Appendix A

Baseline Report

1001_Land to the north of the Grange (LG1)

Baseline report: Constraints, opportunities, design vision and place-making objectives

Version 3
29 February 2024

The aim this report is to consolidate and summarise the key findings from various consultant reports that forms part of the baseline evidence and technical studies for Site LG1.

It informs the production of the constraints and opportunities plan, a concept design vision and place-making objectives for LG1, to further support the development of LG1's strategic masterplan.

Prepared by

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Prepared on behalf of

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Contents

1_**INTRODUCTION** 04

2_**NON-TECHNICAL SUMMARIES** 07

3_**SITE CONSTRAINTS AND OPPORTUNITIES** 42

4_**DESIGN VISION** 47

5_**PLACEMAKING OBJECTIVES** 50

1

Introduction

1. Introduction

1.1 This baseline report has been prepared on behalf of the Letchworth Garden City Heritage Foundation (LGCHF). It forms part of the planning baseline and evidence base that will be used to inform the future masterplan framework for the Land to the north of the Grange (LG1) located on the northern boundary of Letchworth Garden City. This strategic 45 ha (112 acre) housing site is allocated in the adopted Local Plan 2011-2031[1] for a new neighbourhood of approximately 900 homes and the planning objectives are described in Policy SP15: Site LG1 - North of Letchworth Garden City of the adopted Local Plan.

Purpose of study

1.2 The aim this report is to consolidate and summarise the key findings collated from the various consultant reports that forms part of the baseline evidence and technical studies for Site LG1.

1.3 This informs the production of the constraints and opportunities plan, a concept design vision and place-making objectives for LG1, to further support the development of LG1's strategic masterplan.

Structure of the report

1.4 To support the strategic masterplanning exercise on LG1, this report consolidates and summarises the key findings of the Baseline Stage, and is structured in four sections as outlined below:

Part 2: Non-technical summaries

1.5 This section summarises a series of background technical studies that have been undertaken, led by Cushman & Wakefield as development managers. This informs the production of a constraints and opportunities plan, which will form part of the strategic master plan documents and will be adopted by NHC through its Project Board.

Part 3: Site constraints and opportunities

1.6 Drawing from the various background technical studies and in alignment with the policy context[2], this section identifies the factors - both constraints and opportunities - that must be considered when undertaking the strategic masterplanning process for LG1 and those that may potentially impact the detailed design of the development.

Part 4: Design vision

1.7 Aligned with Letchworth Garden City Heritage Foundation's adopted vision for LG1, relevant planning policy context and the National Design Guide[3], in particular the themes of Context and Identity, this section presents an overarching concept vision for LG1 as a distinctive modern-day Garden City reflective of Letchworth's Garden City legacy.

1.8 It seeks to maximise the benefits afforded by the site opportunities, overcome the site constraints and minimise the impact these may have on future development to unlock improved social wellbeing and an economically and environmentally sustainable development for LG1 in synergic relationship with its context.

Part 5: Place-making objectives

1.9 To help achieve the concept design vision in practice, through spatial design, this section outlines the key place-making objectives and design principles to guide the future development of LG1 through the masterplanning process.

References:

1,2. NHC (2022) Local Plan 2011-2031, adopted 8 November 2022. See: https://www.north-herts.gov.uk/sites/default/files/2022-12/North%20Hertfordshire%20Local%20Plan%202011-2031.pdf

3. MHCLG (2021) National Design Guide, January 2021, Department for Levelling Up, Housing and Communities. See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962113/National_design_guide.pdf

Site location

1.10 The LG1 site allocation has been confirmed by the adoption of the North Herts Council (NHC) Local Plan late 2022.

1.11 Letchworth Garden City Heritage Foundation (LGCHF) is the landowner of the site and is progressing proposals through a strategic master planning approach, in accordance with Policy SP9 and SP15 of the adopted Local Plan.

1.12 The site is located close to the northern boundary of NHC and Central Bedfordshire Council (CBC) (Fig.1.1). The location of the site in relation to its wider context presents a wide range of sensitivities that needs to be appropriately addressed as part of the strategic masterplanning process. This is not just limited to existing on-site features such as the historic field boundaries, hedgerows, mature trees, shelter-belts, landform and water courses, the utility pipelines, the Greenway and NCN 12; but also includes the immediate adjacencies with the Grange Recreation Ground, the Grange Estate, the historic Norton Village, issues related to access from Norton Road and Grange Estate; and wider context sensitivities related to coalescence with surrounding settlements, particularly Fairfield Park.

1.13 These are discussed in further detail as part of the non-technical summaries and the site constraints and opportunities in the subsequent sections of this report.

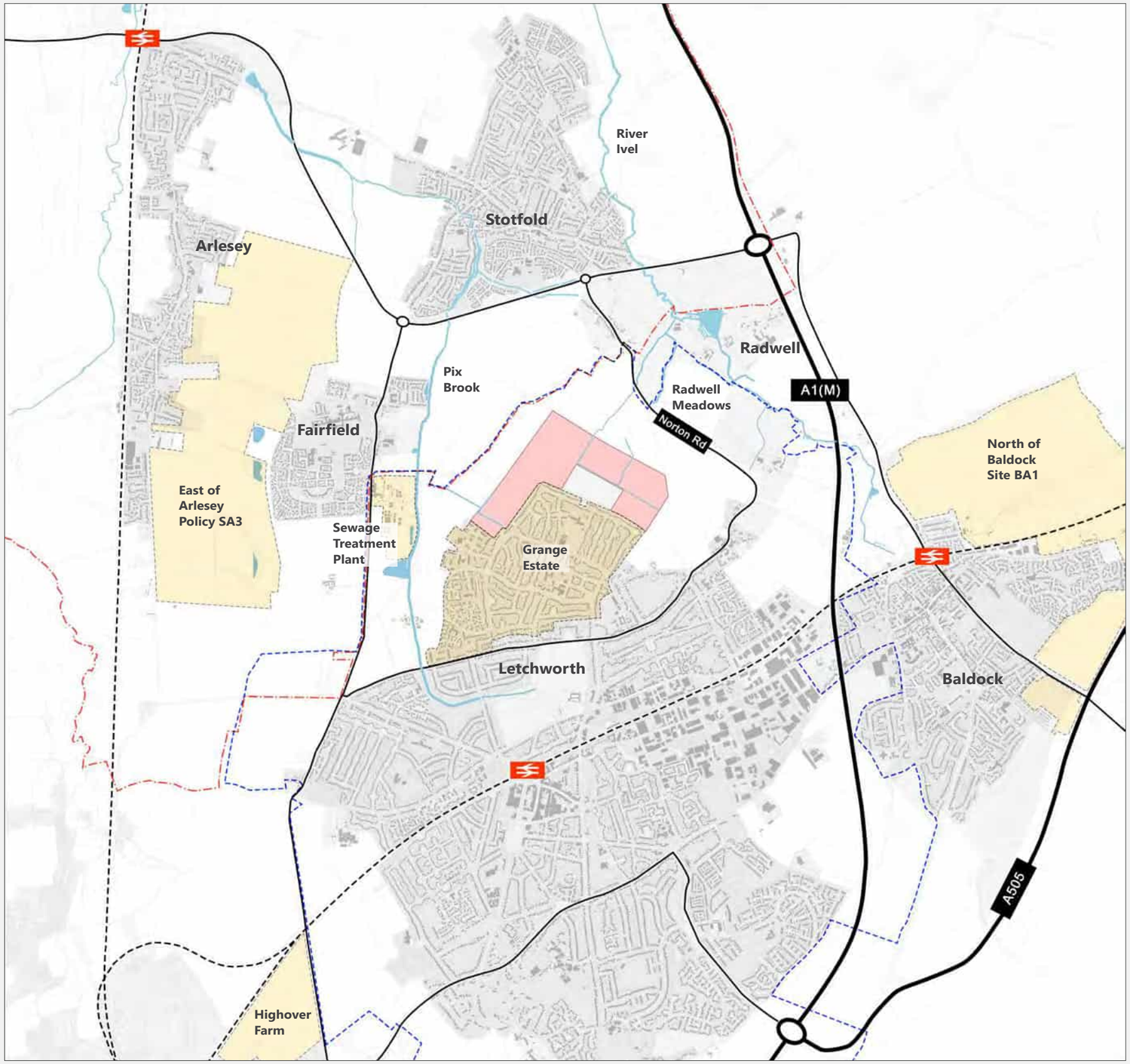


Fig. 1.1: Site location and study area boundary

2

Non-technical summaries

2. Non-technical summaries

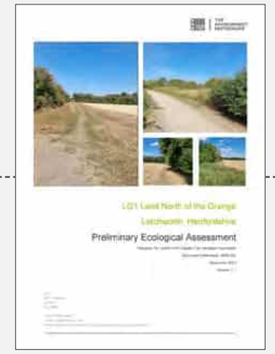
Introduction

2.1 To support the strategic masterplanning exercise on LG1, along with the process leading the recruitment of a suitable partner to deliver the development, a series of background technical studies have been undertaken, led by Cushman & Wakefield as development managers. This informs the production of a constraints and opportunities plan, which will form part of the strategic master plan documents and will be adopted by NHC through its Project Board. This is in addition to initial master planning, development management, transport and community engagement work through its appointed team.

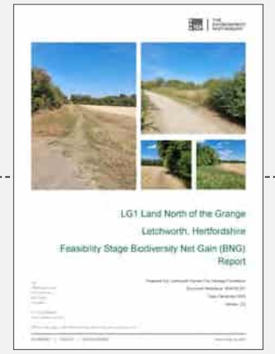
2.2 The purpose of this advice note, is a non-technical summary on these technical studies to help support the Project Team, NHC and its consultant team and published on the LGCHF consultation website. The full technical reports are also available if required.

This section summarises the key findings of the various background technical studies undertaken, led by Cushman & Wakefield as development managers. This informs the production of a constraints and opportunities plan, which will form part of the strategic master plan documents and will be adopted by NHC through its Project Board.

Landscape Character and Sensitivity Study
February 2024

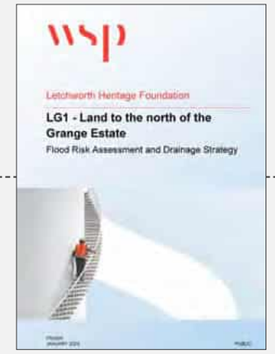


Preliminary Ecological Assessment
December 2023

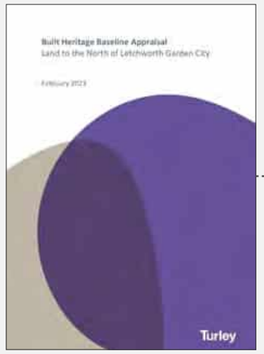


Biodiversity Net Gain (BNG) Report
December 2023

Green Infrastructure Audit
July 2023

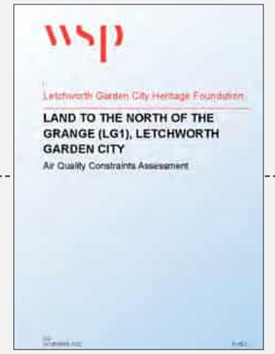


Flood Risk Assessment and Drainage Strategy
January 2023



Built Heritage Baseline Appraisal
February 2023

Archaeological Evaluation Report
March 2023

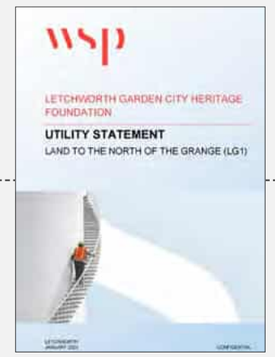


Air Quality Constraints Assessment
November 2022

Infiltration Test Report
October 2022

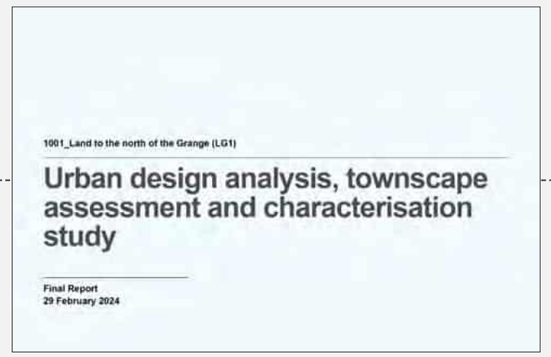
Geo-Environmental Assessment Report
October 2022

Noise Risk and Impact Assessment
September 2022



Utility Statement
January 2023

Transport & Accessibility Report
June 2023



Urban design analysis, townscape assessment and characterisation study
February 2024

Baseline stage technical studies and reports

Landscape character and sensitivity study

2.3 Peter Neal Consulting and ERE have undertaken a Landscape Character and Sensitivity Study[1] for the LG1 development site and its surrounding context (Fig. 2.1-2.12). The scope was agreed with NHC with advice from Place Services (Essex County Council) and follows applicable national guidance. It includes a review of relevant planning studies and polices, desk-based surveys and site assessments undertaken in March, April and July 2022.

2.4 The study includes a review of the strategic green infrastructure network surrounding the site including parks and green spaces, designated and protected sites, river corridors, woodlands, shelterbelts, hedgerows, footpaths and cycle routes. The Garden City Greenway and the Etonbury Green Wheel provide a strategic pedestrian network connecting LG1 with adjacent settlements and landscape areas providing significant recreational benefit. Whilst river corridors, woodlands and hedgerows enhance ecological connectivity. An assessment of the historic field pattern and ecology surveys identify important hedgerows within the site that mark the Stotfold parish boundary, the southern edge of the Norton Road and several boundaries along the south of the site. The tree survey has identified the prominent trees which are mainly mature Oak trees that are located within hedgerows across the centre of the site next to the Greenway and along the northern boundary.

2.5 A preliminary visual assessment highlights the importance of views from LG1 west to the historic spires of Fairfield Hall and east to the tower of St Nicholas Church. The most sensitive views towards the site are from Greenacres Park, Stotfold, the Norton Road, the A407 roundabout and adjacent footpaths. A detailed assessment of Landscape and Visual Sensitivity has been completed and this identifies that the two northern character areas of the site have the greatest sensitivity (assessed as medium sensitivity) taking account of topography, visual prominence from the north and west, limited screening and proximity to the settlements of Fairfield Park and Norton Village.

2.6 The study concludes with a set of landscape recommendations that should be addressed in the development of the masterplan framework for the site that are illustrated by a supporting plan. These include the need to protect and enhance the Greenway and increase recreational facilities, strengthen existing landscape buffers and ecological networks, respect prominent views, integrate sustainable drainage systems with the existing drainage network, protect mature trees and established hedgerows as well as planting additional trees and expanding the existing hedgerow network.

The landscape study concludes with recommendations including the need to protect and enhance the Greenway, increase recreational facilities, strengthen existing landscape buffers and ecological networks, respect prominent views, integrate sustainable drainage, protect mature trees and established hedgerows as well as planting additional trees and expanding the existing hedgerow network.

References:

1. ERE and Peter Neal Consulting (February, 2024; v4.0) LG1 Landscape Character and Sensitivity Study. Currently being finalised.

Key design implications	
1	Embrace Garden City Principles in the landscape masterplan. This should include a generous landscape setting and promoting additional tree planting within green spaces and streets contributing to a comprehensive GI framework, creating a clear sense of place integrated with its surrounding landscape.
2	Strengthen existing landscape buffers. A long-term, active and productive peripheral landscape buffer and defensible Green Belt Boundary should be established immediately to the west, north and east of LG1 and new planting should be used to strengthen existing vegetated screening and protect existing views, particularly towards the western and eastern boundaries from adjacent settlements.
3	Protect and enhance the Garden City Greenway, and where feasible enhance to establish a linear park to support dwell activities, enlarging the network of walking and cycling routes including maintaining and increasing connectivity with the Etonbury Green Wheel and other recreational destinations.
4	Expand recreational facilities and resources. Enhance current provision and recreational offer of the Grange Recreation Ground, where feasible, particularly for children and young adults.
5	Strengthen ecological networks and increase habitat diversity. See p.16 for further details.
6	Integrate sustainable drainage within existing drainage pattern. See p.21 for further details.
7	Respect views towards locally prominent landmarks. See p.29 for further details.
8	Protect, maintain and enhance the existing hedgerow network and existing mature trees. They make an important contribution to landscape character and connectivity, articulating views, providing screening and defining visual envelopes within the site.

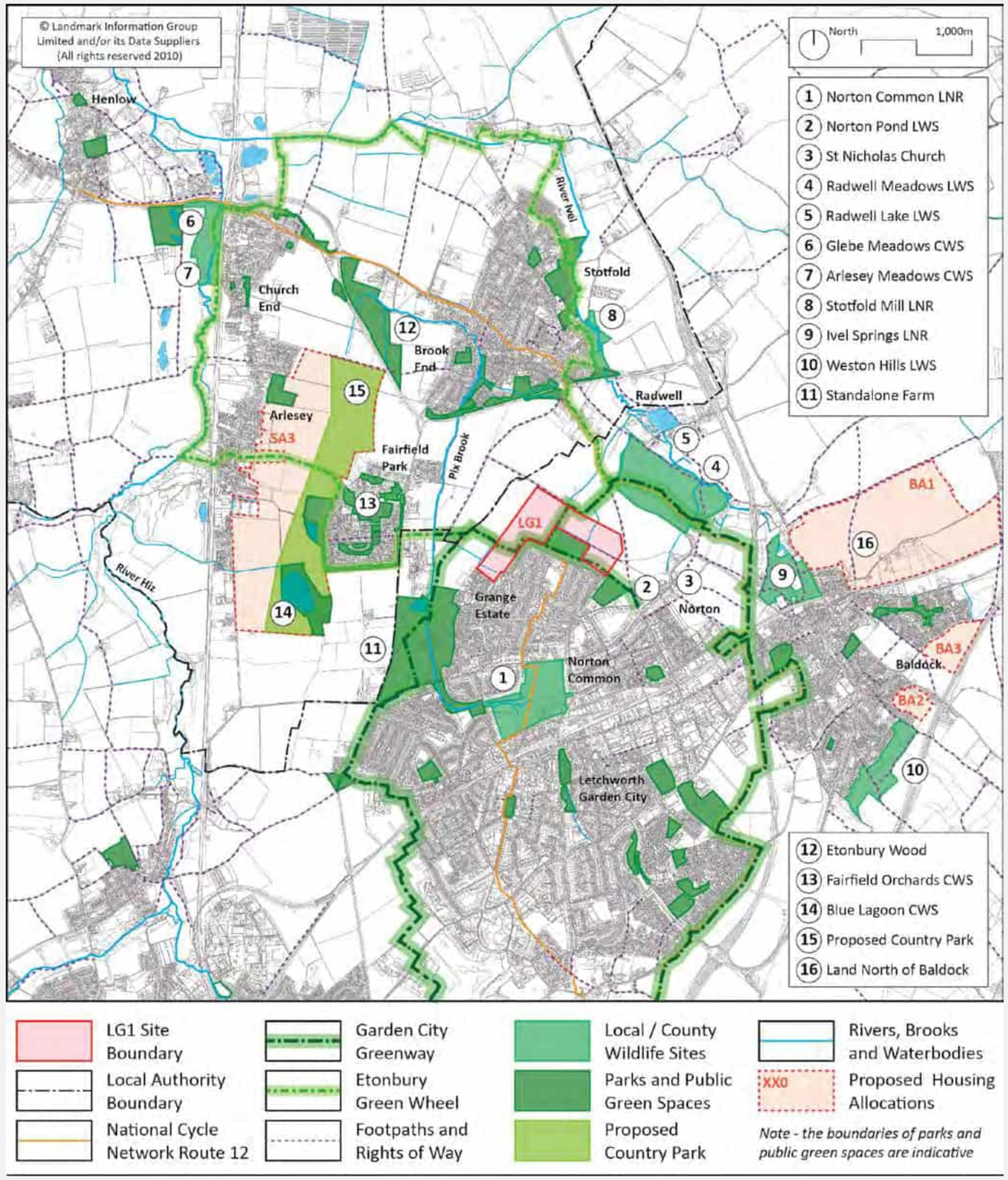


Fig. 2.1: Strategic green infrastructure network
Landscape Character and Sensitivity Study, February 2024, p.18

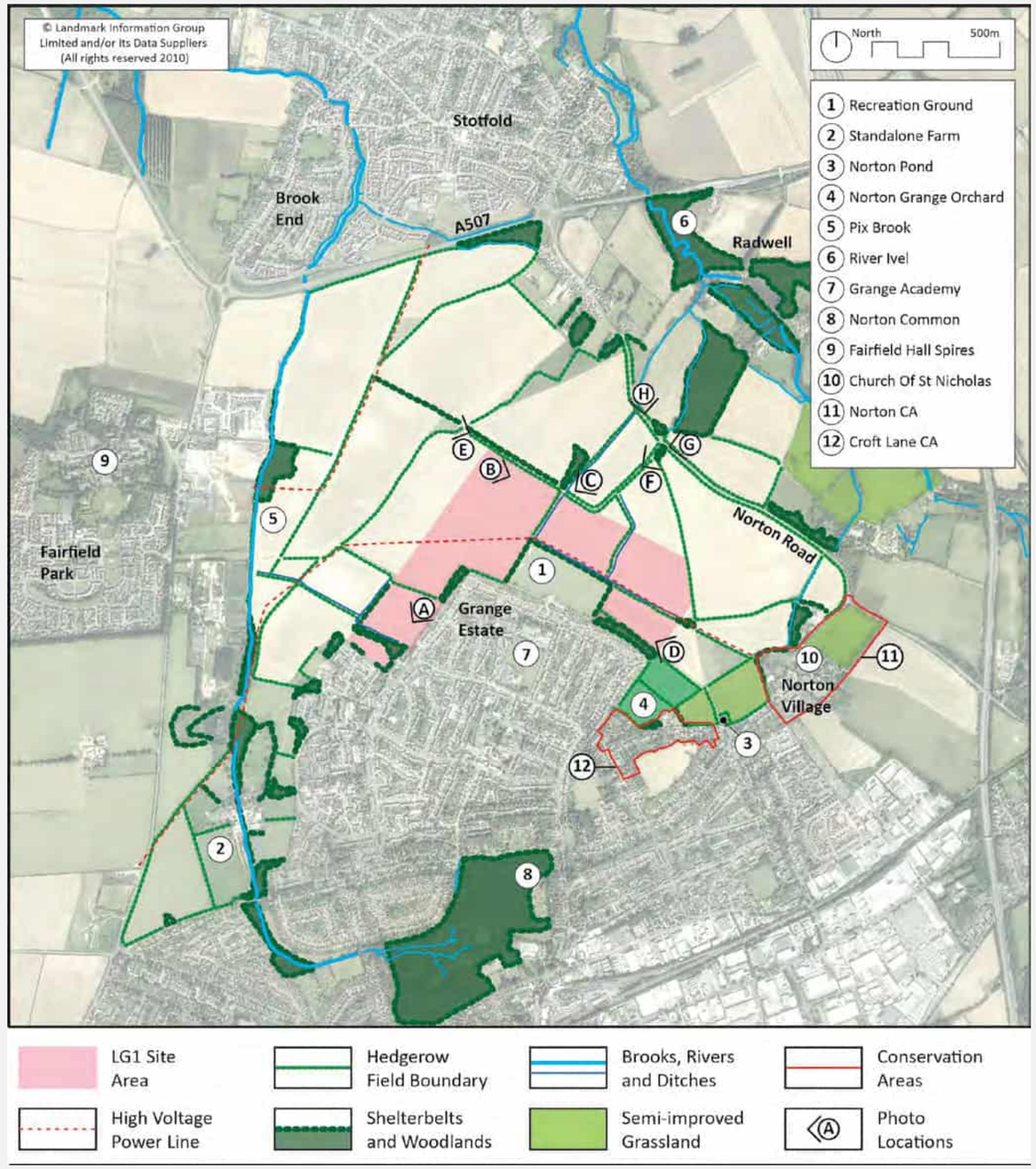


Fig. 2.2: LG1 existing landscape framework
Landscape Character and Sensitivity Study, February 2024, p.32

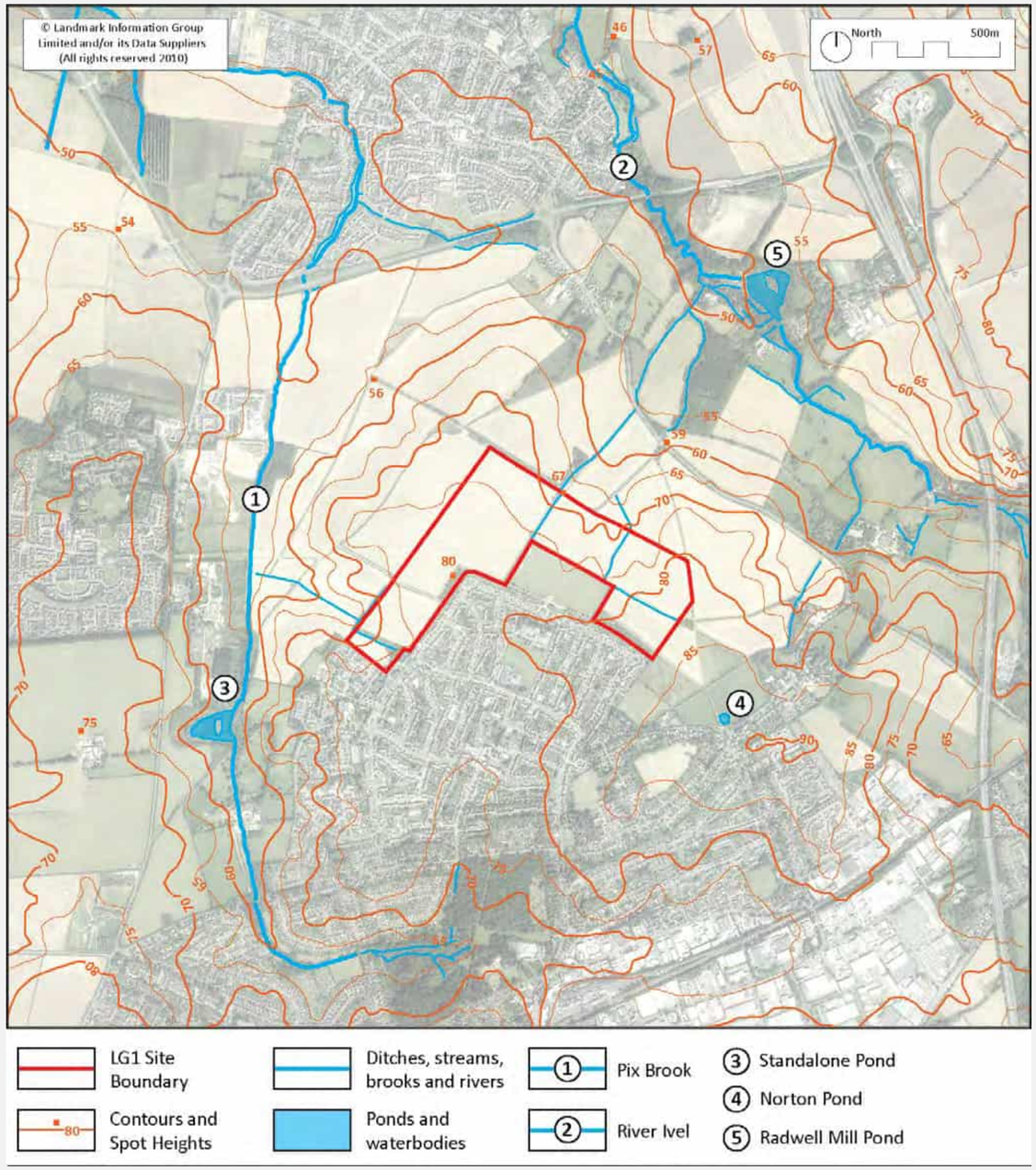


Fig. 2.3: LG1 topographic and hydrological context
Landscape Character and Sensitivity Study, February 2024, p.22

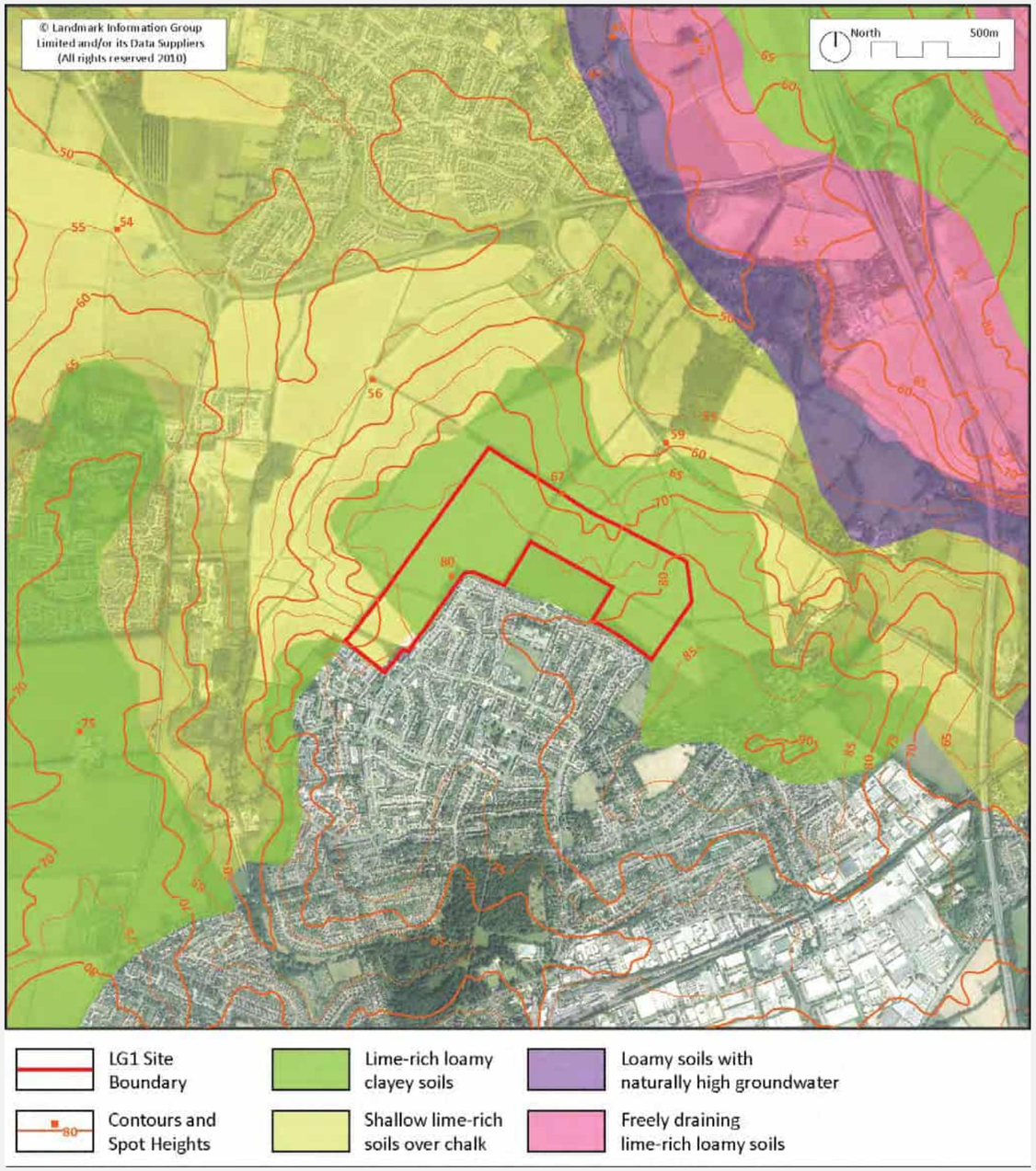


Fig. 2.4: LG1 soils context from BGS soilscapes for England
Landscape Character and Sensitivity Study, February 2024, p.23

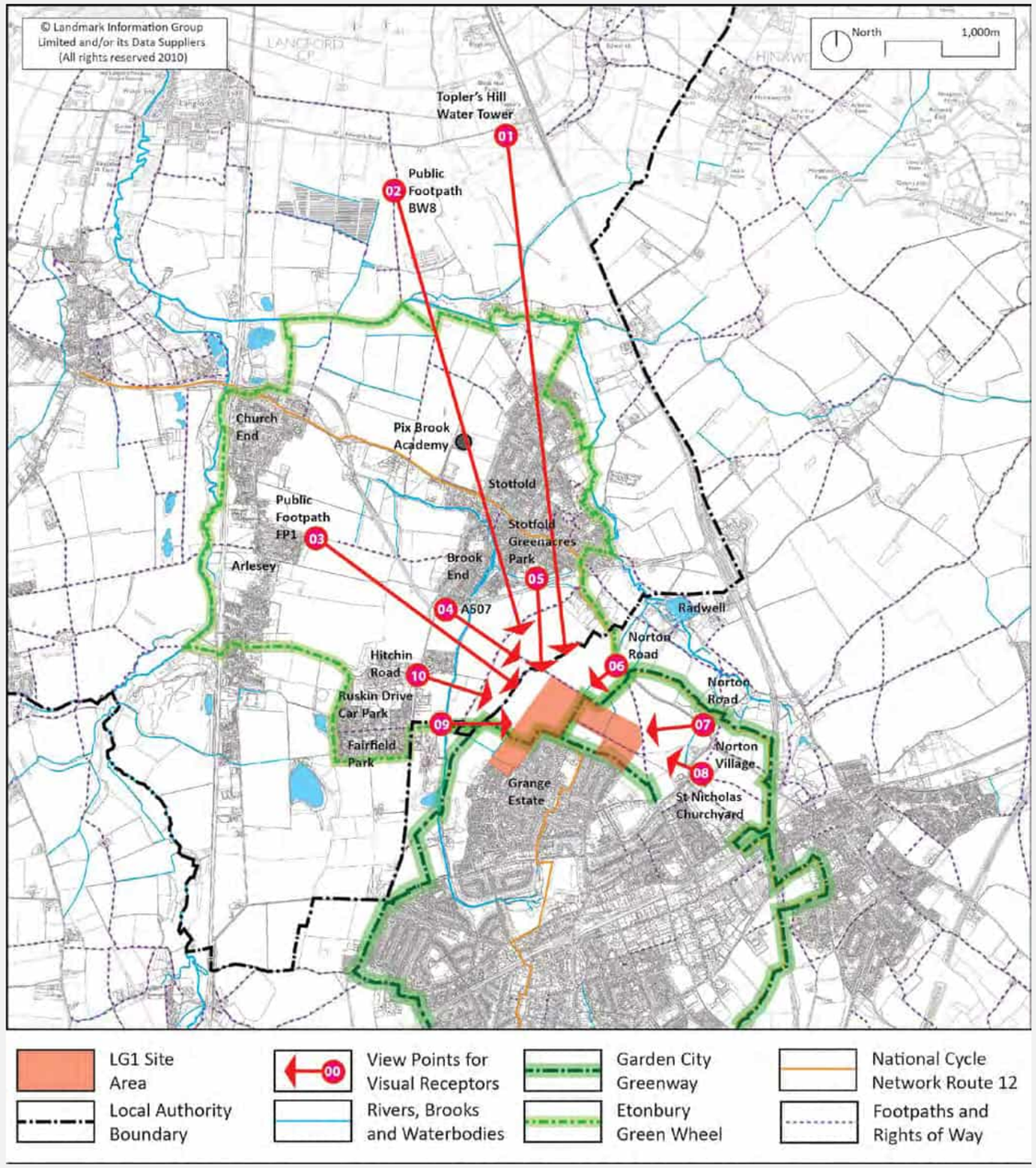


Fig. 2.5: Key visual receptos towards LG1
Landscape Character and Sensitivity Study, February 2024, p.27

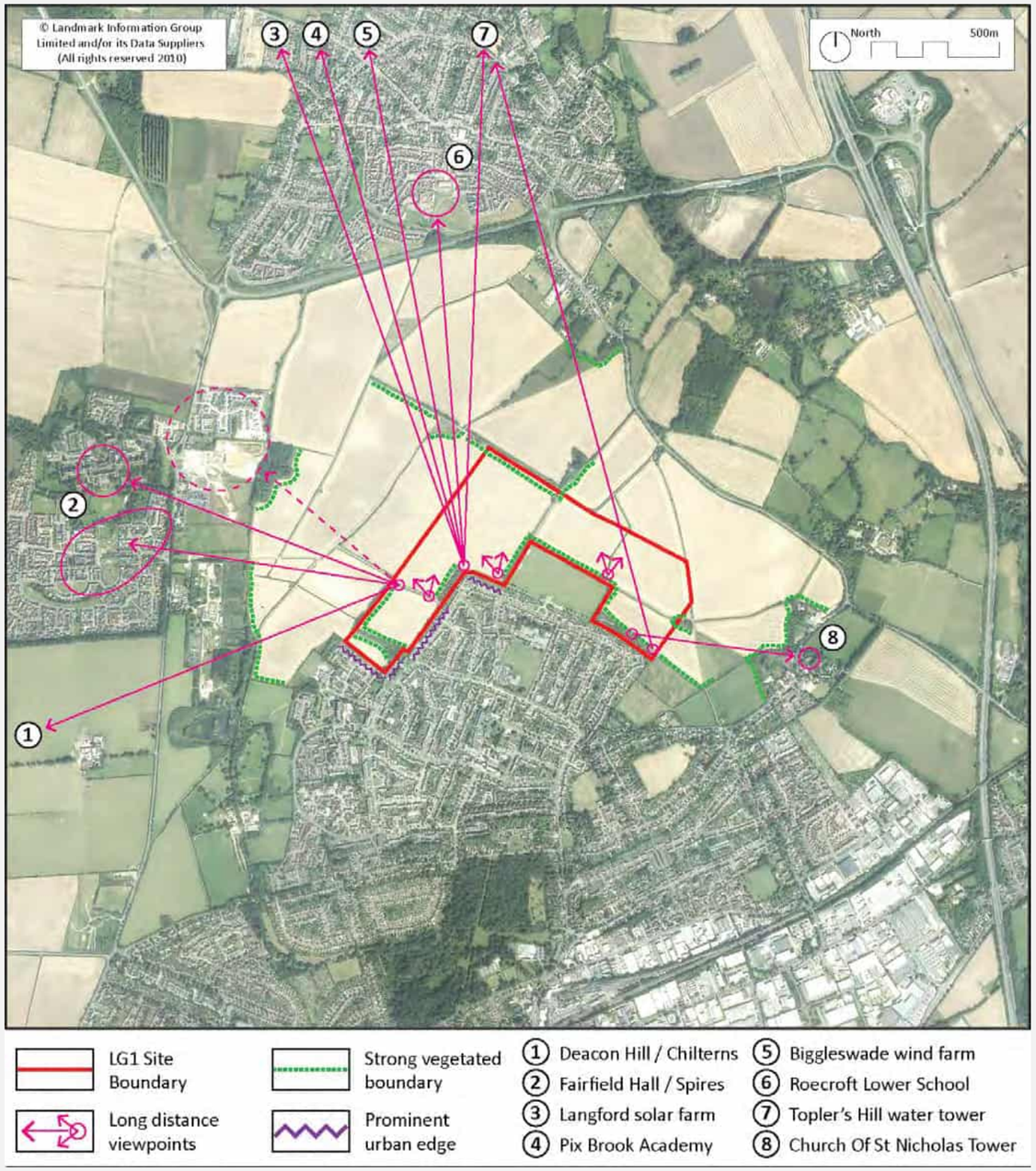


Fig. 2.6: Key views and viewpoints from LG1
Landscape Character and Sensitivity Study, February 2024, p.24

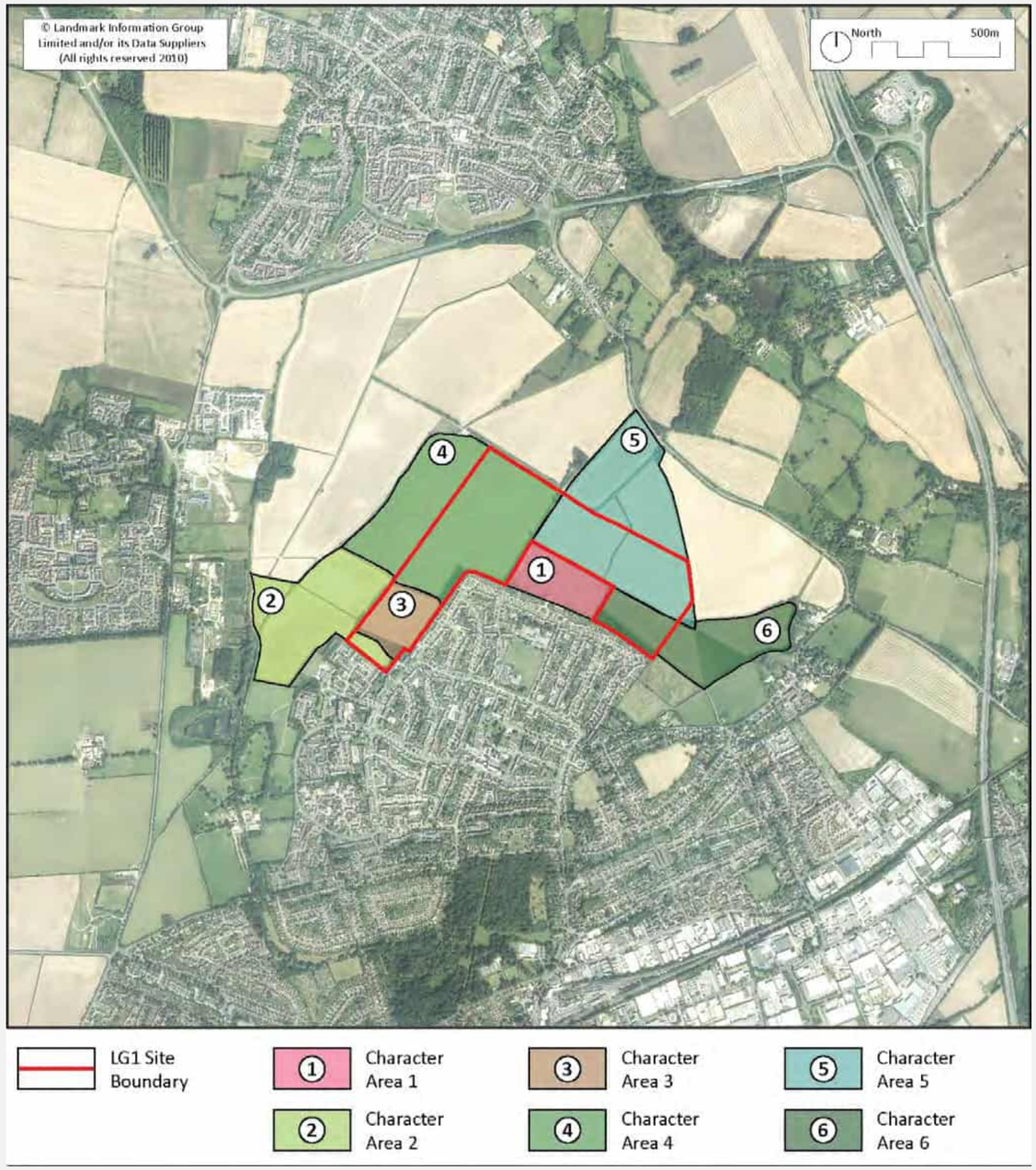


Fig. 2.7: LG1 local landscape character areas
Landscape Character and Sensitivity Study, February 2024, p.39

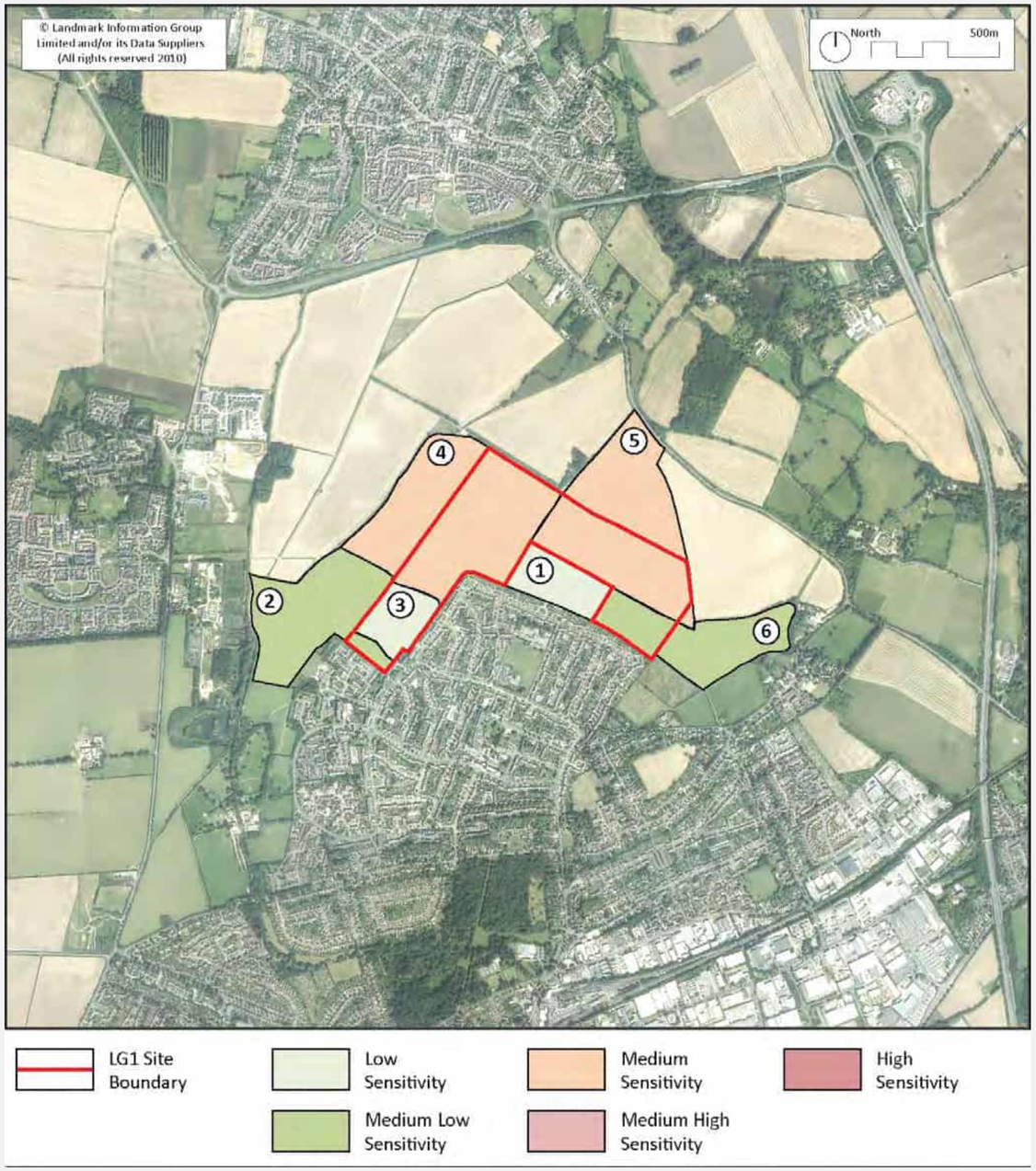


Fig. 2.8: LG1 combined landscape and visual sensitivity assessment
Landscape Character and Sensitivity Study, February 2024, p.53

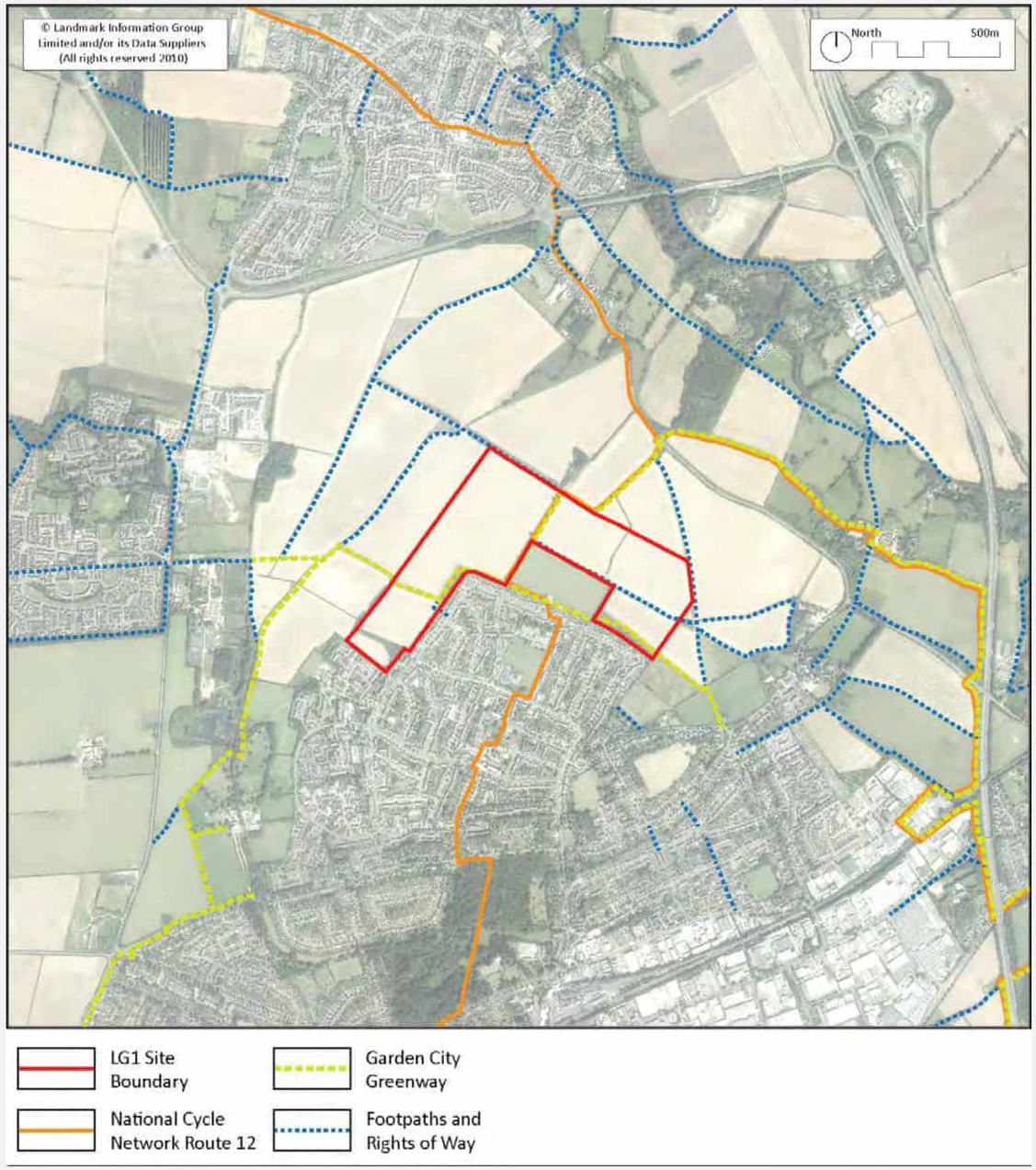


Fig. 2.9: Footpath and cycle network
Landscape Character and Sensitivity Study, February 2024, p.31

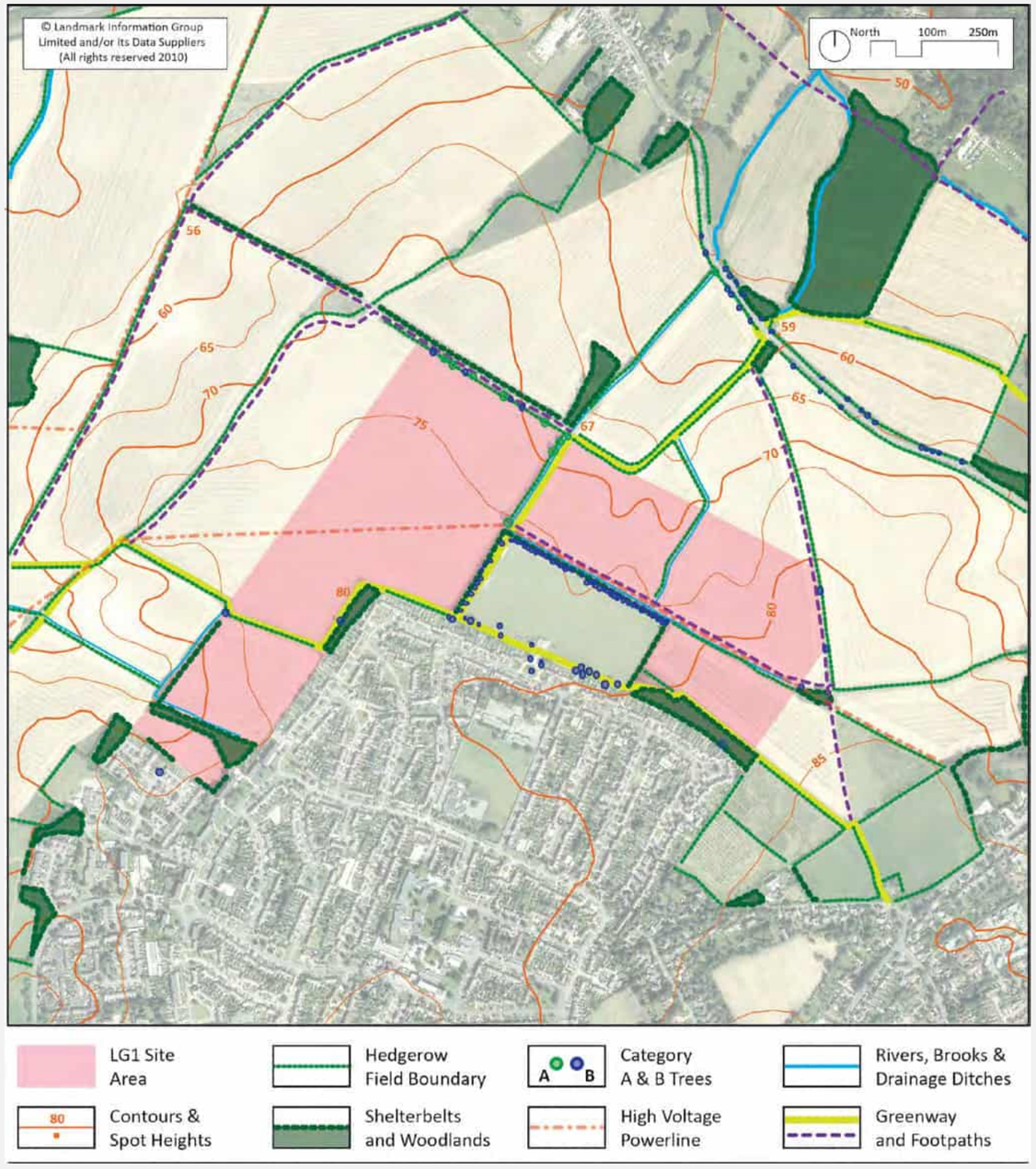


Fig. 2.10: LG1 detailed landscape features
Landscape Character and Sensitivity Study, February 2024, p.35

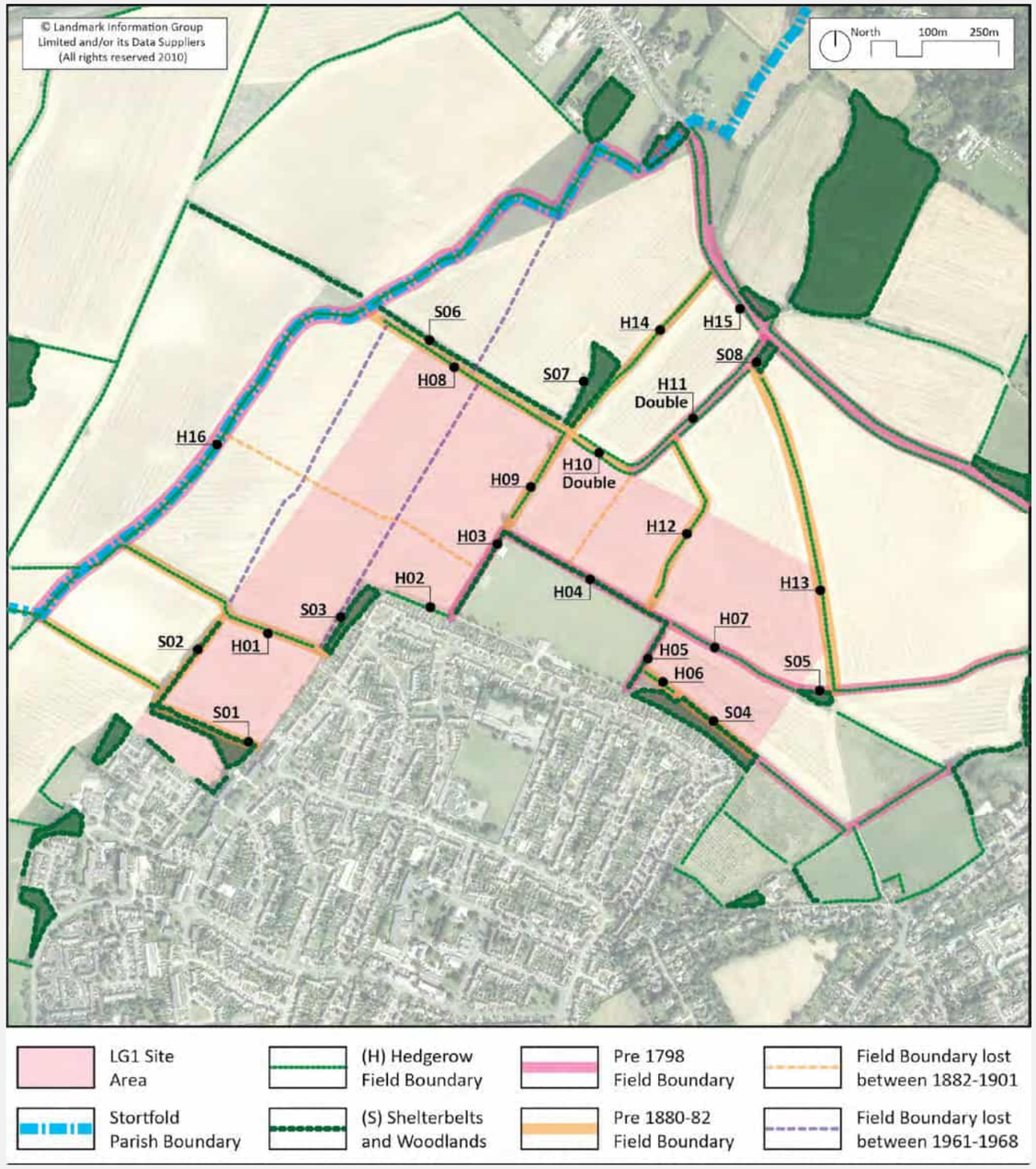


Fig. 2.11: Audit of hedgerows and shelterbelts
Landsape Character and Sensitivity Study, February 2024, p.13

No.	**Hedgerow Considered Important**	Existed for 30 Years or more	**Archaeology & History**		**Wildlife & Landscape**			
			Marks historic boundary[1]	Pre-dates field enclosure[2]	No.[3]	Contains protected species[4]	Defined No. of woody species[5]	Considered Important
H01	No	Yes	No	No	H18	No	3	No
H02	No	Yes	No	No	H17	No	3	No
H03	**Yes**	Yes	No	**Yes**	H1	No	3	No
H04	**Yes**	Yes	No	**Yes**	H2	No	3	No
H05	**Yes**	Yes	No	**Yes**	H3-4	No	3	No
H06	No	Yes	No	No	H5-6	No	3-4	No
H07	**Yes**	Yes	No	**Yes**	H7	No	4	No
H08	No	Yes	No	No	H14	No	5	No
H09	No	Yes	No	No	H13	No	**6**	No
H10	No	Yes	No	No	H11	No	**6**	No
H11	**Yes**	Yes	No	**Yes**	H9-10	No	**5-6**	No
H12	No	Yes	No	No	H12	No	4	No
H13	No	Yes	No	No	H8	No	4	No
H14	No	Yes	No	No	H15	No	4	No
H15	**Yes**	Yes	No	**Yes**	H16	No	3-4	No
H16	**Yes**	Yes	**Yes**	**Yes**	-	-	-	-
H17	No	Yes	No	No	H19	No	3	No

1	Hedgerow marks the boundary, or part of the boundary, of at least one historic (pre-1850) parish or township (Part II, Section 1)
2	Recorded as an integral part of a field system pre-dating the Inclosure Act (1845) or is part of, or visibly related to, any building or other feature associated with such a system (Part II, Section 5)
3	No. refers to Hedgerow Number in the Ecological Survey (Drawing G9546.005A,TEP 22/08/23)
4	Hedgerow contains species protected by the Wildlife and Countryside Act 1981 (Part II, Section 6 (1) (a) and sub-paragraph (3) and (4))
5	Hedgerow includes a defined number of woody species and features (Part II, Section 7 (1))

Fig. 2.12: Hedgerow and field boundary assessment following Hedgerow Regulations 1997
Landscape Character and Sensitivity Study, February 2024, p.14

Preliminary ecological assessment

2.7 The Environment Partnership (TEP) was commissioned to undertake the preliminary ecological assessment and arboricultural survey, including the associated field and desk top studies (Fig. 2.13-2.16).[2,3,4,5,6] This follows previous extensive site surveys by another consultancy. This found that there are no internationally or nationally designated wildlife sites within 10km or 5km respectively. The site is not within a Site of Special Scientific Interest (SSSI) or an Impact Risk Zone (IRZ).

2.8 Three statutory wildlife sites of local significance have been found within 2km of the site (Norton Common, Stotfold Mill Meadows and Ivel Springs, local nature reserves). There are 15 non-statutory locally designated sites within 2km of the site. Of those, Norton Pond, Radwell Meadows, Radwell Lake and River Ivel at Nortonbury may be the subject of indirect impacts. None of the 15 non-statutory locally designated sites are expected to be directly impacted by the development.

2.9 Notable habitats within and adjacent to the site include deciduous broad-leaved woodland (S41) and good quality semi-improved grasslands. These are local priority habitats and habitats of Principal Importance (HPI) but not subject to direct impacts from the development. Small areas of traditional orchard (S41) are found adjacent to and 360m south of the site. Direct impacts are not expected to occur on either of these orchards, but the orchard adjacent to the site may be subject to indirect impacts from construction. The assessment found that before mitigation measures that will be included in the development proposals, notable habitats are likely to have higher access pressures from the proposed increased local population and local traffic.

2.10 Other habitats including Semi-natural broad-leaved woodland, Lines of Trees, Plantation Broad-leaved woodland and scattered broad-leaved trees. None of these are expected to be directly impacted by the proposals as all are expected to be retained. On site mitigation for any potential loss is feasible without negatively impacting upon other habitats. Some hedgerows will be subject to some losses as part of the proposals to provide access routes through the site. Replacement hedgerow planting will be incorporated into the development to mitigate for any losses occurring. Some of the small areas of semi-improved and poor semi-improved grasslands may be lost as part of the proposals, but any losses to these habitats can feasibly be mitigated for on site within the proposed development. All the arable field margin habitats are expected to be lost as part of the proposals. These losses are small and can be mitigated for on site within the proposed development area.

2.11 Great Crested Newt (GCN) has been located within Norton Pond 350m to the southeast of the site, however Natural England mitigation licence will not be required as the pond is unlikely to be impacted upon by the development proposals. GCN are considered highly unlikely to range into the site. <<redacted>>.

2.12 No reptiles were found during the main survey. The survey on land to the north of Norton Road found two slowworms and a single grass snake. This is a major road and considered to present a significant barrier to reptile movement. No evidence of water vole was recorded within the surveyed area of Pix Brook and the survey identified that the Brook provides low suitability for water vole. Three otter spraints were recorded on the first visit, approximately 450m southwest of the site. No evidence of potential holts was recorded during the surveys.

2.13 The desk study returned no records of dormice within 2km of the site and no evidence of dormouse was found during the nest tube surveys. Evidence of wood mouse in the form of individuals, nests and nut caches were found throughout the site. Given the likely absence of dormice on site, there are no constraints to this species although the removal of suitable habitat such as hedgerows should be avoided where possible.

2.14 There are 20 trees within the site with suitability for roosting bats. Commuting and foraging bat species recorded on site include the Common pipistrelle, the Soprano pipistrelle and the Brown long-eared bat. Rarer species include Leisler's bat, the Nathusius' pipistrelle and the Barbastelle. Trees that

Key design implications	
❶	Strengthen ecological networks and increase habitat diversity. The masterplan framework should seek to improve the connectivity and diversity of ecological networks to meet the statutory requirement to deliver biodiversity net gain (BNG) as well as emerging national planning policy for establishing local nature recovery networks.
❷	Strengthen the Pix Brook corridor, beyond the site boundary, that contributes to an important ecological network by maintaining and extending connectivity with hedgerows, shelterbelts and woodland copses.
❸	Extend the diversity of habitats with the introduction of swales, wetlands and areas of open water that would form part of the Sustainable Urban Drainage strategy. See p.21 for further details.
❺	Create sustainable drainage features on site with an aim of establishing semi-naturalised habitats, including permanent areas of water, native aquatic and marginal planting and varying bank grading, providing breeding habitat for amphibians.
❹	Introduce grasslands and wildflower meadows that include opportunities to protect, create and enhance chalk grasslands where feasible to reflect prevailing National and North Hertfordshire landscape character profiles and objectives.
❻	Create new areas of species-rich wildflower meadow, native woodland and native scrub on-site to complement and strengthen these existing habitats.
❼	Incorporate additional man-made habitat features including hibernacula, log piles, bat, bird and invertebrate boxes within the development proposals to improve refuge opportunities for a range of species.

have been assessed as having suitability to support roosting bats are to be retained and buffered where this is reasonably practicable and the Bat Survey report[5] provides detail on further survey and mitigation measures. It is recommended that a Construction Management Plan, Precautionary Working Method Statement, and a habitat management plan should be produced for the site. This will include precautionary working measures to avoid impacts on a range of species.

2.15 A Feasibility Stage Biodiversity Net Gain (BNG) assessment and report[6] has been completed using the Biodiversity Metric 4.0 calculator to quantify the change in biodiversity units for the site area. Of the site area 3.88ha of habitat will be retained, the majority of which will be existing hawthorn scrub, mixed scrub and other broadleaved woodland. Based on the Scheme footprint as it stands, the headline results indicate a Net Gain of 18.06% which equates to 22.65 Biodiversity Units (BU) for area-based habitats and a Net gain of 19.34% (5.95 BU) for linear habitats/hedgerows.

In terms of the preliminary ecological assessment, the site is not within a Site of Special Scientific Interest (SSSI) or an Impact Risk Zone (IRZ). A Feasibility Stage Biodiversity Net Gain assessment has been completed indicating a net gain of more than 10%.

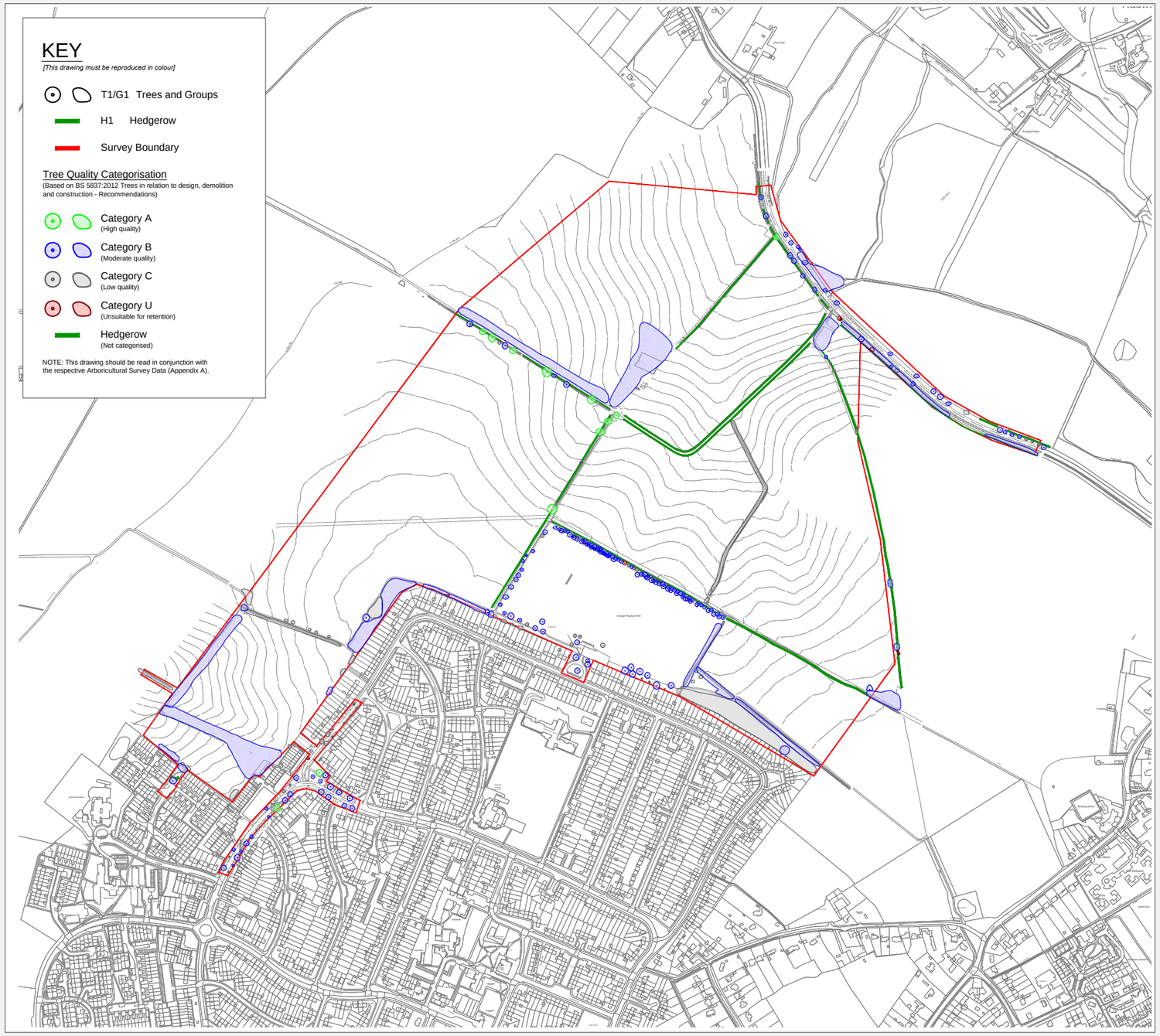


Fig. 2.13: Arboricultural survey
Tree Constraints Report, August 2023, p.45

References:

2. TEP (December, 2023; v2.1) Preliminary Ecological Assessment.
3. TEP (August, 2023; v2.0) Tree Constraints Report.
4. TEP (December, 2023; v1.0) Hedgerow Assessment Report.
5. TEP (October 2023; v1.0) Bat Survey Report.
6. TEP (December 2023), Feasibility Stage Biodiversity Net Gain (BNG) Report.

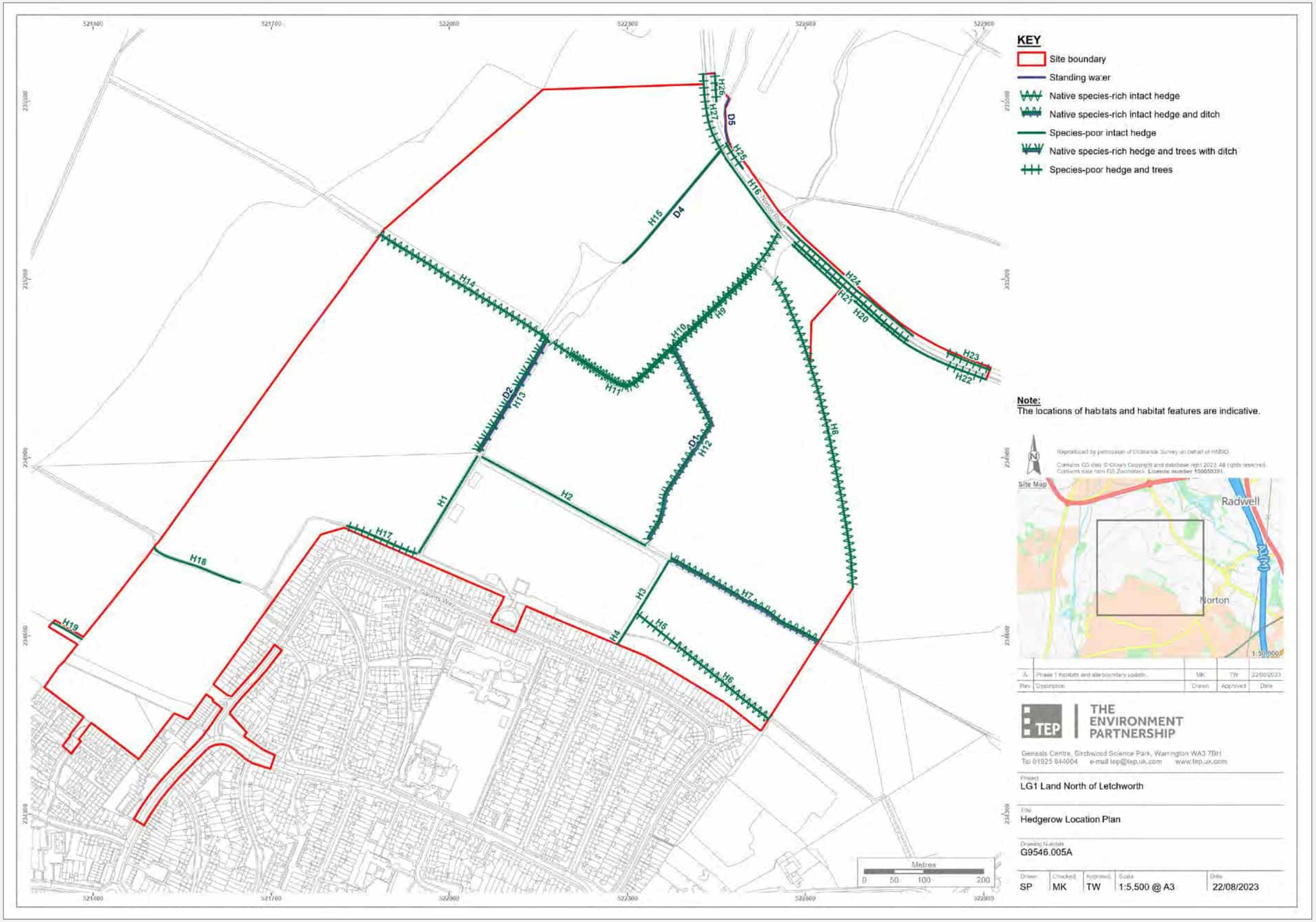
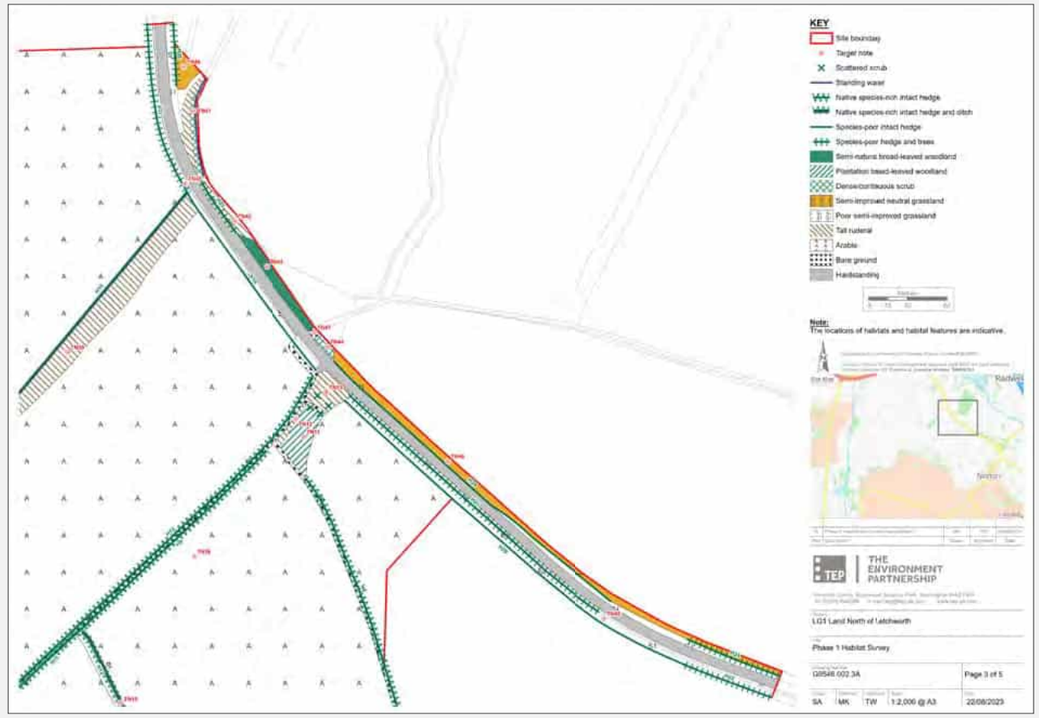
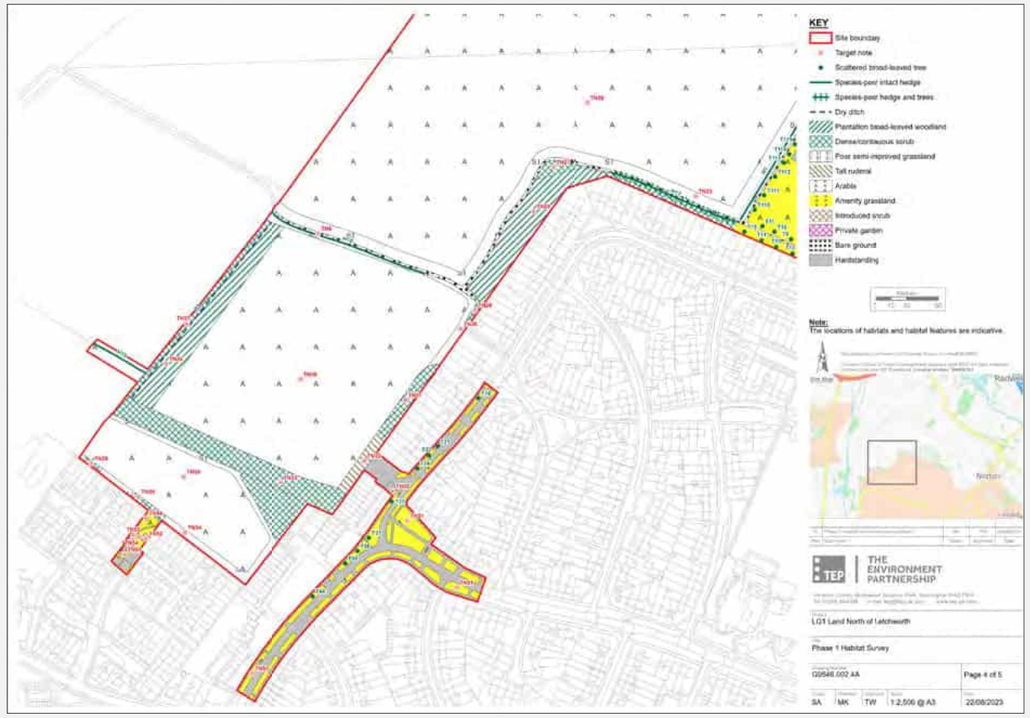


Fig. 2.14: Hedgerow Location Plan
Hedgerow Assessment Report, December 2023, p.53





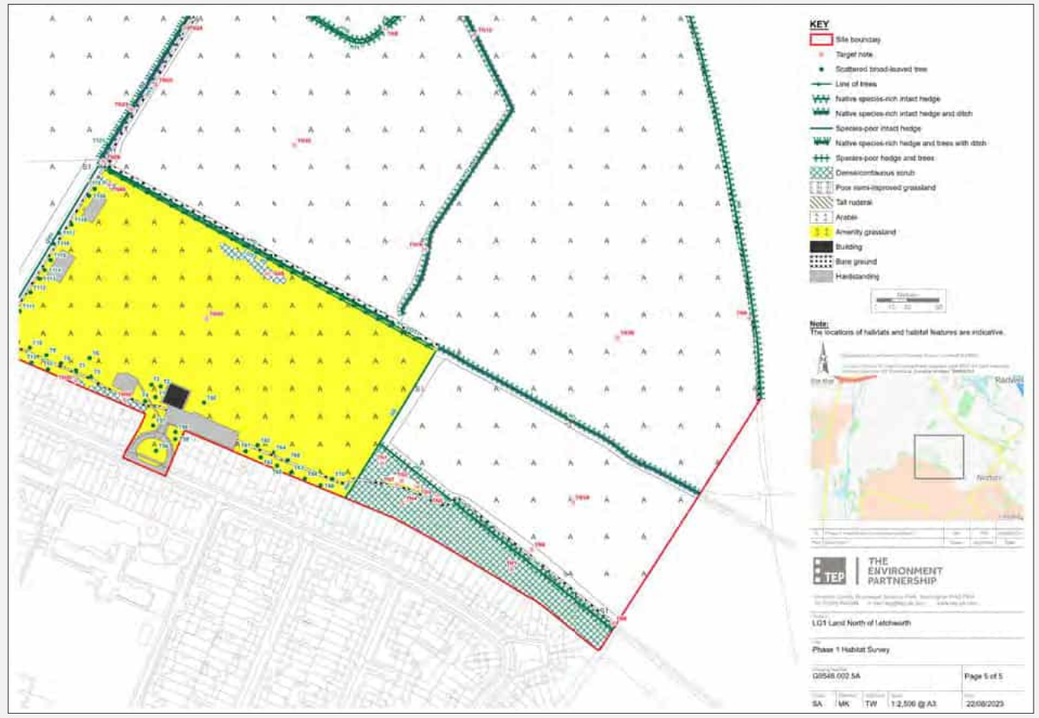


Fig. 2.15: Phase 1 Habitat Survey
Preliminary Ecological Assessment, December 2023, p.121-124

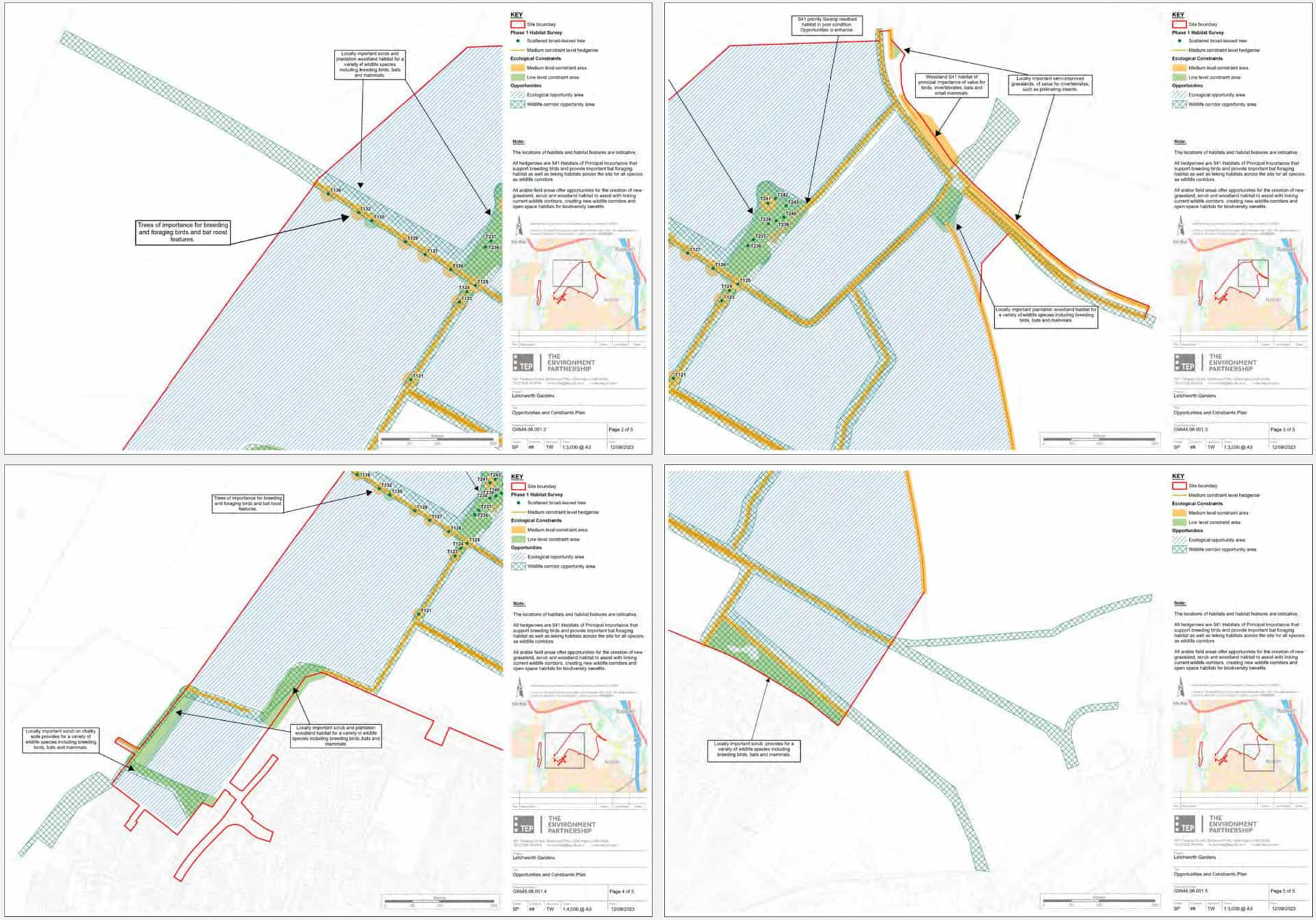


Fig. 2.16: Ecological Opportunities and Constraints Plan
Preliminary Ecological Assessment, December 2023, p.126-129

Flood Risk Assessment (FRA) and drainage

2.16 WSP has undertaken an initial assessment of the site (Fig. 2.17-2.20).[7]

2.17 The site is within Flood Zone 1 as defined by the Environment Agency, meaning it has a low probability of flooding from rivers (Fig. 2.19). It is divided into two natural catchment areas with a high point dividing the southwestern corner and the remainder of the site. The southwestern section of the Site generally falls south from high points of approx. 79.8mAOD to low points of approx. 63.4mAOD in the existing watercourses on the site's western boundary. The remainder of the site generally falls north, with high points of 83.6mAOD at its southeast corner and low points of 62.5mAOD along the northern boundary.

2.18 When assessing flood risk summary the study found low risk of surface water flooding and negligible risk in all other categories.

2.19 In terms of surface water drainage, the site will be divided into three proposed catchments, utilising the existing topography, draining to attenuation basins where flows will be attenuated for all events up to and including the 1 in 100 year storm event plus a 40% allowance for climate change, which will in turn discharge to existing watercourses at greenfield rates. These will be supplemented by a SuDS treatment train providing required pollutant mitigation in line the CIRIA SuDS guide and an adoptable sewer network.

2.20 For foul water, the site will drain via a gravity sewer network to two pumping stations that will discharge via proposed rising mains on the south-western region and northern central region to the Anglian Water foul water sewer network. Anglian Water have confirmed available capacity.

2.21 Overall, based upon information provided within this report, it is concluded that the site is presented as sustainable in terms of flood risk and compliant with the criteria set out in the NPPF. The Site and its occupants will not be at undue risk of flooding, and flood risk off site will be reduced post development.

2.22 Initial discussions with the County County (response letter dated 5th December 2023) has highlighted the need to assess in more detail two of the surface water run-offs that impact the site. This is now being considered by Stantec, who have been appointed in January 2024 to undertake the necessary assessments and investigations required to ensure that the development includes green and blue corridors where needed, which can be incorporated into the masterplan framework.

The site is presented as sustainable in terms of flood risk and compliant with the criteria set out in the NPPF. The Site and its occupants will not be at undue risk of flooding, and flood risk off site will be reduced post development.

Key design implications	
❶	Integrate sustainable drainage within existing drainage pattern. The relatively flat or gently sloping topography provides limited constraint on development and access within the site. In this respect, careful attention should be paid to drainage and surface water management.
❷	Create an initial framework for sustainable drainage systems (SuDS), utilising the natural landfall. The site naturally drains to the north and to the west through an existing network of ditches that are aligned with the field boundaries. This pattern should inform the introduction of swales, detention basins and attenuation ponds, designed as part of a gravity-fed SuDS. This requires careful planning within the existing topography.
❸	Extend and enhance existing drainage systems, where feasible, with SUDs features such as swales, detention basins and attenuation ponds to expand the variety of habitats within the site and provide additional amenity and ecological value.
❹	Investigate and explore viability of sustainable drainage interventions at a plot and building scale that contribute to further slowing of surface water runoff e.g. through permeable paving and/or integration of rain gardens and rainwater harvesting in accordance with LGCHF's design principles.
❺	Consider existing drainage issues on the Grange Recreation Ground when planning for environmental improvements and an enhanced recreational offer.

References:

7. WSP (January, 2023) Flood Risk Assessment and Drainage Strategy.

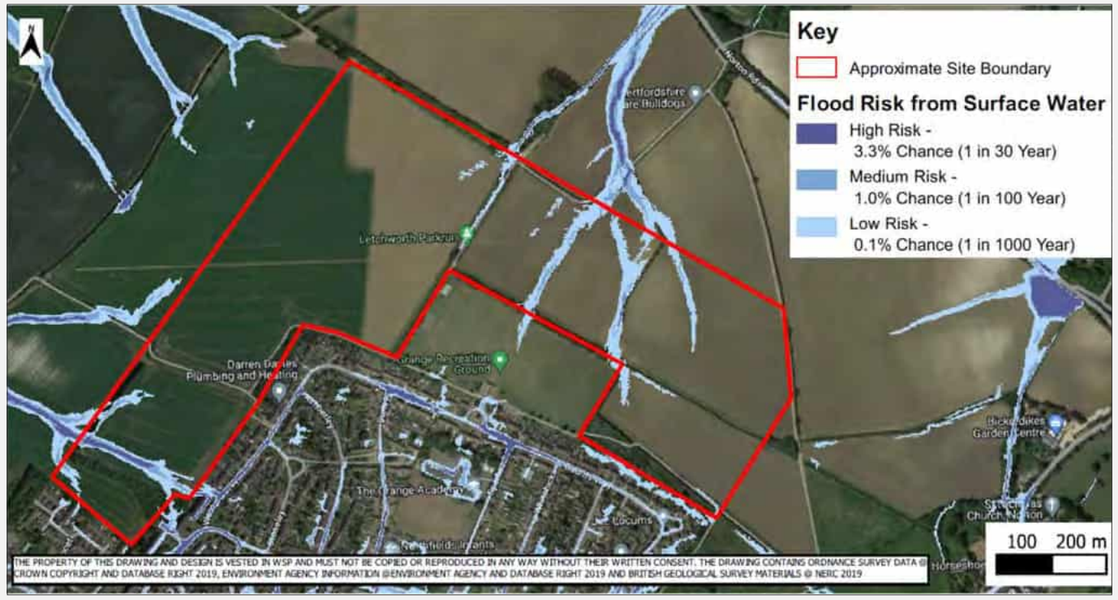


Fig. 2.17: EA's Risk of Flooding from Surface Water Map
Flood Risk Assessment and Drainage Strategy, January 2023, p.16

Fig. 2.18: EA's Risk of Flooding from Reservoirs
Flood Risk Assessment and Drainage Strategy, January 2023, p.17

Fig. 2.19: EA Flood Map for Planning
Flood Risk Assessment and Drainage Strategy, January 2023, p.12

Fig. 2.20: Indicative drainage strategy
WSP, August 2023, LW-WSP-XX-XX-DR-D-4000-P03

Transport

2.23 Steer has undertaken a comprehensive Transport and Accessibility Audit[8] of the existing Site and Proposed Development (Fig. 2.21-2.24). This was fully scoped with HCC and NHC.

2.24 The audit considered the site's location within the wider setting in relation to key destinations, other future development sites and the multi-modal transport networks. Understanding this strategic context is critical to developing an effective Transport Strategy and design for Site LG1 to ensure the development is well integrated with the wider community, key destinations and transport networks, will support a 10% modal shift and takes account the location of complimentary developments within Grange Estate and existing social infrastructure.

2.25 Site LG1 is well connected to local pedestrian and cycle networks with the Garden City Greenway, Etonbury Green Wheel, NCN12, Footpath 32 and a number of other permissive footpaths directly serving the site. The site is also situated approximately 2km north of Letchworth Garden City Rail Station (a key commuter link) and town centre which can be accessed in approximately 25 minutes on foot and in approximately 10 minutes by bicycle.

2.26 Arriva Bus Route 55 is the only bus route serving the Grange Estate, south of Site LG1. The route links the Grange Estate with central and eastern Letchworth (including the town centre and rail station), Lister Hospital and central Stevenage. The hours of service are quite restrictive for commuters travelling to/from London. Discussions are ongoing with the NHC, HCC and Central Bedfordshire Council and bus operators to inform the development of a public transport strategy for the site that also benefits the adjacent Grange Estate and connectivity to and from the town centre. It has initially been agreed that the primary street within the site will be designed to accommodate buses with an internal bus turning area also provided.

2.27 Comprehensive accessibility audits were undertaken of key pedestrian and cycle routes between Site LG1 and surrounding key destinations which identified issues and suggested areas of improvement for further consideration by local authorities as part of the strategic master planning process. An evaluation has also been undertaken of transport opportunities and constraints, together with an overview of previous transport studies and how these have informed the emerging multi-modal and transport access strategy, for LG1 including consideration of a sustainable mobility hub.

2.28 Further discussions will be held with the NHC, HCC and Central Bedfordshire Council to inform the development of the strategic masterplan, to ensure it is well integrated with the surrounding area and future development sites, and to scope the methodology for the Transport Assessment and highway modelling studies that will be required to support the future planning application for the site.

2.29 The location of the primary access has been agreed in principle on Norton Road c200m to the east of the double hedgerow which includes NCN12, the Greenway and Etonbury Green Wheel. There has recently been a submission to the HCC Speed Management Group to reduce the speed limit on Norton Road from 60mph to 50mph, which has been approved. A subsequent Traffic Regulation Order (TRO) submission will be made for this.

2.30 Discussions are currently ongoing with settle in relation to safeguarding space within their site for the Western Way secondary vehicle access.

The transport and accessibility audit considers LG1's location within the wider setting in relation to key destinations, other future development sites and potentials for sustainable travel.

References:

8. Steer (June, 2023) Transport & Accessibility Report.

Key design implications	
1	Adopt an integrated multi-modal approach to LG1's movement and transport networks stitched into the wider Grange Estate and Letchworth Town Centre; providing a sustainable extension to Letchworth that facilitates opportunities for active travel, supporting healthy lifestyles and a 10% modal shift.
2	Create a mobility hub on LG1 for facilitating opportunities for easy interchange between sustainable modes of travel with complimentary community amenities. Consider its integration with the Grange Estate, Letchworth town centre and other Letchworth destinations.
3	Protect and enhance the public rights of way network through and around the site and consider opportunities for the creation of safe, direct and legible walking and cycling routes to/from The Grange, Norton, Fairfield Park, Letchworth railway station and town centre
4	Develop a sustainable public transport strategy for the site that also benefits the adjacent Grange Estate and connectivity to and from the Letchworth town centre, in discussions with the NHC, HCC and Central Bedfordshire Council.
5	Create a connected, landscape-integrated, multi-modal street network that prioritises active travel, whilst incorporating appropriate design measures to mitigate rat-running of vehicles through Grange Estate.
6	Consider issues associated with parking overspill near the Grange Recreation Ground (on match days) and wider Grange Estate.
7	Adopt a coordinated approach to a Sustainable Travel Plan with Settle (main landowner in the Grange) and North Herts Council, in relation to upgrading the local cycling and pedestrian networks, through the allocation of S106 contributions.

Figure 3.1
Letchworth Key Destinations and Transport Map

steer

0 500 1,000 m

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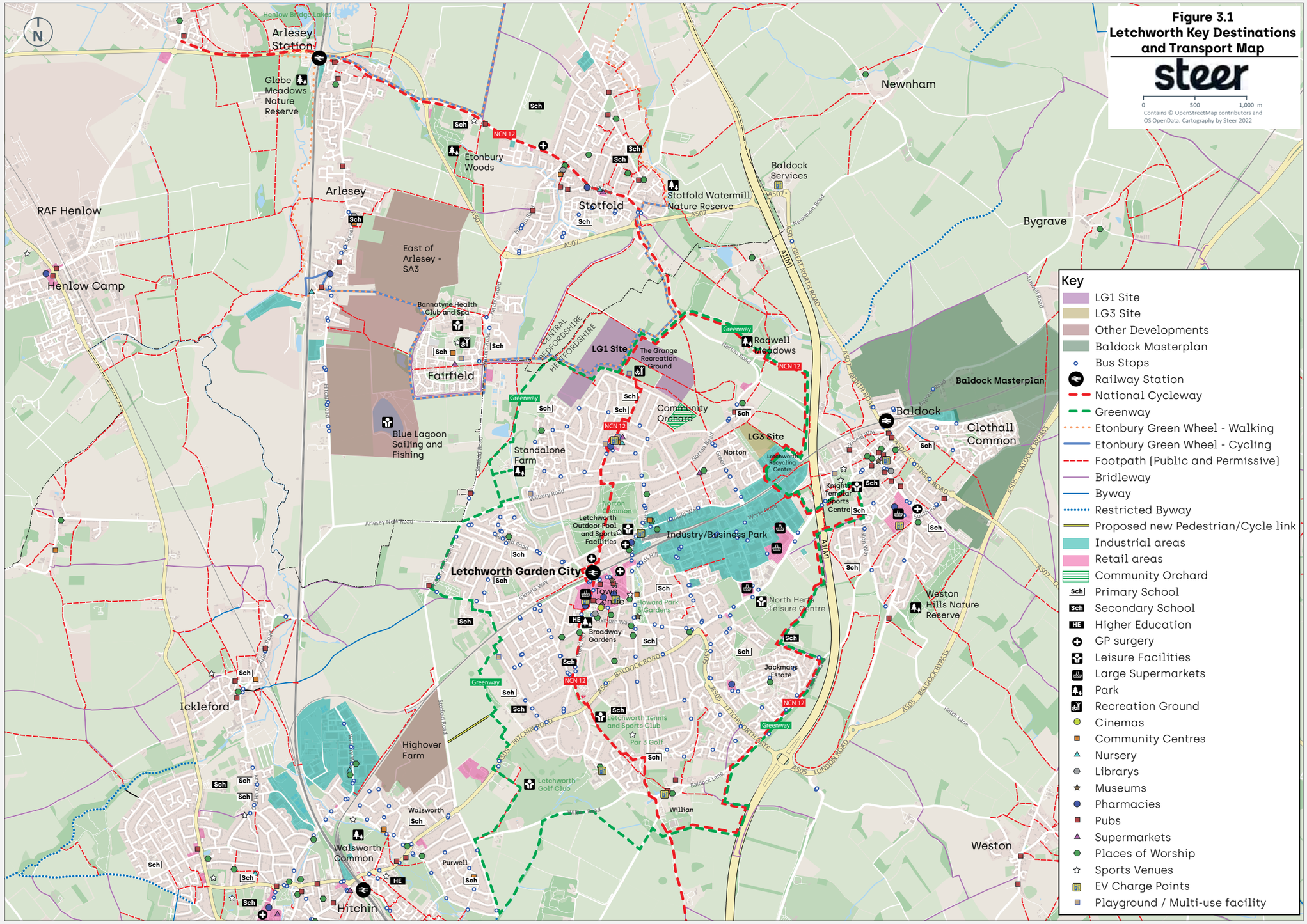


Fig. 2.21: Key Destinations and Transport Map
Transport & Accessibility report, June 2023, p.17

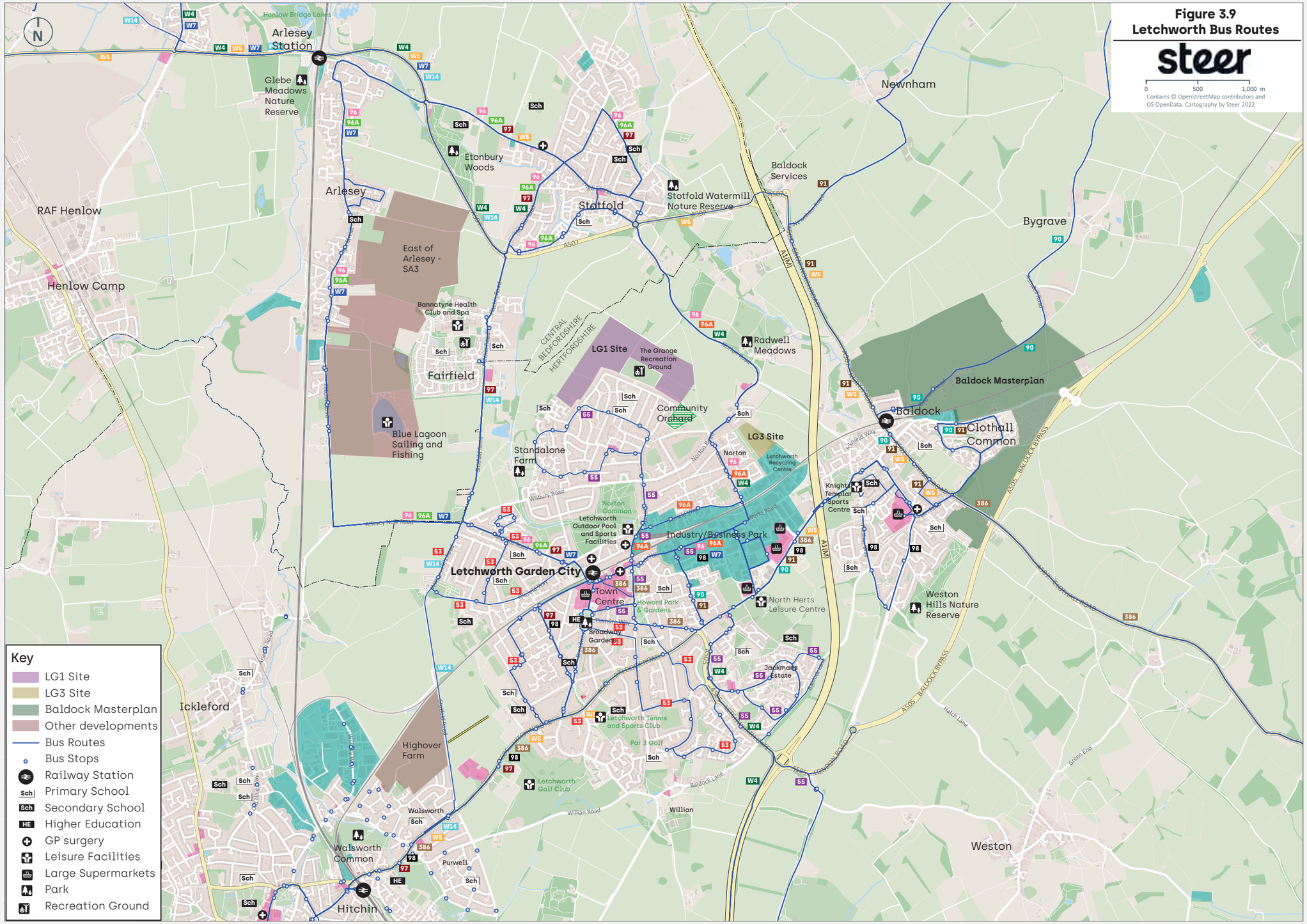


Fig. 2.22: Bus Routes
Transport & Accessibility report, June 2023, p.29

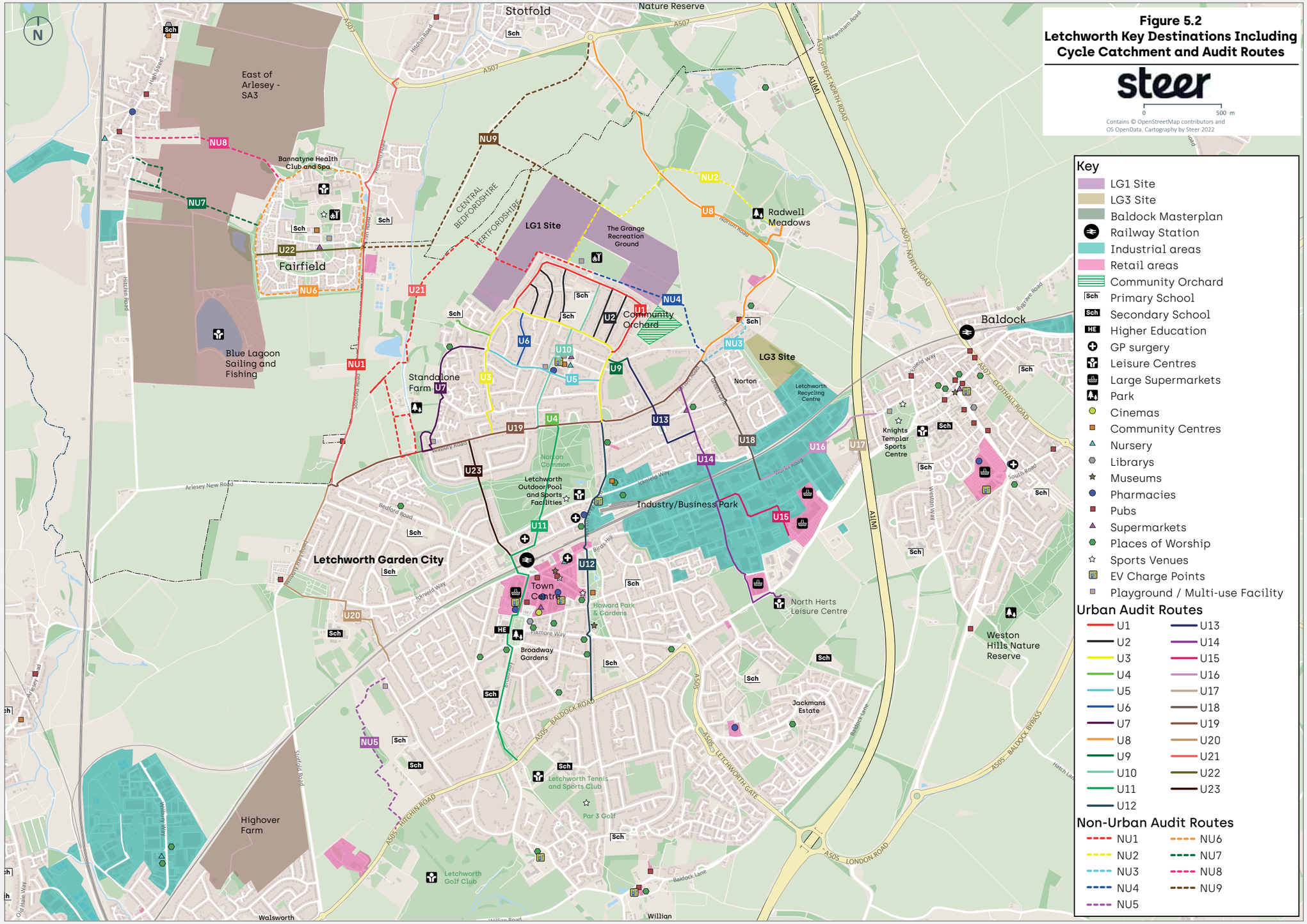


Fig. 2.23: Key Destinations including Cycle Catchments and Audit Routes
Transport & Accessibility report, June 2023, p.62

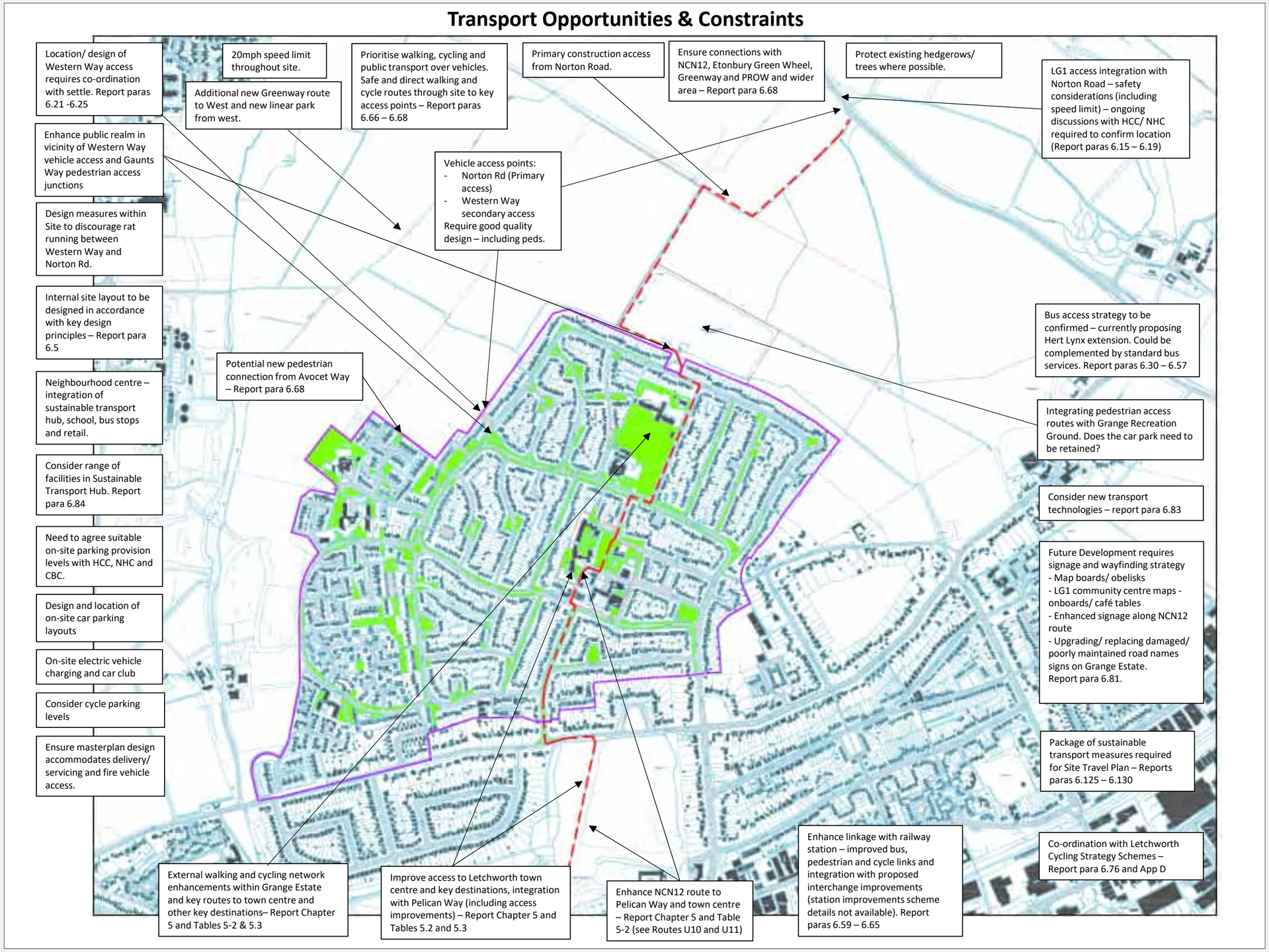


Fig. 2.24: Transport Opportunities and Constraints
Transport & Accessibility report, June 2023

Built Heritage

2.31 This Built Heritage Baseline Appraisal has been prepared by Turley to provide relevant and proportionate information to inform the process of design development and support discussion with the local planning authority (Fig. 2.25).[9]

2.32 The Site has no statutory or local built heritage designations. However, there are 32 statutorily listed buildings, 3 conservation areas and 2 scheduled monuments within a 1km radius of the Site. As set out in the NPPF, not all of these heritage assets require assessment in order to determine the heritage impacts of the proposed development.

2.33 An initial scoping exercise was undertaken, which identified that the key heritage assets that will likely require assessment are:

- Letchworth Conservation Area
- Croft Lane (Letchworth) Conservation Area
- Norton Conservation Area
- Norton Old Manor House, Adjoining Barn and Outbuilding and No. 103 Norton Road (Grade II Listed)

Heritage Asset	Contribution of the Site to overall heritage significance
Letchworth Conservation Area	Negligible
Croft Lane (Letchworth) Conservation Area	Very Limited
Norton Conservation Area	Limited
Norton Old Manor House, Adjoining Barn and Outbuilding and No. 103 Norton Road (Grade II Listed Buildings)	Very Limited

2.34 A robust and proportionate assessment of the heritage significance of the above assets, including the contribution of setting, and the Site as an element of setting was undertaken.

2.35 In terms of the contribution of the Site, the conclusions of the assessment demonstrate that the Site is less sensitive in terms of the surrounding built heritage context. This also means that the potential impacts of the proposed developments on the overall heritage significance of these assets is also likely to be of a similar, limited scale, albeit this will need to be robustly and proportionately assessed as part of a full heritage impact assessment to accompany the outline planning application.

2.36 There are also opportunities to preserve, retain and create positive aspects of the Site in relation to these identified heritage assets such as:

- Retaining existing, identified historic field boundaries within the Site and situating development plots within this framework.
- Respecting and following the principles of the Garden City movement – i.e., low rise, low density development with a focus on green open space – within the new residential development.
- Taking opportunities to locate key routes and open spaces within the development to take advantage of the incidental views surrounding heritage assets, particularly towards the culpae/spire of Fairfield Hospital/Church (both Grade II listed buildings) and the tower of St Nicholas's Church (Grade II listed building).

The built heritage assessment concludes that LG1 is less sensitive in terms of the surrounding built heritage context, albeit this will need to be robustly and proportionately assessed as part of a full heritage impact assessment to accompany the outline planning application.

Key design implications	
1	Manage and mitigate visual sensitivities with surrounding settlements, particularly Fairfield Park, through tree and hedgerow planting along the western edge of the peripheral green belt boundary.
2	Maintain and frame key views towards locally prominent landmarks, particularly towards the culpae/spire of Fairfield Hospital/Church (both Grade II listed buildings) and the tower of St Nicholas's Church (Grade II listed building).
3	Include a blend of formal and informal green open spaces within the residential development, created through variations in massing, densities, built form and open space configurations, rooted in an understanding of the Letchworth's landscape and townscape character.
4	Retain existing, identified historic field boundaries (mostly along existing hedgerows) within the Site and situating development plots within this framework.

References:

9. Turley (February, 2023) Built Heritage Baseline Appraisal.

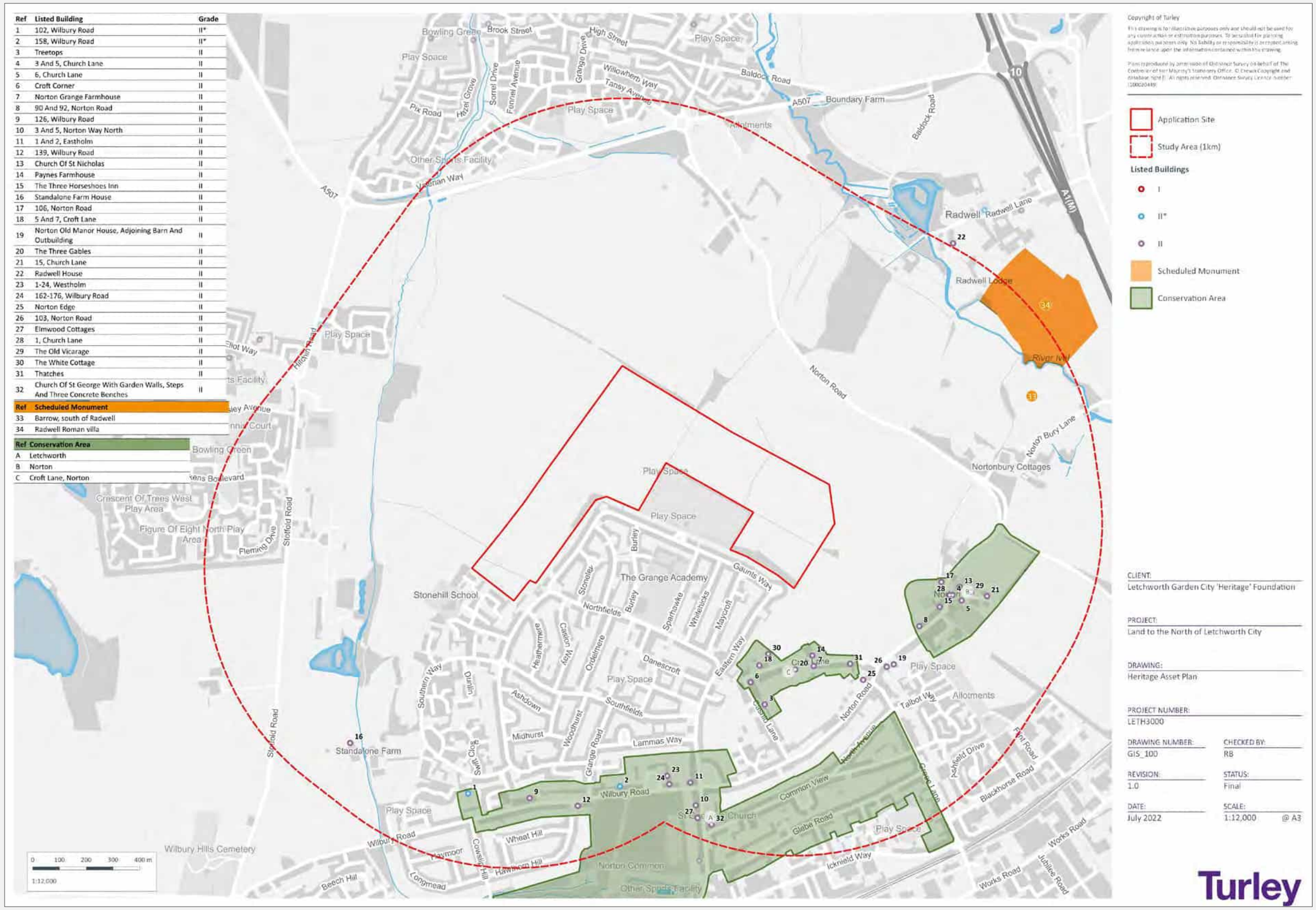


Fig. 2.25: Heritage Asset Plan
Built Heritage Baseline Appraisal, February 2023, p.50

Note: Please refer to the Hedgerow assessment on p.15&18 for a combined assessment of the heritage and ecological value of the existing hedgerows.

Archaeology

2.37 Wardell Armstrong LLP (WA) undertook an archaeological evaluation of the site by trial trenching (Fig. 2.26).[10] The evaluation is intended to highlight areas of archaeological potential and to inform the development of a site masterplan prior to the submission of a future outline planning application.

2.38 The archaeological work was undertaken between the 7th October 2022 and the 13th January 2023 and comprised the excavation of 233 trenches. The investigation revealed considerable evidence for middle to late Iron Age and Romano-British activity – in addition to comparatively limited evidence for late Neolithic to early Bronze Age, late Bronze Age to early Iron Age, and medieval activity.

2.39 Three principal zones of activity were encountered in areas that were identified as being of particular interest following a previous geophysical survey in 2021.

2.40 The middle to late Iron Age activity was represented by structural remains in the form of clusters of postholes and a probable ring gully, two ring ditches probably best described as penannular enclosures, and several ditches. Modest assemblages of pottery, animal bone and daub were found in association with the middle to late Iron Age features.

2.41 Romano-British activity was represented by several ditches and an area of probable agricultural 'lazy beds'. Notably, metal detecting near the eastern limit of a large system of enclosures that was identified during the geophysical survey, which appears to have been serviced by a trackway or driveway, recovered numerous coins and metal objects of Romano-British date.

2.42 The relationship of the development with areas of interest will now be assessed and reflected in the master planning of the scheme, however, WA's view is that the archaeology is not of such significance that HCC will require any preservation in situ as an absolute constraint to consider in the masterplan. But, the archaeology is relatively shallow and HCC would expect that any parts of these areas which are eventually subjected to any form of development will instead require open-area excavation as mitigation, probably by condition on planning consent.

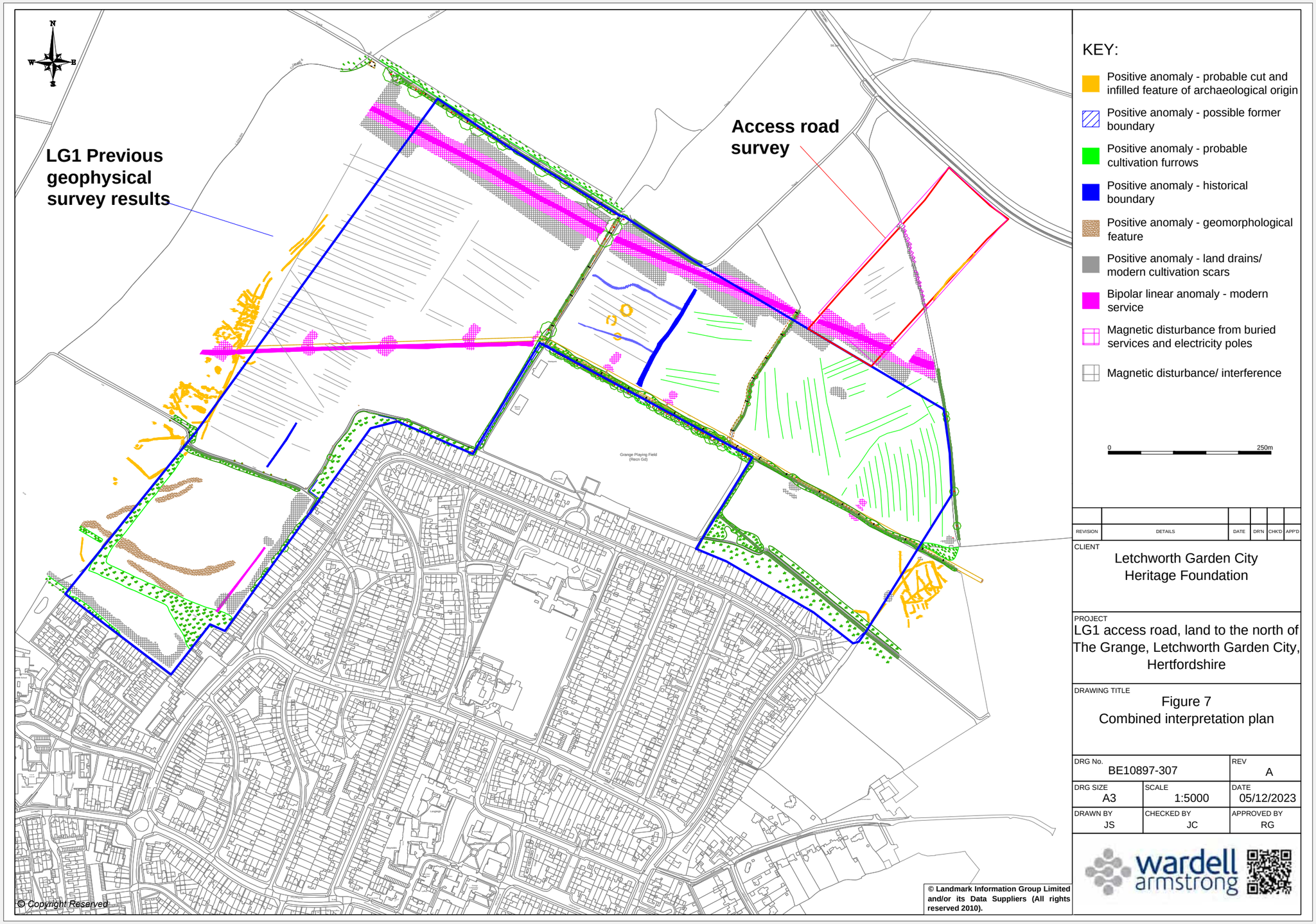
2.43 Between 27th and 29th November 2023, Wardell Armstrong LLP also undertook an archaeological desk-based assessment and a magnetic gradiometer survey to help determine the presence/absence, nature and extent of archaeological remains within the proposed access route for the 'LG1' development from Norton Road (Fig. 2.26). The survey identified a single probable ditch feature of possible archaeological origin indicating that the area of archaeological interest does not extend further into the Site or the footprint of the proposed road.

In terms of the site's archaeology, consultant advice is that findings are not of such significance that HCC will require any preservation in-situ as an absolute constraint. Furthermore, areas of archaeological interest do not extend futher into the footprint of the proposed link route from Norton Road.

Key design implications	
1	Provide opportunities for an improved understanding of cultural assets discovered from archaeological investigations through interpretation using art, sculpture and heritage trails anchored around new public realm. Use this as an opportunity to engage with both existing and new residents in a variety of creative art and design programmes, cultivating a shared sense of local distinctiveness.
2	Consider implications of the archaeology that is relatively shallow. Parts of these areas which are eventually subjected to any form of development might require open-area excavation as mitigation, probably by condition on planning consent. This may also have implications on the nature of landscaping and character of the proposed attenuation basins.
3	There are no design implications in terms of any archaeological areas of significance that requires consideration within the footprint of the proposed link road from Norton Road into the northern boundary of LG1.

References:

10. Wardall Armstrong LLP (March, 2023; v1.0) Archaeological Evaluation Report, Version 0.1.



KEY:

- Positive anomaly - probable cut and infilled feature of archaeological origin
- Positive anomaly - possible former boundary
- Positive anomaly - probable cultivation furrows
- Positive anomaly - historical boundary
- Positive anomaly - geomorphological feature
- Positive anomaly - land drains/ modern cultivation scars
- Bipolar linear anomaly - modern service
- Magnetic disturbance from buried services and electricity poles
- Magnetic disturbance/ interference

0 250m

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT
Letchworth Garden City Heritage Foundation

PROJECT
LG1 access road, land to the north of The Grange, Letchworth Garden City, Hertfordshire

DRAWING TITLE
Figure 7
Combined interpretation plan

DRG No.	REV
BE10897-307	A

DRG SIZE	SCALE	DATE
A3	1:5000	05/12/2023

DRAWN BY	CHECKED BY	APPROVED BY
JS	JC	RG

wardell armstrong

Fig. 2.26: Archaeological Combined Interpretation Plan
Archaeological Evaluation Report, March 2023, p.265

Air quality and odour assessment

2.44 WSP undertook a review of relevant air quality data and local mapping data key air pollutant sources.[11]

2.45 It found that air quality is mainly influenced by road transport from Norton Road, A1(M) motorway and the A507. It is understood that there are no industrial pollution sources within 2km of the site. There are a number of human and ecological receptors that need to be considered. These include dwellings on the Grange (primarily Western Way and Gaunts Way) and schools on the Grange and local nature reserves at Norton Common, Ivel Springs and Weston Hill.

2.46 When completed, it is expected that occupiers of the development will not be subject to an unacceptable decrease in air quality from the existing road network, also expected to improve over time due to changes towards electric vehicles.

2.47 In terms of odour from the nearby sewage works, these are 480m from the site and there is no record of complaints from Letchworth residents to NHC since 2016 and is unlikely to be a constraint on the proposed development. However, this is something that has been discussed at community engagement events and is a requirement of Policy SP15, meaning that there will be a detailed odour assessment as part of a future planning application air quality assessment.

2.48 Consideration is required on the impact on existing receptors from the increase in vehicle movements arising from the development. This will be linked to the level of sustainable transport options, electric car charging points and vehicle management and access points. There are also opportunities in the master plan to mitigate impacts. During the development's construction phase, there should be a management strategy that ensures that dust is minimised and managed to avoid harm to residents.Once further detail on the development is known, a further assessment will be necessary to ensure that the development does not lead to harm to human and ecological receptors.

Ground conditions

2.49 A desk top ground investigation and site visit was undertaken by Subadra.[12,13]

2.50 The site is an area of high environmental sensitivity which primarily comprises head deposits (superficial deposits of a structureless and rubbly character), glacial till (the sediment deposited by a glacier) and chalk - a principal aquifer. Groundwater is likely to be present at 7m and more below ground level and the site is located within a Drinking Water Safeguard Zone for surface water.

2.51 Reviewing the history of the site found that it has been in agricultural use since the 1880s. There is a low risk of hazardous gas, which should be reviewed in more detail when the detailed scheme for each phase evolves.

2.52 Overall, no evidence of any likely source of soil and/ or groundwater contamination or potentially contaminative activities was found at the site. No viable off-site sources of potential contamination have been found within 1km of the site.

2.53 Further geotechnical investigation will be required as part of the detailed design of the scheme, along with the monitoring of any potential hazardous gases. A flood risk assessment is being undertaken, due to the size of the site, although it is within Zone 1, which is a low risk of flooding.

2.54 Infiltration Testing: This surveyed the underlying soil conditions via a series of test pits to test soil conditions and by adding water, the levels of which were monitored. This also included a review of public utilities.

2.55 This found there to be a thin layer of topsoil, clay with gravels, with some pits having a layer of sand. At 3m and above showed chalk. When assessed against Building Research Establishment guidance, the use of standard soakaways is unlikely to be a viable drainage solution.

Key design implications - Air quality/ odour	
❶	There are no significant design implications in terms of air quality because the technical assessment concludes that occupiers of the development will not be subject to an unacceptable decrease in air quality from the existing road network.
❷	There are no significant design implications in terms of odour from the nearby sewage works (480m from the site) because there is no record of complaints to NHC since 2016 and is unlikely to be a constraint on the proposed development. However, this has been discussed at community engagement events and is a requirement of Policy SP15, meaning that there will be a detailed odour assessment as part of a future planning application air quality assessment.

Key design implications - Ground conditions	
❶	Due to the site's soil conditions, the use of standard soakaways is not a viable drainage solution.
❷	There are no significant design implications in terms of soil and/or groundwater contamination. The study found no likely source to contribute to this.
❸	There are no significant design implications in terms of geotechnical constraints on the site. Further geotechnical investigation will be required as part of the detailed design of the scheme, along with the monitoring of any potential hazardous gases.

References:

11. WSP (November, 2022) Air Quality Constraints Assessment.

References:

12. Subadra (October, 2022) Infiltration Test Report & Phase 1.
13. Subadra (October, 2022) Geo-Environmental Assessment Report.

Noise

2.56 Spectrum was instructed to undertake a Stage 1 noise risk and impact assessment on the site.[14]

2.57 An ambient noise survey was undertaken to measure continuous noise over 8 days and night and there was also attended short term measurements to assess variation in noise. These were also compared with DEFRA noise maps for the A1(M), which did not correlate well, due to the lack of easterly winds.

2.58 This was therefore factored into the assessment. These surveys were then considered against the proposed development. This found that the new school is unlikely to suffer from noise from the motorway unless located in the North East boundary of the site, which could be attenuated in the building design.

2.59 For the dwellings the assessment found that the risk of noise to the proposed dwellings would be negligible in the greater proportion of the site and low for a small proportion of the site closest to the motorway close to the north east boundary.

2.60 There is an opportunity to adopt a 'Good Acoustic Design Process'. This may entail standard glazing on these dwellings, to meet potential night-time noise from the motorway. This would lead to noise standards being comfortably met. Gardens will meet recommended ranges without further measures.

The new school is unlikely to suffer from the noise from the motorway unless located in the North East boundary of the site.

References:

14. Spectrum (September, 2022; Rev 1) Initial Site Noise Risk and Impact Assessment.

Utilities

2.61 WSP was instructed to undertake a utilities survey[15] to understand the capacity and likely implications of the LG1 development (Fig. 2.27).

2.62 Gas, water, electricity and telephone/internet statutory undertakers were consulted using the likely scope of development in accordance with the SP15 policy in the Local Plan. This exercise indicated that in the opinion of the undertakers that there is capacity in the network to serve the development, subject to standard interventions as part of the development.

2.63 Investigations have been made on the re-location of the gas pipeline that runs through the northern section of the site, where it was confirmed by Cadent that this is feasible but would be subject of an additional cost as part of the development.

2.64 There is an overhead powerline on the site and UK Power confirmed that this can be buried as part of the development, subject to additional cost if desirable as part of the development.

2.65 Affinity Water confirmed that there is capacity, but this will be the subject of a further query following consultation responses from Grange residents regarding low water pressure.

There is capacity in the existing network (Gas, water, electricity and telephone/ internet service lines) to serve the development.

References:

15. WSP (January, 2023) Utility Statement.

Key design implications - Noise assessment	
1	Avoid locating the school along the site's north-east boundary to avoid any implications of noise from the motorways and would need to be attenuated in the building design. Therefore, the masterplan should seek to avoid the school being located there, if possible.
2	There are no significant design implications for the residential dwellings in terms of noise. The study concludes that there will be negligible noise impact to the greater proportion of the site and low for a small proportion of the site closest to the motorway close to the north-east boundary. There is an opportunity to adopt a 'Good Acoustic Design Process', leading to noise standards being met comfortably across the site.
3	There are no significant design implications for the gardens. The study concludes it will meet the recommended noise ranges without further measures.

Key design implications - Utilities statement	
1	Base the strategic masterplan on the assumption that the existing overhead poweline it will be buried. UK Power confirmed that it can be buried as part of the development, subject to additional cost if desirable.
2	There are no significant design implications in terms of providing for key services line (gas, water, electricity and telephone/ internet) other than standard interventions as part of the development.
3	Connect the development to the nearby Sewage Treatment Plant, based on capacity studies of the existing facility.

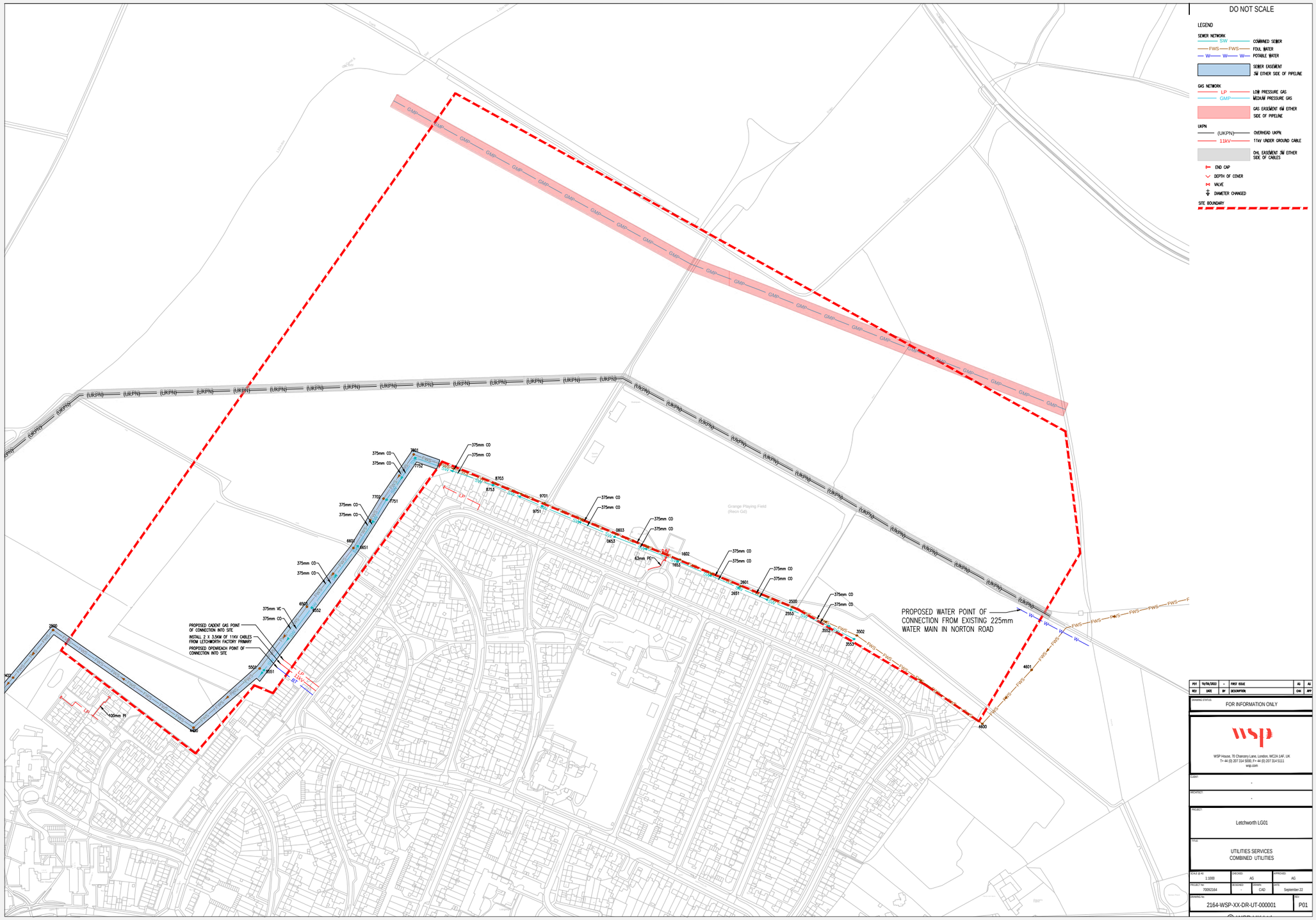


Fig. 2.27: Utilities services - Combined Utilities
WSP, February 2023, 2164-WSP-XX-DR-UT-000001

Green Infrastructure Audit

2.66 Peter Neal Consulting and ERE have prepared jointly with the Letchworth Garden City Heritage Foundation (LGCHF) a Green Infrastructure Audit for LG1 (Fig. 2.28-2.33).[16] The scope was agreed with NHC with advice from Place Services (Essex County Council) and included a desk-based review of relevant planning studies and an extensive set of site surveys undertaken between January and July 2023. Analytical GIS mapping was undertaken by LGCHF and Peter Neal Consulting. This assessment of existing provision of green infrastructure and public open space follows NHC planning standards that are based on Fields in Trust Guidelines for Outdoor Sport and Play in England (FIT/2020). A summary is yet to be added. The GI Audit Report is complete.

2.67 An agreed 1.2km offset from the boundary of LG1 was used as the catchment for the audit that is the maximum FIT access standard for outdoor sports facilities. This catchment has included publicly accessible open spaces in both North Herts and Central Beds that were mainly 0.2 Ha or larger in size, except for some children's play areas that commonly have a smaller area. The audit included the following open space typologies: Amenity Green Spaces (AG); Allotments (AL); Churchyards & Burial Grounds (CC); Children's Play (CP); Natural & Semi-natural Green Space (NG); Parks and Gardens (PG); and Outdoor Sports Facilities (SF). The audit included an outline assessment of quality using a 25-point scale based on Green Flag Award criteria. An analysis of accessibility has been undertaken to illustrate the spatial distribution for each typology using current FIT access standards and these are shown on the accompanying plans.

2.68 In total 91 sites were surveyed with an approximate total of 168 Ha - 70 sites (135 Ha) are within North Herts and 21 sites (33 Ha) are within Central Beds. In total 16 sites were recorded as high quality, 67 sites as medium quality and 8 sites as low quality. Average standards of quality are generally similar across both local authorities when taking all typologies into account whilst children's play recorded the highest number of low-quality sites. The spatial mapping analysis for each typology indicates that the LG1 site is only partially served by the current provision of open spaces. The site has good access to Outdoor Sports Facilities due to the proximity of the Grange Recreation Ground. The site also has good access to Natural and Semi-Natural Green Space as there are several sites within close proximity (e.g., Radwell Meadows and Woodland and the Croft Lane Community Orchard). LG1 has limited access to existing Children's Play facilities and is poorly served by existing facilities (LAPs and LEAPs). The site is better served by MUGAs and other facilities for teenagers due to the proximity of the facilities in the Recreation Ground, although these are of poor quality. LG1 also has very limited access to Amenity Green Space as much of this typology is located within the Grange Estate and just beyond the 480m access standard.

2.69 The Green Infrastructure Audit provides an initial benchmark for establishing a preliminary level of open space provision in new development based on FIT standards that are calculated using a projected population of 2,160 new residents on LG1 when fully developed (on average one house has 2.4 people). The following standards of provision have been used in developing the masterplan framework - 0.54 Ha for Children's Play; 1.73 Ha for Parks and Public Gardens; 1.30 Ha for Amenity Green Space; 3.89 Ha for Natural and Semi-natural green space; and 0.65 Ha for Allotments. The provision of Playing Pitches and Multi-Use Games Areas (MUGAs) have not been included as these are already provided in the adjacent Recreation Ground. Further detail and the relevant access standards for each typology are provided in the full report.

Provision standards used in the masterplan framework - 0.54ha for children's play; 1.73ha for parks and public gardens; 1.30ha for amenity green space; 3.89ha for natural/semi-natural green space; and 0.65ha for allotments.

References:

16. ERE and Peter Neal Consulting (July 2023) Green Infrastructure Audit.

Key design implications	
❶	A green infrastructure network should be established across the site that connects existing environmental assets, including hedgerows and shelterbelts, with a variety of open space typologies.
❷	Future open space provision should meet or exceed FIT planning standards for amenity green space, natural spaces, play areas and parkland to provide a set of connected and multifunctional spaces supporting recreation, active travel and biodiversity.
❸	The quality and stature of the Greenway should be enhanced within LG1 through the creation of a linear parkland that will connect with the Grange Rec and provide an additional environmental buffer to existing areas of housing adjacent to the site.
❹	The provision of children's play areas should include up to three LEAPs, ensuring that the 400m access standard covers the development area. NHC has advised that there should be limited provision LAPs across LG1 and it is proposed a NEAP should be located within the Grange Recreation Ground to benefit both existing and new residents.
❺	Allotment provision will require 0.65 Ha to meet the Local Plan (FIT) standard within LG1. It is recommended that this provision is split between the east of LG1 to strengthen the green buffer with Norton Village Conservation area and compliment the Croft Lane community orchard. Provision on the west of the site should be located to strengthen the buffer with the Grange Estate and address current deficiency in wider access to allotments within this area.

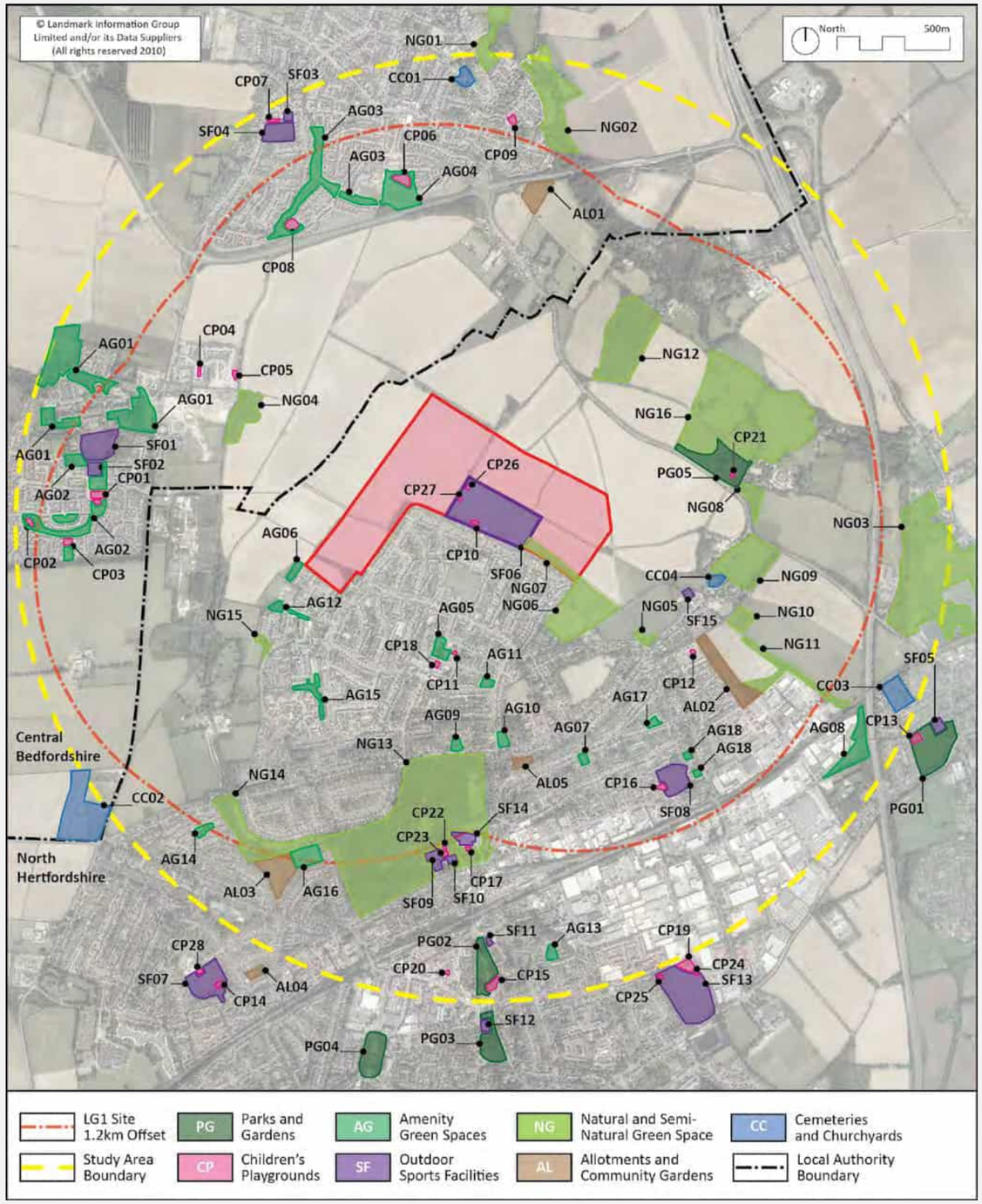


Fig. 2.28: Green Infrastructure Audit locations of sites
Green Infrastructure Audit, July 2023, p.23

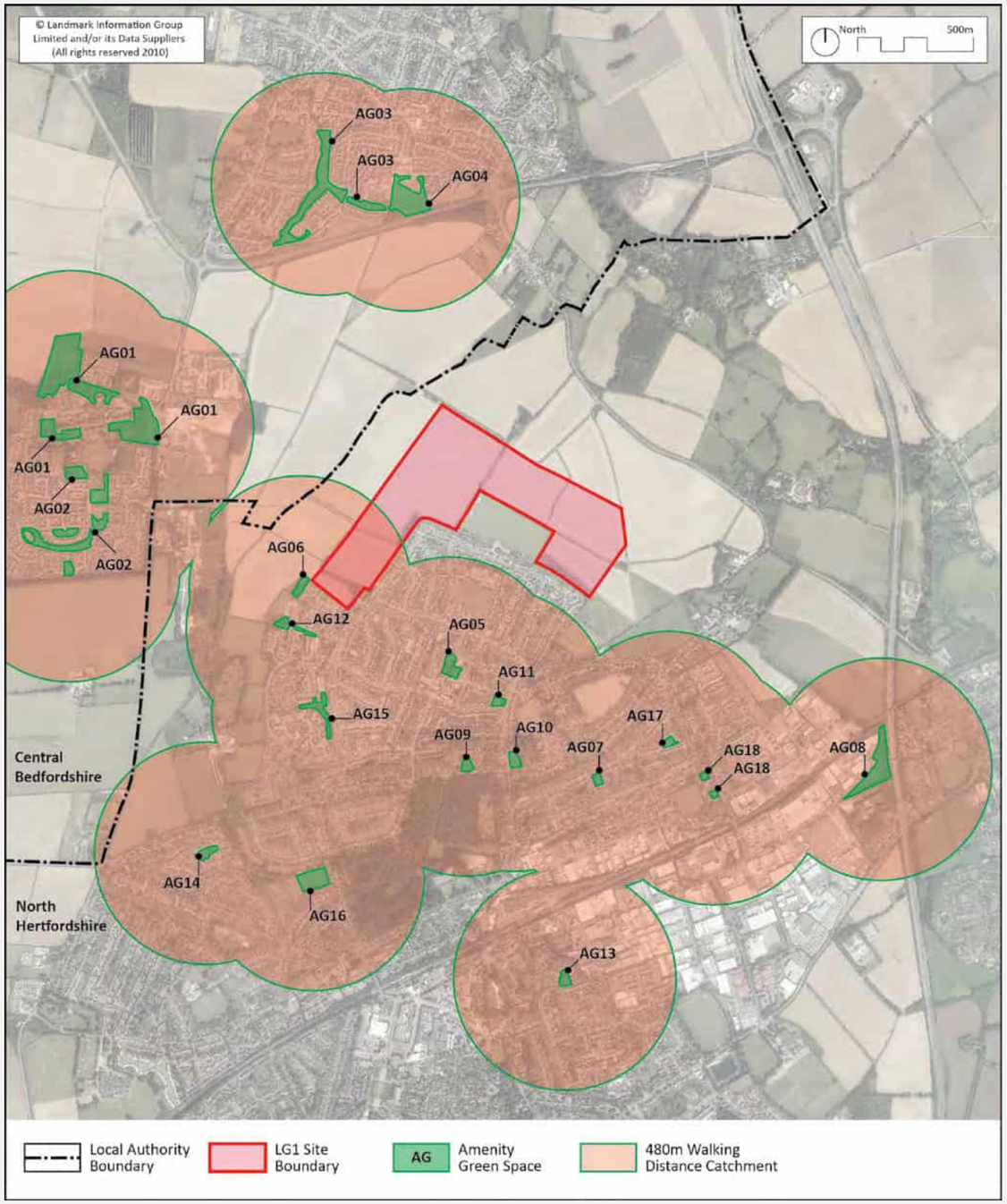


Fig. 2.29: Amenity green space accessibility analysis (480m)
Green Infrastructure Audit, July 2023, p.28

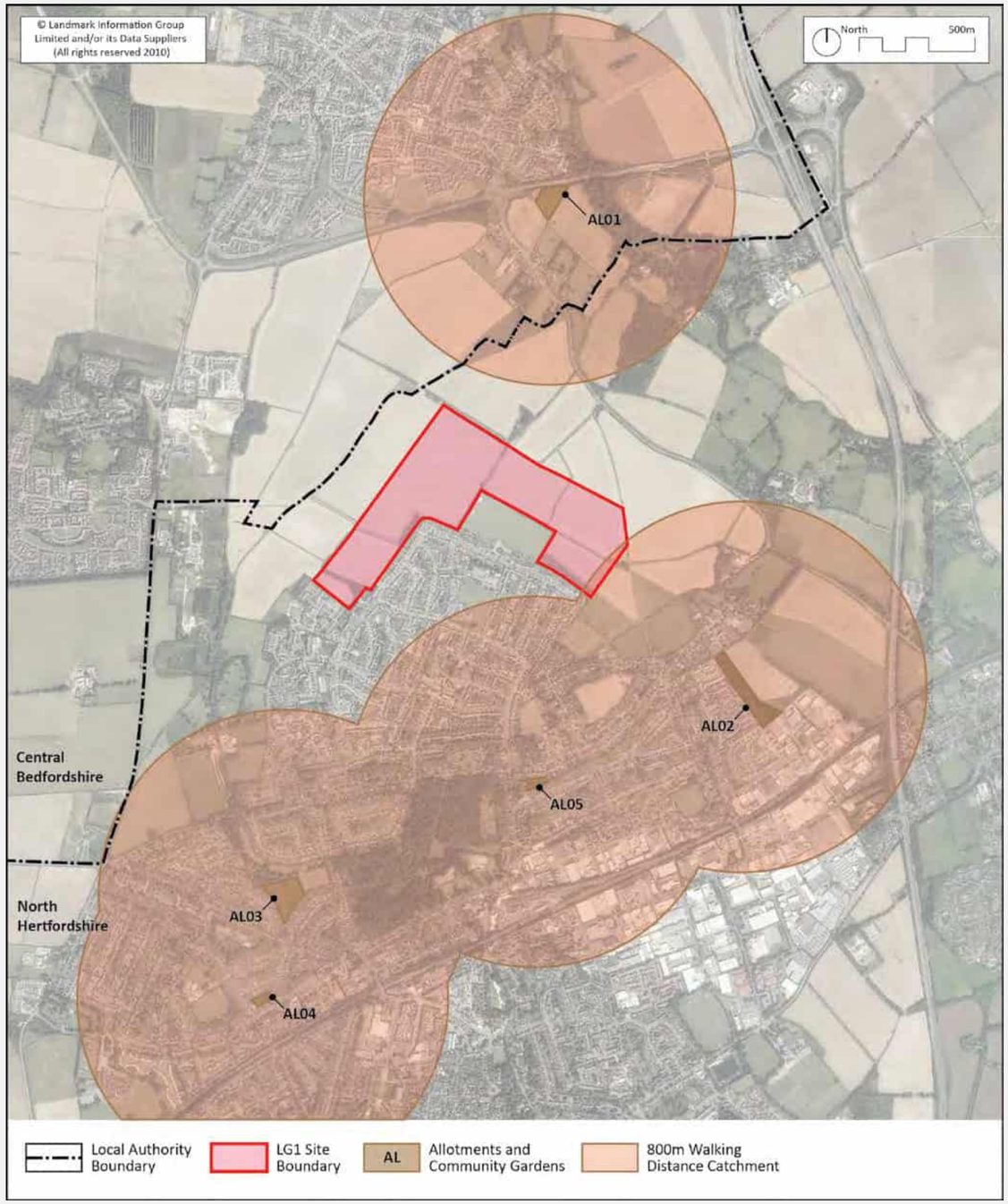


Fig. 2.30: Allotment accessibility analysis (800m)
Green Infrastructure Audit, July 2023, p.29

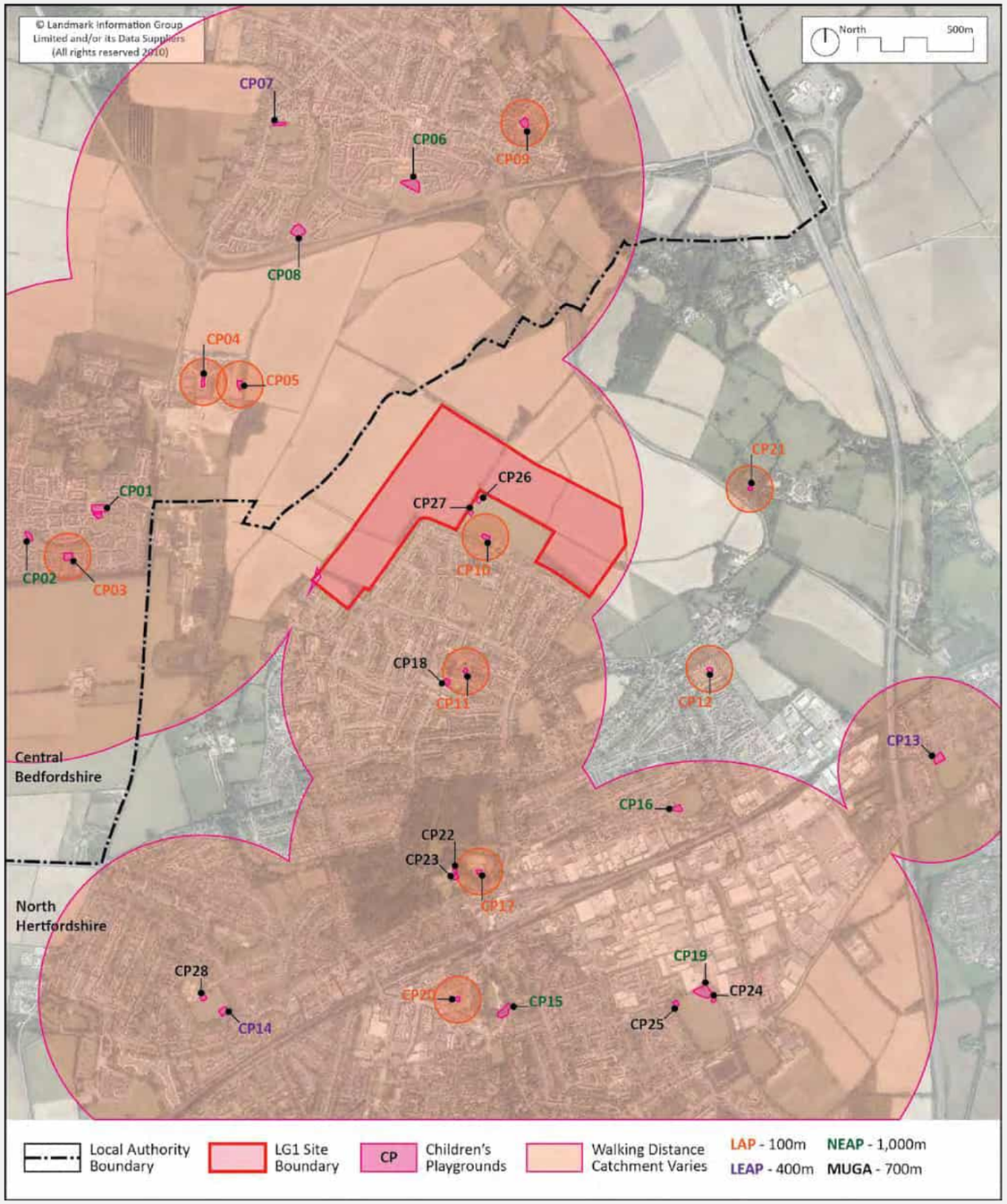


Fig. 2.31: Children's play space accessibility analysis
Green Infrastructure Audit, July 2023, p.30

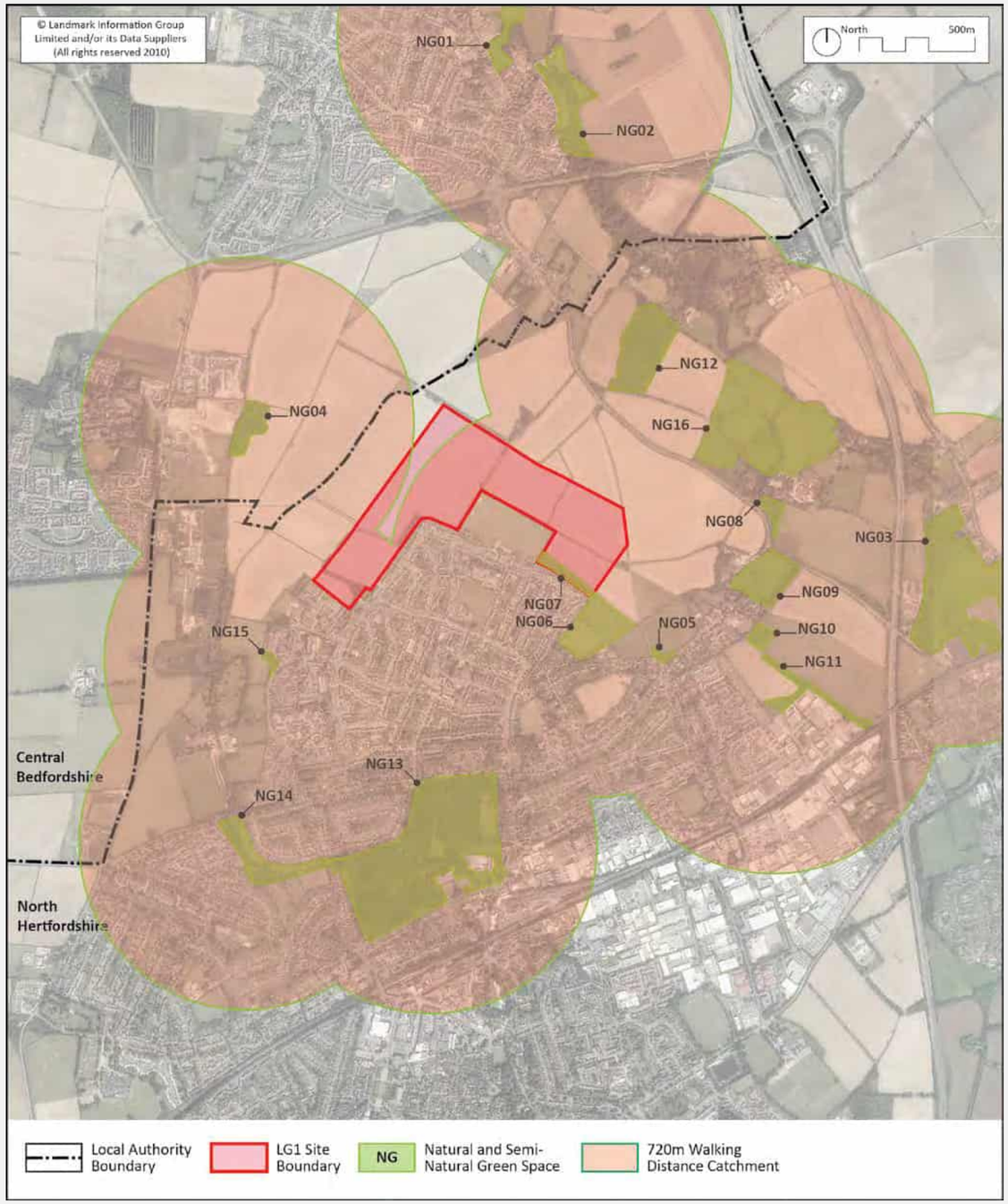


Fig. 2.32: Natural and semi-natural green space accessibility analysis (720m)
Green Infrastructure Audit, July 2023, p.31

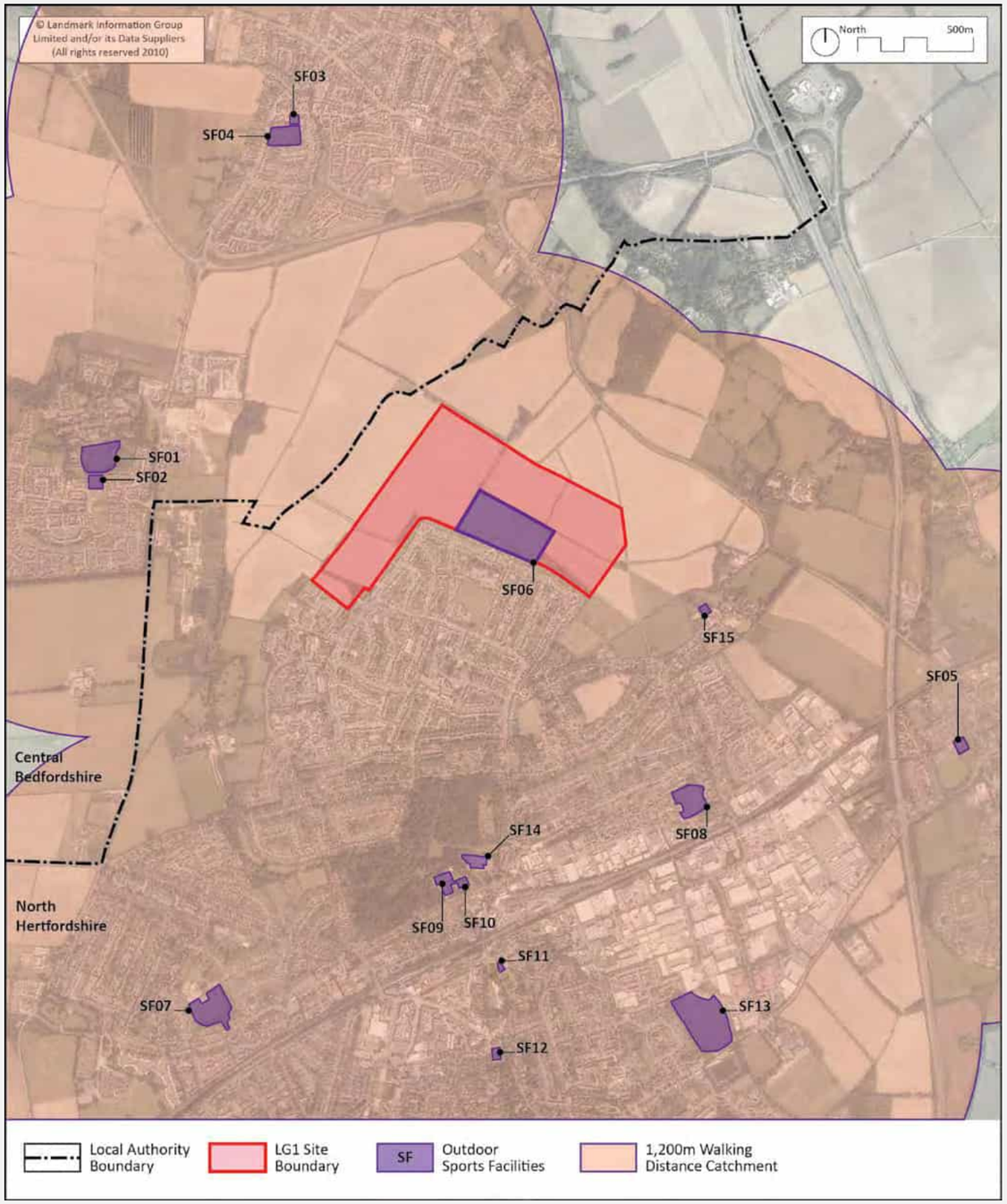


Fig. 2.33: Sports facilities accessibility analysis (1200m)
Green Infrastructure Audit, July 2023, p.33

Urban design analysis, townscape assessment and characterisation study

2.70 EcoResponsive Environments (ERE) have undertaken an urban design analysis (Fig. 2.34), townscape assessment and characterisation study for the LG1 development site and its surrounding context.[17] The scope was agreed with North Herts Council and includes a review of relevant planning studies and polices, desk-based research, site visits and coordination with various baseline studies being undertaken by the appointed consultant team.

2.71 The study is structured in four sections:

- Historical development
- Landscape and environmental character
- Settlement type and form
- Built form and architecture

2.72 Historical development includes an understanding of Letchworth's evolution, in order to inform the future development of LG1 through the master planning process. It focuses on understanding the reasons why Letchworth's character has changed over time, as well as identifying the more constant factors which give the place the historical continuity that underlies its townscape identity.

2.73 Landscape and environmental character includes a review of the strategic green infrastructure of the wider context and LG1's landscape structure including topography, hydrology and geology, views and visibility, footpaths, rights of way and access to recreational facilities, ecology and habitat. It concludes the urban design and townscape implications of the local landscape and environmental characteristics to inform LG1's landscape framework.

2.74 Settlement type and form includes an analysis of the urban structure of surrounding settlements including Stotfold, Fairfield, Arlesey, Baldock and Letchworth to inform LG1's layout and form. The assessment focuses on seeking both positive and negative lessons regarding countryside integration, facilitating multi-modal access to uses and facilities, and achieving legible and active street scenes that support sustainability and resilience of development through urban form. Learning from the Garden City principles of town planning, it concludes the urban design and townscape implications of the local settlement type and form characteristics to inform LG1's masterplan layout, form and urban structure.

2.75 Built form and architecture focuses on analysing the evolution of the spatial characteristics of Letchworth's architectural DNA to inform LG1's built form and architecture as a contemporary interpretation of the Garden City principles. Drawing from historical analysis, it includes an assessment of key character areas that are representative of key periods of growth in Letchworth. The analysis focuses on seeking both positive and negative lessons with regards to the spatial configuration of blocks, plot types and building disposition, housing typologies, massing variations, streetscape character and key architectural characteristics.

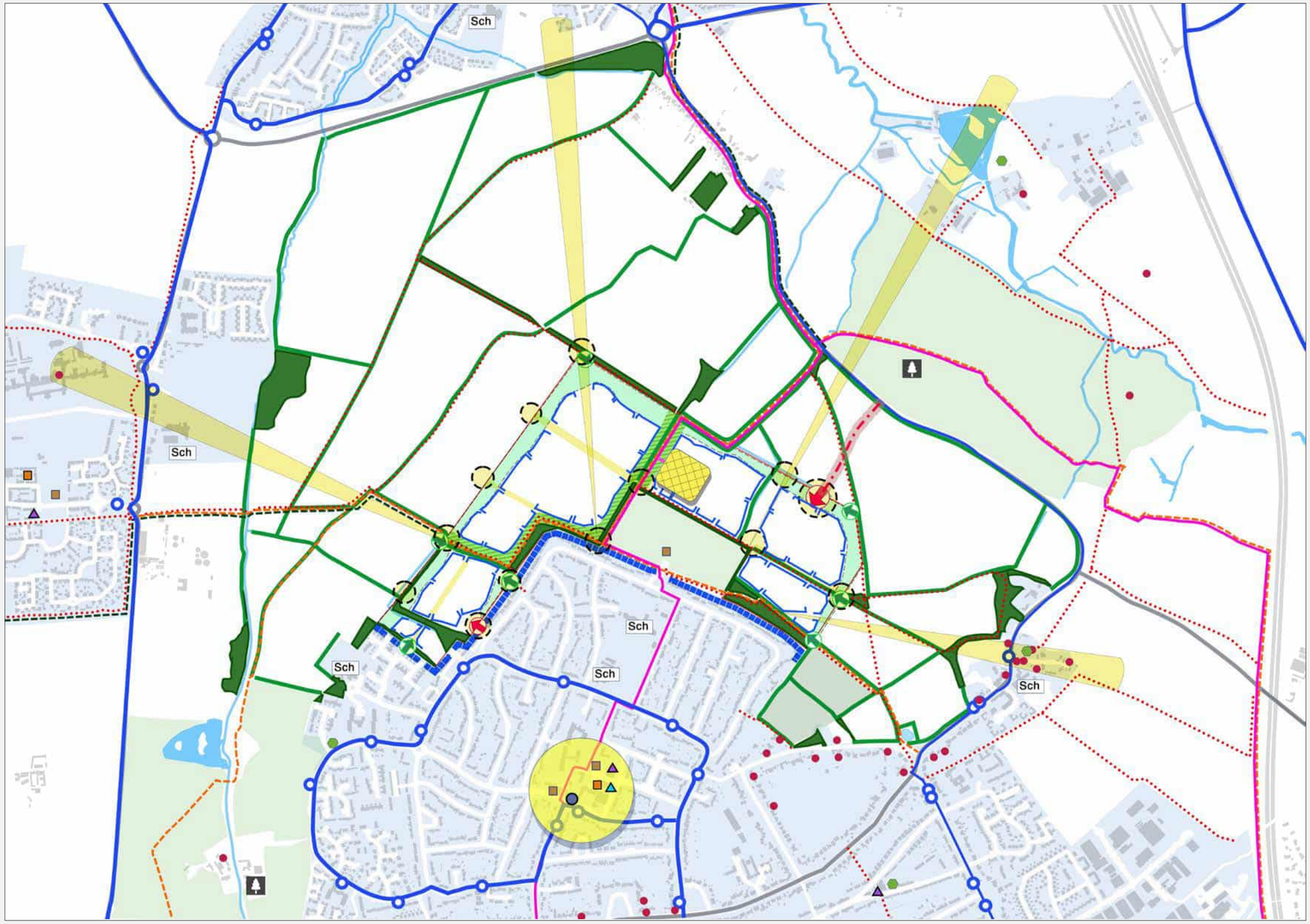
2.76 Cumulatively, the study concludes with a clear distillation of the urban design and townscape implications of the site's local characteristics in relation to its wider context. This encompasses landscape, urban structure, built form and architectural characteristics, to inform the development of LG1's strategic masterplan framework.

The urban design and townscape concludes with a clear distillation of the spatial implications of the site's local characteristics in relation to its wider context. This encompasses landscape, urban structure, built form and architectural characteristics.

References:

17. EcoResponsive Environments (March, 2023) Urban design analysis, townscape assessment and characterisation study.

Key design implications (Must be read in conjunction with implications on p.9-p.36).	
❶	Co-locate and cluster the retail, community centre, mobility hub and school in proximity to the Greenway and Grange Recreation Ground, and in the most accessible location to create the conditions for a vibrant local centre.
❷	Maintain and frame key views to Fairfield, St. Nicholas Church and the countryside.
❸	Establish a sense of arrival/gateway, to/from LG1 from Norton Road, Western Way and Grange Rec with a hierarchy of nodes/vistas along LG1's street and public space networks for easy way-finding.
❹	Create character variation through massing and a diversity of plot/housing typologies rooted in the Garden City townscape planning principles of 'vista, closure, grouping and accent', emphasising a gradual transition from an urban setting to a rural countryside interface i.e. a mix of formal and informal settings.
❺	Support safety of public outdoor spaces by maximising LG1's street and public space networks (including the Grange Rec, Greenway linear park and the peripheral green belt) to have active frontage through built form.
❻	Place key community and civic facilities foregrounded as landmarks of appropriate relative significance and enhance memorability of street intersections through corner buildings designed as minor landmarks and distinguish street typologies through building elements and tree species.
❼	Maintain the privacy of existing Grange Estate properties that back onto the site boundaries by protecting and extending the existing shelterbelts along the eastern and western edges and ensuring appropriate privacy distances between existing and new dwellings.
❽	Locate residential uses/typologies to capitalise and maximise on green views.



	Site boundary
	Garden City Greenway
	National Cycle Network Route 12
	Etonbury Greenwheel
	Footpaths and Right of Ways
	Key nodes and gateways
	Long distant views
	Backs of adjacent plots
	Potential active edges
	Vehicular access point
	Pedestrian/ cycle access point
	Listed structures
	Bus route and stops
	Pelican way local centre
	Potential LG1 neighbourhood centre/ hub
	Grange Receration Ground
	Greenway Linear Park
	Proposed peripheral landscape buffer
	Existing shelterbelts/copses/ hedgerows

Fig. 2.34: Consolidated urban design analysis of key elements and contextual sensitivites in relation the the Grange Estate
Urban Design, Townscape and Characterisation Study, February 2024, p.93

3

Constraints and opportunities

3. Constraints and opportunities

Constraints

Landform and hydrology

3.1 The site is located on high ground to the north of Letchworth and falls gently to the north and west. It drains via existing ditches towards the river corridors of the Pix Brook and River Ivel. Future development should respect the prominent setting and these natural drainage patterns informing the location of the proposed attenuation basins. The Drainage and Flood Risk assessment presents the site as sustainable in terms of flood risk and compliant with the criteria set out in the NPPF.

Existing hedgerows, trees and shelterbelts

3.2 The field boundaries are marked by mature hedgerows, trees and shelterbelts. Several hedgerows are considered important in relation to the Hedgerow Regulations as they mark historic field boundaries and have ecological interest. Future development should respect these natural features and accommodate them wherever possible, minimising the loss of hedgerows, Cat A and Cat B trees together with their Root Protection Zones.

Strategic pathways and cycle routes

3.3 The site is bisected and surrounded by a network of footpaths and cycleways providing access to surrounding areas and a well-used recreation resource. The route of the Garden City Greenway should be protected in the future masterplan along with access to the Etonbury Green Wheel and the National Cycling Network Route 12.

Prominent views and visual sensitivity

3.4 The site provides elevated views to the west of Fairfield Park and the spires of Fairfield Hall. To the east the tower of the Church of St Nicholas is visible and framed by surrounding mature vegetation. The north western boundary of the site is visually sensitive to middle distance views from the settlements of Stotfold, Fairfield, the Hitchin Road and the A507 and the southern boundary is lined with backs of existing residential properties of the Grange Estate. Future development should respect these prominent view and their wider settings.

Access

3.5 Access points from Norton Road and Western Way are the location we are currently working to as indicated in the Transport & Accessibility Report. This however, is subject to agreement with NHC and HCC. Further discussions will be held with the NHC, HCC and Central Bedfordshire Council to ensure that the strategic masterplan is well integrated with the surrounding area and future development sites in terms of access. Key constraints to inform the final choice of the Norton Road access point (from a wider area of search) considers traffic safety and visibility splays, sensitivities associated with the existing landscape and ecological assets, existing landform and drainage implications, and existing pathways and cycle routes. This is currently being investigated in further detail by the consultant team in coordination with NHC and HCC.

Archaeologically sensitive zones

3.6 In terms of site's archaeology, consultant advice is that the findings are not of such significance that HCC will require any preservation in-situ as an absolute constraint. Due to its shallow nature, however, open-area excavation as mitigation might be required by condition on planning consent. Opportunities associated with the site's archaeology are discussed in the following section.

Utility pipelines and associated infrastructure

3.7 Gas, water, electricity and telephone/internet statutory undertakers were consulted using the likely scope of development in accordance with the SP15 policy in the Local Plan. This exercise indicated that there is capacity in the network to serve the development, subject to standard interventions as part of the development. Investigations confirmed that both the gas pipeline and OHL can be relocated/ buried but would be subject of an additional cost as part of the development. Currently we are working on the basis that the gas pipeline remains where it is, whilst the OHL will be buried along the proposed street layout. This will, however, need to be tested for commercial viability.

Initial noise assessment implications

3.8 The noise assessment found that the risk of noise to the proposed dwellings would be negligible in the greater proportion of the site and low for a small proportion of the site closest to the motorway close to the north east boundary. This has implications such as not locating the school in the North Eastern zone of the site. With the adoption of a 'Good Acoustic Design Process', however, noise standards can be comfortably met.

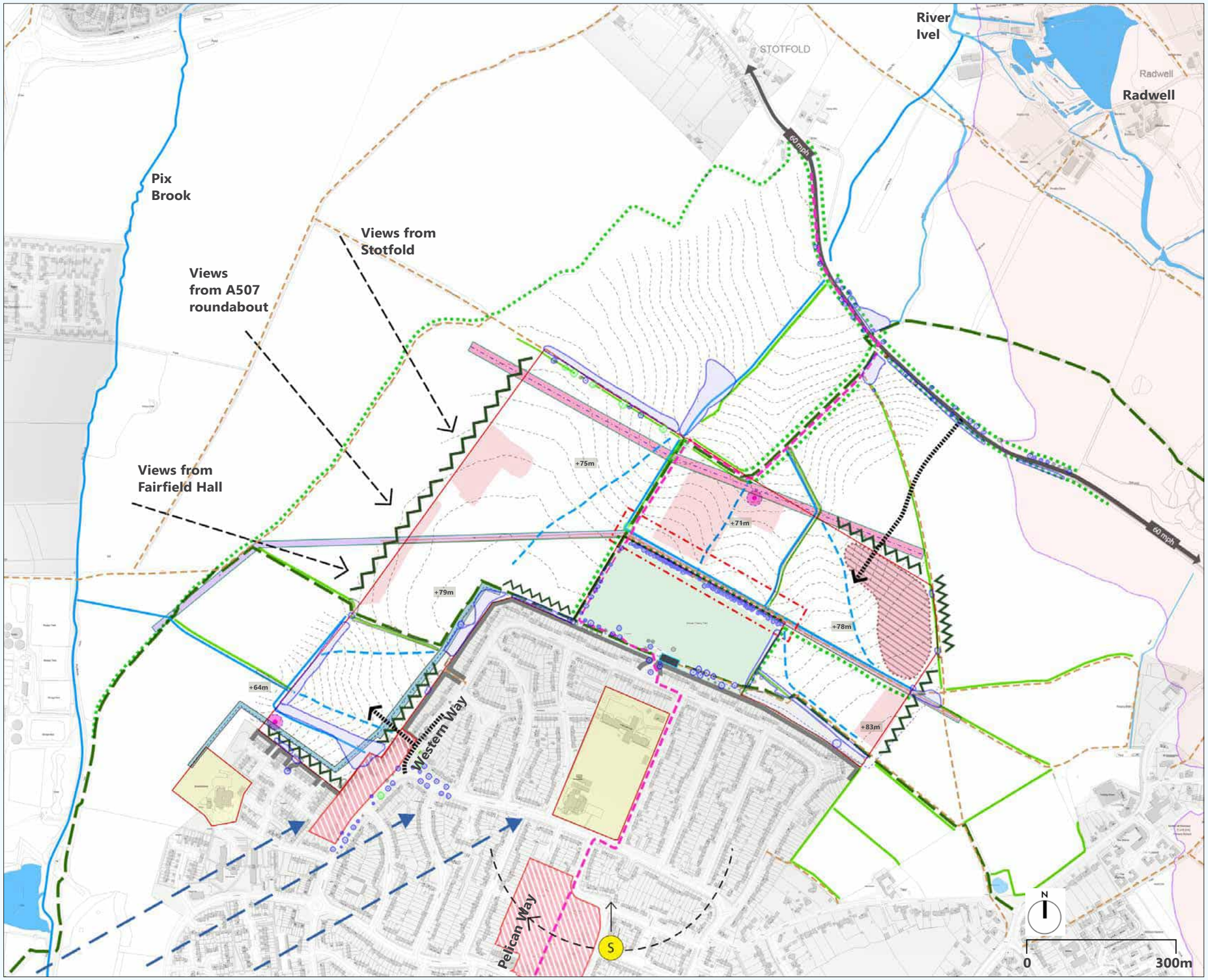
Dominant wind direction and sun path

3.9 Lastly, the masterplan framework should consider the direction of the wind, in particular winter winds and the site's solar orientation to optimize the alignment of the streets, plots and buildings in a balanced approach with the other site constraints.

Site constraints

Key

	Site boundary
	Contour lines
	Existing hedgerows with 12m protection buffer
	'Important' hedgerows (Hedgerow Regulations 1997) with 12m protection buffer
	Category A (high quality) trees
	Category B (moderate quality) trees
	Category C (low quality) trees
	Prominent views towards LG1
	Dominant winter wind direction
	Visually sensitive boundary
	Brooks, rivers and ditches
	Existing surface runoff
	Garden City Greenway
	Etonbury Green Wheel
	Other footpaths
	National Cycle Network Route 12
	Norton Road (60 mph and ped/cycle paths on one side)
	Adjacent residential edge
	Gas easement (6m either side)
	OHL easement (3m either side)
	Zone for OHL retention (TBC)
	Sewer easement (3m either side)
	Indicative foul water pump with 15m cordon sanitare
	Vehicular entrances to site
	Archaeologically sensitive zones
	Adjacent settlements
	Road traffic noise impact from A1
	Indicative exclusion zone for school
	Recreation ground car parking
	Western Way and Pelican Way development site boundaries



Opportunities

Strengthening boundaries and green buffers

3.10 Several site boundaries are screened by existing shelter belts, mature trees and hedgerows. Additional structural landscape and planting of native species along the northern, western and eastern boundaries should provide a strong green buffer to the site integrated with ecological and recreational potentials of sustainable urban drainage systems following the natural drainage pattern of the landform. Planting along boundaries with the Grange Estate should be strengthened and where there are gaps within the existing edges of the site, these should be filled in with native planting or face 'new' back gardens to ensure that future development does not undermine privacy of existing residents.

Protecting and extending hedgerows and trees

3.11 A key characteristic of the site is its natural hedgerows, shelterbelts and mature trees that can directly contribute to the placemaking. These assets should be protected and enhanced with additional tree and hedgerow planting where possible, considering opportunities to reinstate hedgerows that have been lost in the past. Additional tree planting, particularly along the western boundary will help develop a sense of enclosure and mitigate risks associated with coalescence.

Creating ecological networks and BNG

3.12 The site and its surrounding context have a varied mosaic of habitats including broad-leaved woodland, dense scrub, and semi-improved grassland. Much of the existing agricultural and arable land has limited ecological interest. Additional native planting and particularly new drainage features and wetlands can make a significant contribution to improving ecological corridors and biodiversity net-gain (BNG).

Enhancing the Greenway

3.13 The existing footpath network provides an important recreational resource and there is clear potential to strengthen and extend the route of Garden City Greenway, connecting this to surrounding footpaths and cycleways. Where this passes through development it may potentially form part of an enhanced linear park with improved seating, play and recreational features.

Creating landscape-integrated gateways

3.14 Learning from Barry Parker's Parkway concept there is an opportunity to create a parkway-inspired multi-modal 'gateway' access route into LG1 and wider Letchworth from Norton Road. The link from Western Way, however, should be designed to minimise any sense of exclusion from the Grange Estate: the masterplan should seek a seamless transition between Grange Estate and LG1 through built form and landscape; requiring a wider coordinated approach with Settle, the main landowner in the Grange.

Creating green streets within LG1

3.15 Street tree planting with distinct landscape features and SUDs where appropriate should be a key feature of the future street network. This will draw on the precedents and historic characteristics of the original Letchworth Garden City to development modern-day streets typologies that encourage walking, cycling, other forms of sustainable travel modes, socialisation potentials and accommodating children's play where appropriate, whilst being rooted in Letchworth's DNA.

Celebrating archaeological and historic value

3.16 Although, any preservation in-situ is not required for the archaeological areas of significance identified through survey as an absolute constraint, there is an opportunity to celebrate the site's history and archaeological value through interpretation as an integrated part of the existing and future public realm network.

Creating a vibrant neighbourhood centre

3.17 Key local facilities such as the school, sustainable mobility hub and other community amenities can be used create a vibrant neighborhood centre, in ways that makes productive social participation more attractive and fosters a greater sense of community. This would, however, need to complement (not compete) with the renewed local centre of the Grange Estate as part of Settle's redevelopment plans for the Pelican Way site.

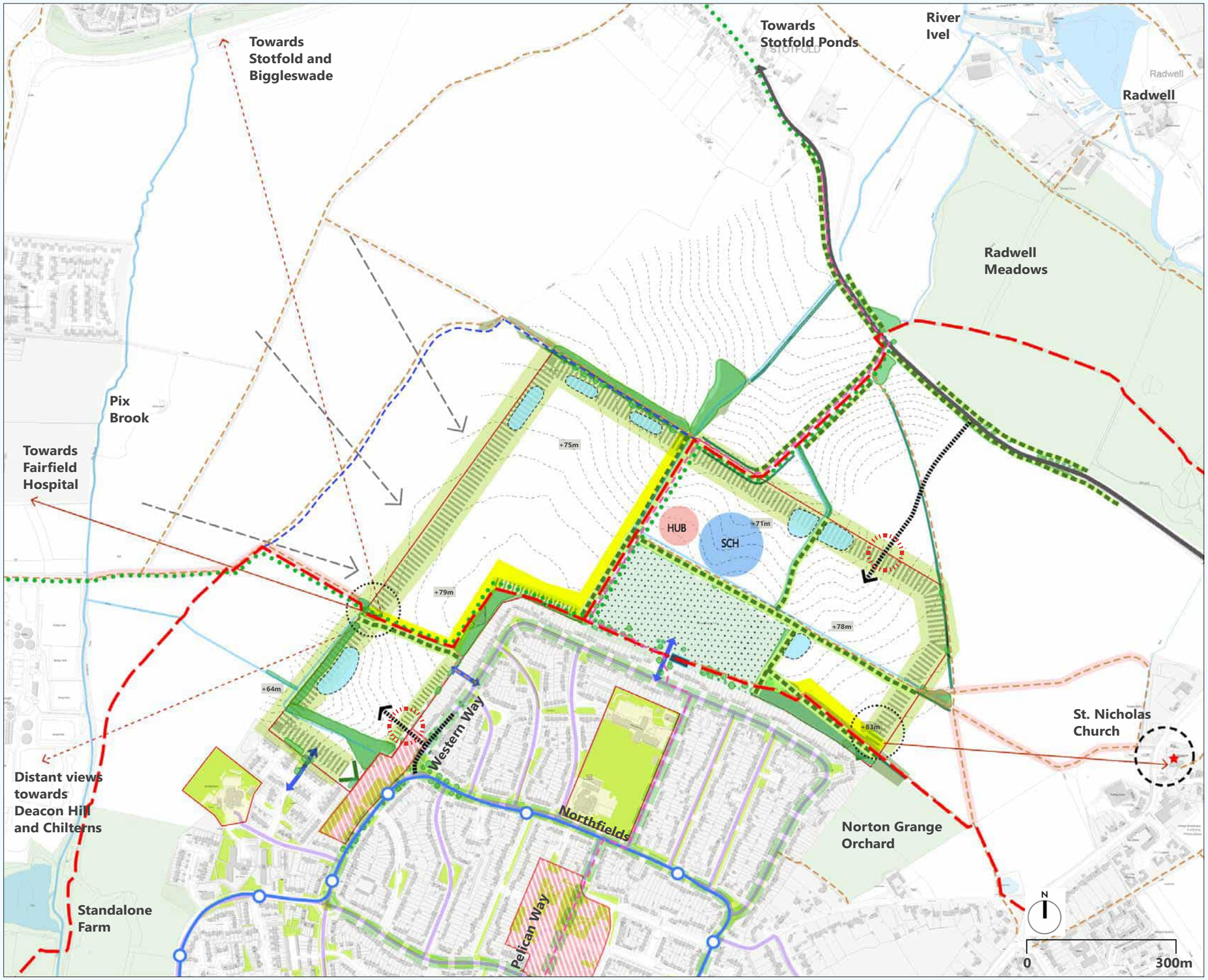
Enabling Grange Estate environmental and public realm improvements

3.18 Lastly, the connections between the new and the existing communities can be strengthened with additional landscape areas, attractive planting and public realm improvements as noted in the Accessibility Audit of existing streets. There are clear opportunities to enhance the recreational provision and visual appeal of the Grange Recreation Ground, as required under S106, enabling this to become a central public park and open space benefiting both existing and new residents over time. Potential new and/or improved ped/ cycle links with Avocet, Western Way, Grange Rec and Norton Grange Orchard all seek to integrate the new neighbourhood with the Grange Estate.

Site opportunities

Key

	Site boundary
	Contour lines
	Green buffer with additional tree and hedgerow planting
	Protect and enhance existing hedgerows
	Protect and enhance existing trees and/or shelterbelts
	Grange Recreation Ground improvement opportunities
	Brooks, rivers and ditches
	Potential nature recovery networks
	Potential location of open spaces with key views out
	Indicative attenuation basins
	Potential green streets incorporating SUDs features creating a 'green grid'
	Potential alignment of vehicular, walking and cycling access
	Gateways to improve legibility
	Public realm improvement of existing streets (Steer/2022, fig 5.2)
	Potential environmental improvement of existing streets
	Potential and improved pedestrian and cycle links only
	Garden City Greenway
	Potential Greenway extension
	Linear park along Greenway
	Etonbury Green Wheel
	Other footpaths
	National Cycle Network Route 12
	Potential location of Sustainable Mobility Hub, Bus Interchange and Neighbourhood Centre
	Potential location of School
	Recreation Ground car parking
	Western Way and Pelican Way development site boundaries



4

Design vision

4. Design vision

4.1 The proposed vision for LG1(Fig. 4.2, overleaf) is in accordance with The Letchworth Garden City Heritage Foundation's adopted vision for the site, framed by the local plan policies (NHC's adopted Local Plan 2011-2031) and the characteristics of context and identity supported through the National Design Guide.

LGCHF's adopted vision

4.2 The Foundation's Board of Trustees adopted the following vision that forms the basis of the development of LG1:

'To create a new landscape-led residential development of land north of Letchworth Garden City (LG1) to help address the housing needs of the town's population and drive sustainable economic growth, whilst achieving substantial community benefit and a net gain in biodiversity.

In consultation with and shaped by the needs of the local community, LG1 will deliver imaginatively and well designed flexible living space for all ages and stages of life together with a primary school, community and cultural facilities and substantial new open spaces for the benefit of all residents, applying a modern interpretation of Garden City design.

With new jobs, training and apprenticeships and an emphasis on walking, cycling and improved sustainable transport linking the whole of the Grange with the rest of the town. LG1 will create opportunities for local people within a vibrant and connected neighbourhood.

Innovative design solutions will be showcased such as modern sustainable construction methods, including self build and community house building to meet a range of housing needs, with at least 40% to be affordable (rent, shared ownership or community land trust).

Land value will be captured and re invested for the benefit of the wider community , creating a legacy for future generations in line with Garden City principles.'

4.3 This adopted vision is supplemented by LGCHF's Green Infrastructure and Transport Infrastructure vision statements[1,2] and core principles, as set out in 2021, to support and guide the evolution of LG1's strategic masterplan in collaboration with NHC, HCC, the local community and other stakeholders.

'To create a new landscape-led residential development of land north of Letchworth Garden City (LG1) to help address the housing needs of the town's population and drive sustainable economic growth, whilst achieving substantial community benefit and a net gain in biodiversity.'

Fig. 4.1 The ten characteristics of a well-designed place (National Design Guide).

National Design Guidance

4.4 The National Planning Policy Framework (NPPF) (MHCLG/2021)[3] and National Design Guide (NDG) (MHCLG/ 2021)[4] provides the current national planning framework and design guidance for LG1. Aligned with the NPPF, as part of the Government's documentation of planning practice guidance, the NDG outlines the priorities for well-designed places in the form of ten characteristics (Fig. 4.1).

Local Planning Context

4.5 The NHC adopted Local Plan 2011-2031[5], and in particular, Policy SP9 on Design and Sustainability, Policy SP15 on LG1, and Appendix 5 on Letchworth's Garden City design principles provide the current local planning context for LG1's strategic masterplan. The latter is of particular significance for the site, it being a once in a generation expansion of the world's first Garden City.

References:

1. LGCHF (2022) Green Infrastructure Workshop Feedback paper, based on a workshop held in August 2021 with LGCHF's Housing Development Committee.

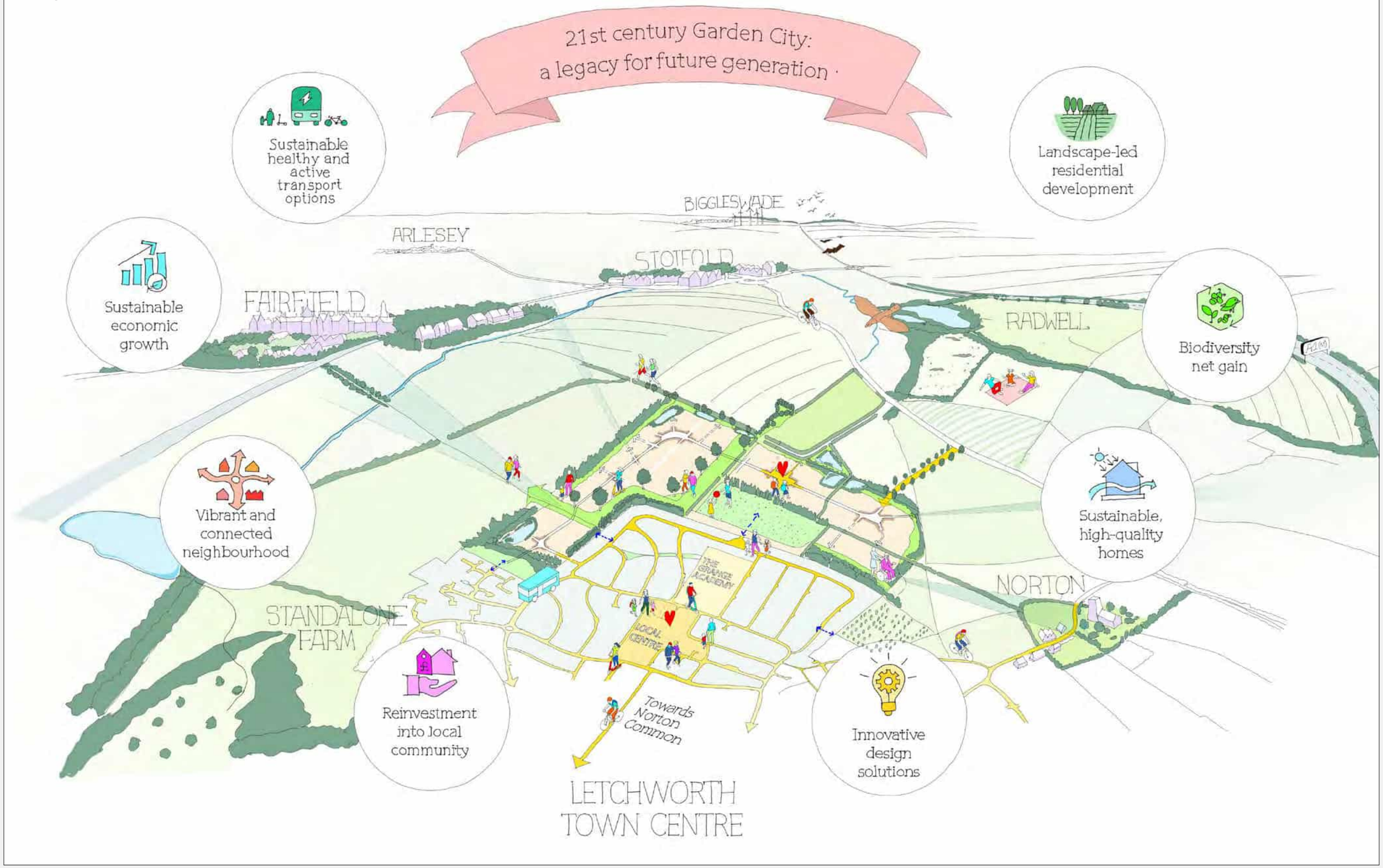
2. LGCHF (2022) Transport Infrastructure Workshop Feedback paper, based on a workshop held in November 2021 with LGCHF's Housing Development Committee.

3. MHCLG (2021) NPPF, September 2023, Department for Levelling Up, Housing and Communities. See: https://webarchive.nationalarchives.gov.uk/ukgwa/20230929144819/https://www.gov.uk/government/publications/national-planning-policy-framework--2.

4. MHCLG (2021) National Design Guide, January 2021, Department for Levelling Up, Housing and Communities. See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962113/National_design_guide.pdf

5. NHC (2022) Local Plan 2011-2031, adopted 8 November 2022. See: https://www.north-herts.gov.uk/sites/default/files/2022-12/North%20Hertfordshire%20Local%20Plan%202011-2031.pdf

Fig. 4.2: Illustrative design vision for LG1's strategic masterplan framework



5

Placemaking objectives

5. Placemaking objectives

Introduction

5.1 To achieve LGCHF's adopted vision for a landscape-led development of LG1 as a 21st century Garden City, eight placemaking objectives are proposed to support a holistic design approach for the development of LG1's strategic masterplan framework (Fig. 5.1). Each objective carries equal weightage and integrates the principles of sustainable design relevant to that objective, within the overall scheme viability for the development.

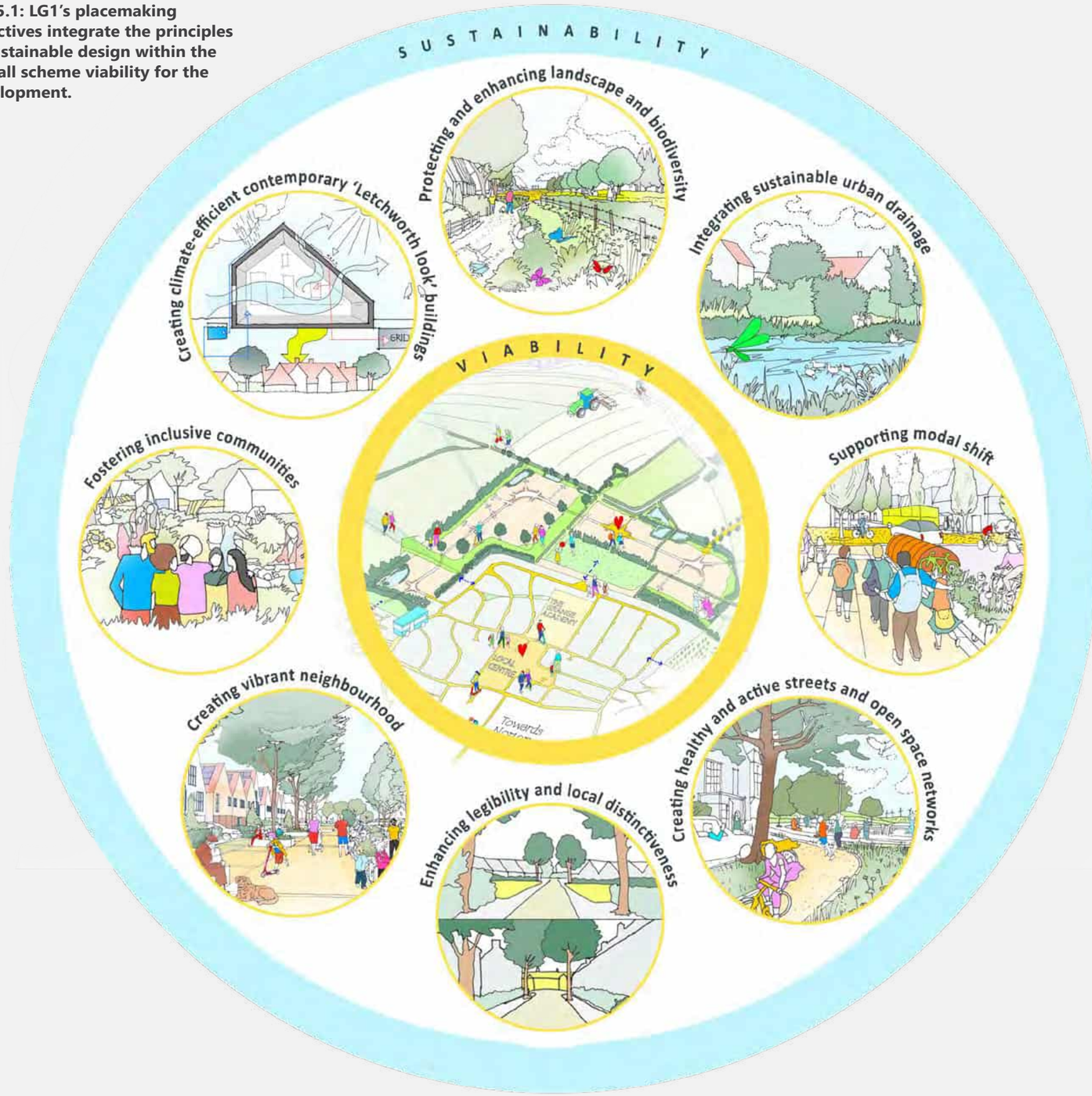
5.2 These placemaking objectives would form part of the strategic master plan documents for LG1, as required by the North Herts Council and will be adopted through its Project Board. These are not only tailored to the site's unique constraints and opportunities, but also aligns with the local planning policy context and best practice design guidance as outlined in the National Design Guide, relating in particular to the themes of Context and Identity.

5.3 Cumulatively, the placemaking objectives set out a high-level design framework; an overall approach to the design of the streets and buildings and the type and form of LG1's strategic masterplan. Its purpose is to be a creative springboard for the project team and a future development partner, as well as a consistent point of reference that guides further development of LG1's masterplan as a modern-day Garden City.

5.4 Please note that a more detailed development of design principles or design coding for the LG1 masterplan may follow as part of a future development brief, and the placemaking objectives does not preclude that exercise. Rather, it can become the starting point of this more detailed exercise.

5.5 The following pages outline each placemaking objective in further detail, rooting them in site-specific characteristics and opportunities for LG1's integration with the Grange Estate and wider context.

Fig. 5.1: LG1's placemaking objectives integrate the principles of sustainable design within the overall scheme viability for the development.



Objective 1

Protecting and enhancing landscape and biodiversity

5.6 To create a multi-scale, multi-functional network of connected, accessible and nature-rich green spaces that improves connectivity to wider green infrastructure network, key destinations, the Letchworth Greenway, Letchworth town centre and Baldock (Fig. 5.2).

5.7 To retain and strengthen the hedgerow and woodland network across the site, protect and enhance existing natural habitats (Fig. 5.5) including woodland, scrubland, wetland and grassland to facilitate a 10% Biodiversity Net Gain, particularly along the southern and western boundaries abutting existing dwellings, whilst protecting long-distance views and sensitively integrating it into the wider landscape structure, ecological and wildlife corridors and green infrastructure network, in particular along the Letchworth Greenway (Fig. 5.6).

5.8 To agree the optimal vehicular access points and street hierarchy that minimises removal of trees and hedgerows and limits fragmentation of the green infrastructure network. This includes exploring opportunities for light-touch pedestrian-only bridges creating 'gateways in the hedgerows' that facilitate a permeable street network for walking and cycling and minimises disruption to its ecological functions (Fig. 5.3, 5.8).

5.9 To promote additional tree planting within green spaces and streets providing at least 2,000 new trees of a variety of native and ornamental species, whose scale, function and spacing reflect the role each street plays in the overall 'green grid'.

5.10 To establish an active and productive peripheral buffer to LG1 using native species, that provide recreational and ecological value and deliver ecosystem services (Fig. 5.4, 5.9, 5.10).

5.11 To adopt an integrated approach with Settle (main landowner in the Grange) and North Herts Council regarding opportunities for environmental improvements and public open space network across the Grange Estate and Grange Recreation Ground (Fig. 5.7), facilitating creation of wider pedestrian and ecological networks.

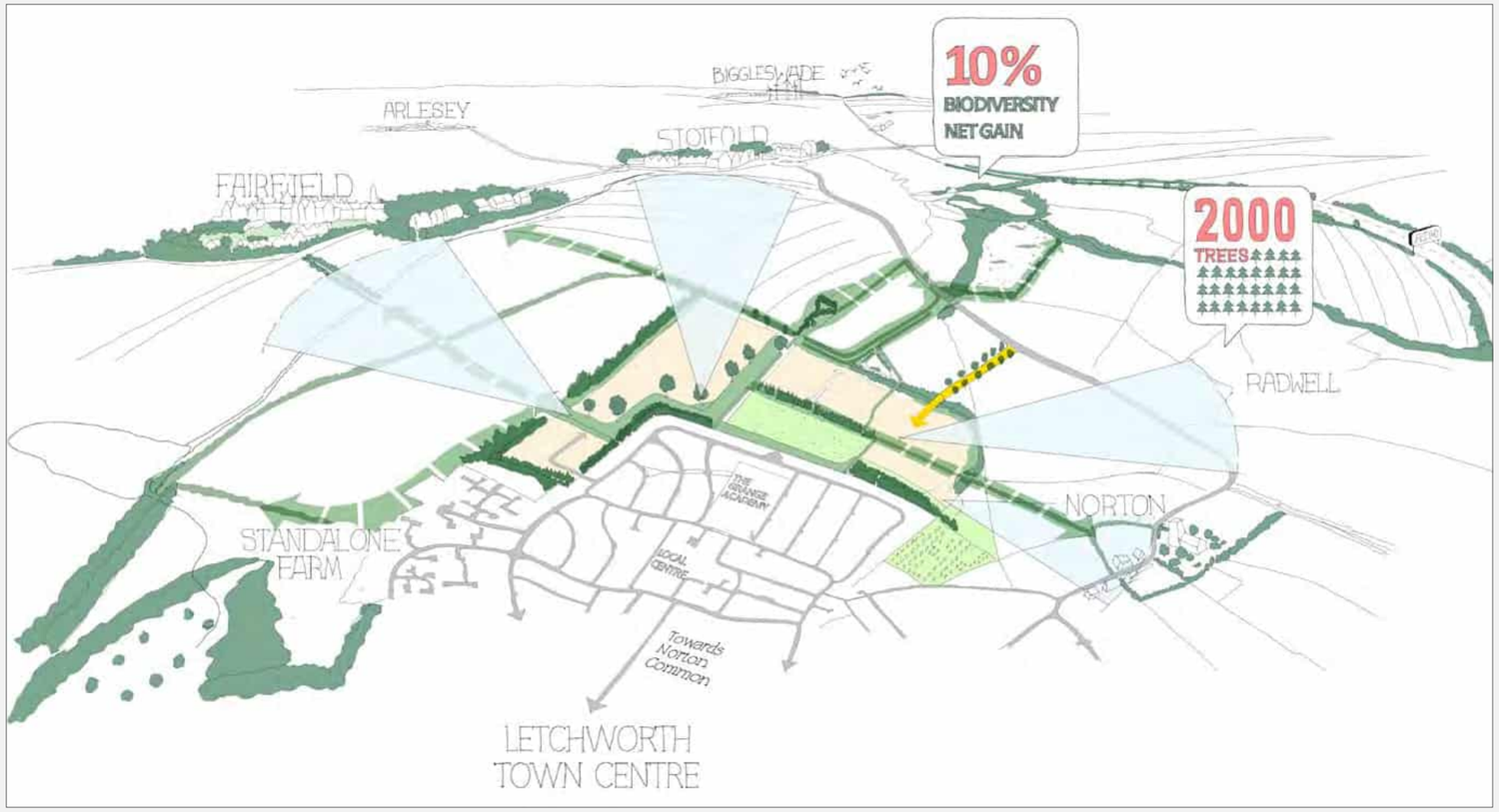


Fig. 5.2: A multi-scale, multi-functional GI network.

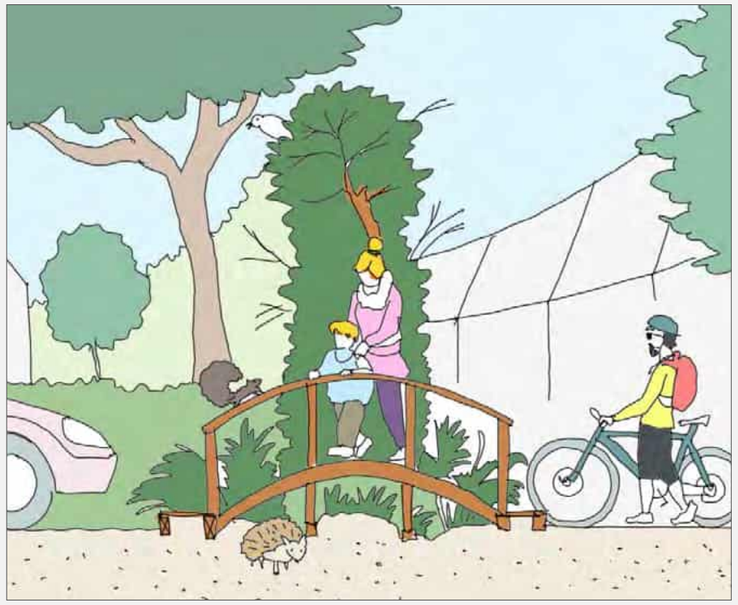


Fig. 5.3: Light-touch pedestrian-only bridges through hedgerows.

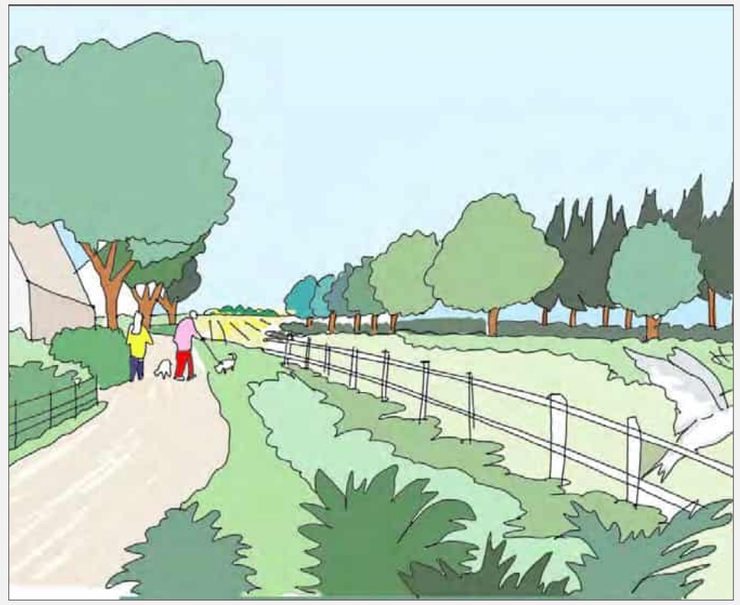


Fig. 5.4: Active and productive peripheral buffer.

Fig. 5.5: Protecting existing trees, hedgerows and shelterbelts.

Fig. 5.6: Integrating the existing Letchworth Greenway.

Fig. 5.7: Enhancing the Grange Recreation Ground.

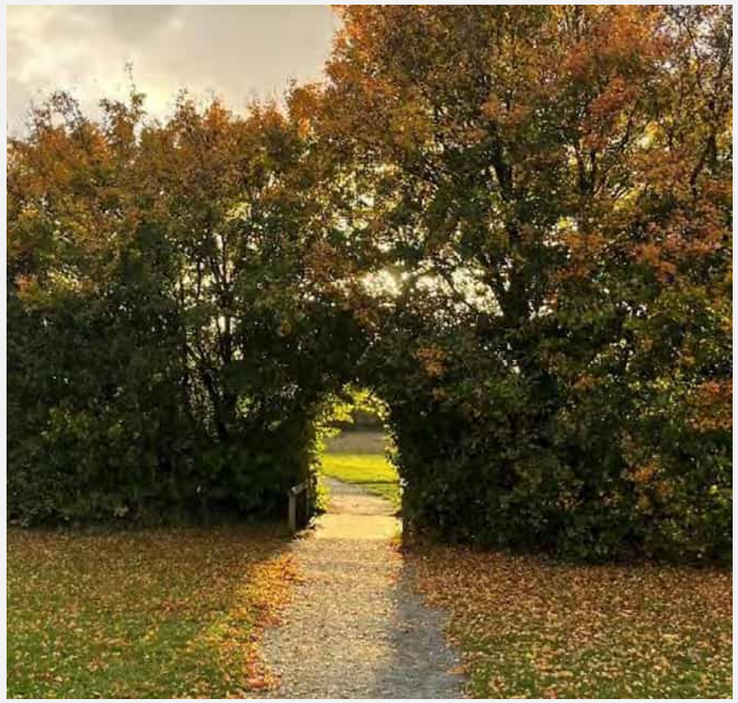


Fig. 5.8: Precedent - Light-touch links through hedgerows, Great Notley, Essex. Source: Peter Neal/ October 2022

Fig. 5.9: Precedent - Countryside interface, Trumpington Meadows, Cambridge. Source: Peter Neal/ October 2022

Fig. 5.10: Precedent - Peripheral buffer, Derwenthorpe, York. Source: EcoResponsive Environments/ July 2023

Objective 2

Integrating sustainable urban drainage

5.12 To incorporate a sustainable urban drainage system (SUDs) that includes swales and attenuation ponds that mimic natural drainage patterns, improves water quality and provides recreational amenity and ecological benefit as part of an integrated green infrastructure network, maximising opportunities to connect with nature.

5.13 To align swales, where possible, with the site's topography, existing drainage networks (Fig. 5.11, 5.14, 5.15) and new streets that connect and drain into attenuation basins, wetlands and ponds (Fig. 5.16, 5.17, 5.18) set within the peripheral nature-rich landscaped countryside interface, defining a strong natural and permanent settlement edge (Fig. 5.13).

5.14 To investigate sustainable drainage interventions at a plot and building scale (Fig. 5.12) that contribute to further slowing of surface water runoff e.g. through permeable paving and/or integration of rain gardens within front gardens in accordance with LGCHF's design principles.

Fig. 5.11: Align SUDs with the site's topography and existing drainage networks.

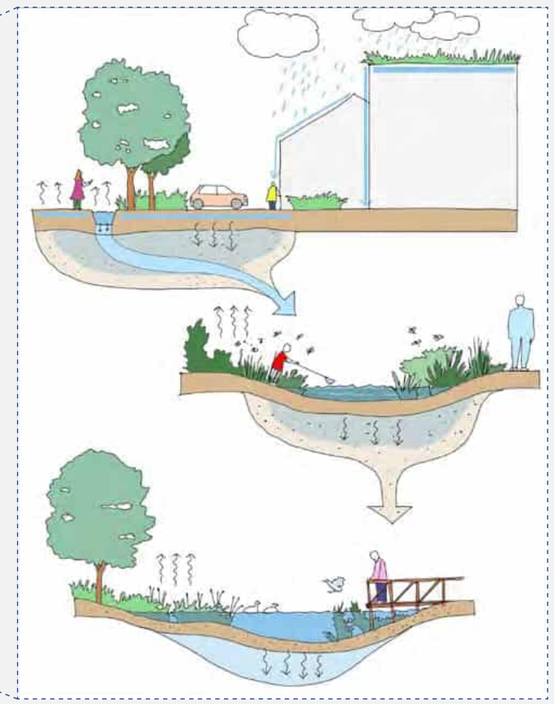


Fig. 5.12: Multi-scale SUDs.

Fig. 5.13: Attenuation basins set within the nature-rich peripheral landscape buffer.

Fig. 5.14: Precedent - Swale, Upton, Northampton.
Source: Peter Neal/ August 2017

Fig. 5.15: Precedent - Swale, Upton, Northampton.
Source: Peter Neal/ August 2017

Fig. 5.16: Precedent - Attenuation basin, Upton, Northampton.
Source: Peter Neal/ March 2020

Fig. 5.17: Precedent - Attenuation basin, Barton Park, Oxford.
Source: Peter Neal/ March 2020

Fig. 5.18: Precedent - Attenuation basic, Derwenthorpe, York.
Source: Peter Neal/ August 2021

Objective 3

Supporting modal shift

5.15 To adopt an integrated approach to LG1's movement and transport networks stitched into the wider context (Fig. 5.19) and provide a sustainable extension to Letchworth that facilitates opportunities for active travel connectivity to key destinations, supporting healthy lifestyles and a 10% modal shift and contributing towards providing non-car sustainable travel opportunities for new and existing residents.

5.16 To create a mobility hub on LG1 (Fig. 5.20) for facilitating opportunities for easy interchange between sustainable modes of travel (e.g. cycle hire, bus stop, car club) with complimentary community amenities (EV charging points, lockers, toilets, shower facilities etc. - Fig. 5.24, 5.25, 5.26) and consider its wider integration with the Pelican Way local centre, Letchworth town centre and key Letchworth destinations to support both local trips and longer-distance travel.

5.17 To protect and enhance the public rights of way network through and around the site (Fig. 5.21, 5.22, 5.23) and consider opportunities for the creation of safe, direct and legible walking and cycling routes to The Grange, Norton, Fairfield Park, Letchworth railway station and town centre, and linking into existing networks that provide access to further afield. This would also include the integration of the Letchworth Garden City Greenway, and adding an extension along the historic Stotfold Parish boundary.

5.18 To support and facilitate the creation of a high-quality active travel corridor from Western Way to the Pelican Way local centre and enhance connectivity from LG1 to the Grange Estate's local centre.

5.19 To adopt a coordinated approach to a Sustainable Travel Plan with Settle (main landowner in the Grange) and North Herts Council, in relation to upgrading the local cycling and pedestrian networks, through the allocation of S106 contributions.

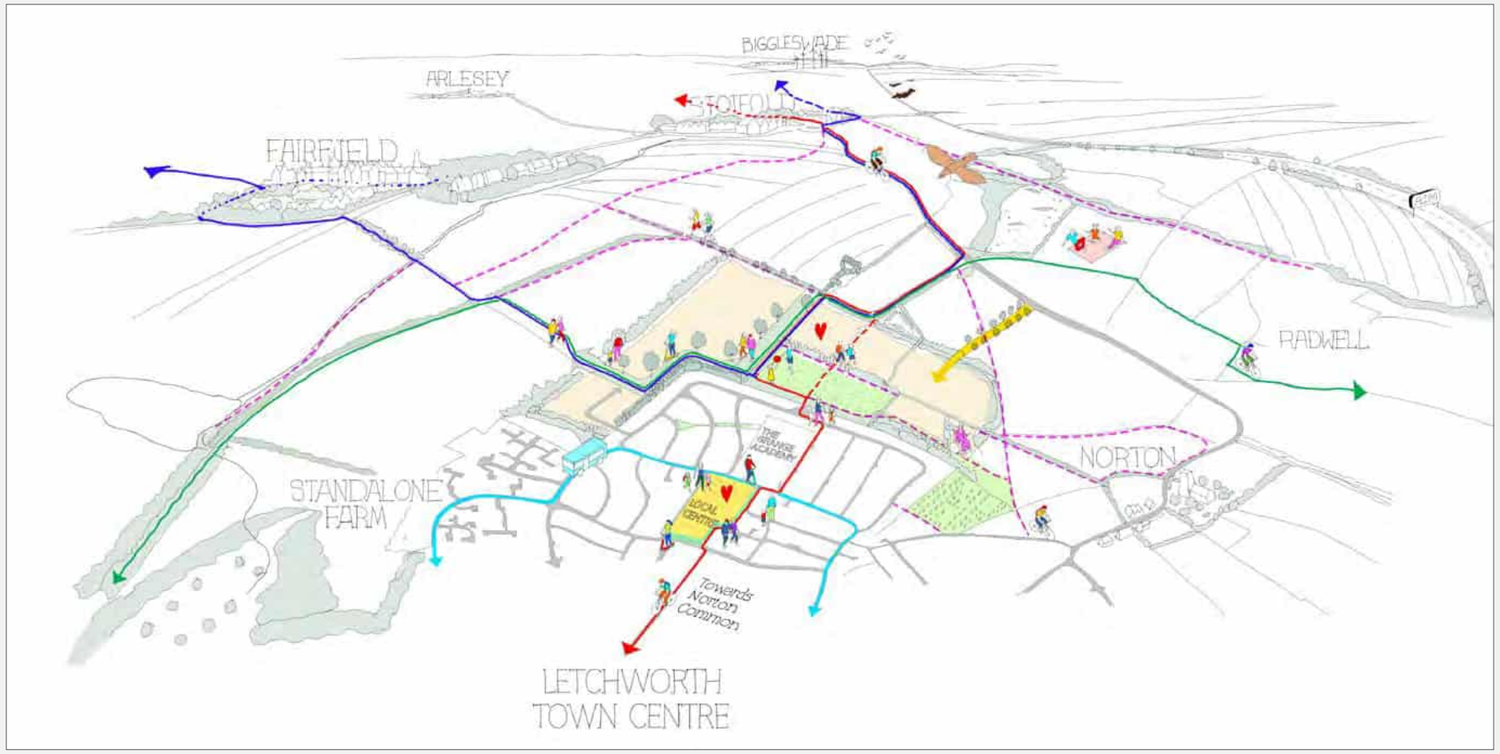


Fig. 5.19: Transport networks and public right of ways stitched into the wider context.

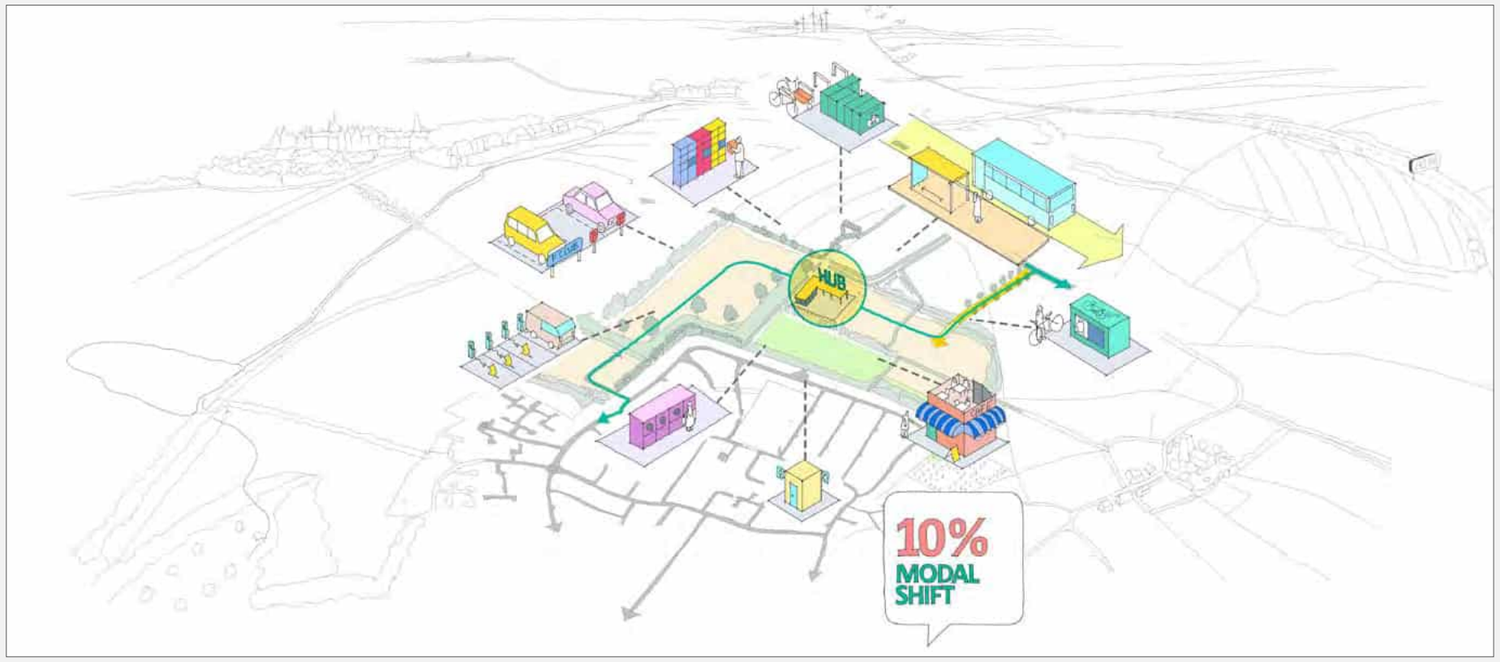


Fig. 5.20: Proposed Mobility Hub to support achieving a 10% modal shift.

Fig. 5.21: Existing public right of way along SE boundary.

Fig. 5.22: Existing Letchworth Greenway.

Fig. 5.23: Existing pathways within the Grange Recreation Ground.

Fig. 5.24: Precedent - Mobility hub, Bike hire.
Source: COMO UK/ October 2021

Fig. 5.25: Precedent - Mobility hub, Car club spaces.
Source: COMO UK/ October 2021

Fig. 5.26: Precedent - Mobility hub, Amazon lockers
Source: Wikimedia Commons/ July 2021

Objective 4

Creating healthy and active street and open space networks

5.20 To create a highly-connected, landscape-integrated, multi-modal street network (Fig. 5.27, 5.28, 5.30-5.35) that minimises detours and dead-ends for pedestrians and cyclists, whilst incorporating appropriate design measures that mitigate rat-running of vehicles through Grange Estate and minimises the visual dominance of cars on streets.

5.21 To protect and enhance the Greenway within LG1 as a linear park (Fig. 5.29, 5.32) incorporating additional recreational facilities including seating, picnic areas and opportunities to integrate local art, history, heritage and culture, supporting various activity programmes for all ages.

5.22 To create the opportunity for enhancing the provision of recreational facilities on the Grange Recreation Ground (Fig. 5.29), creating a green and social link between existing and new residential communities. This would include consideration of improved potentials for natural play, exercise and dwell activities for all ages, through the allocation of S106 contributions; whilst taking into account existing needs and issues associated with the usage of existing sports pitches, drainage and parking overspill.

5.23 To create a street and public open space network with natural surveillance from buildings (Fig. 5.30-5.35). In particular, buildings should have fronts facing the enhanced Greenway linear park, the proposed active and productive peripheral green belt boundary that interfaces with the countryside (Fig. 5.34, 5.35), and the southern and western landscaped boundaries where existing residential properties back onto LG1.

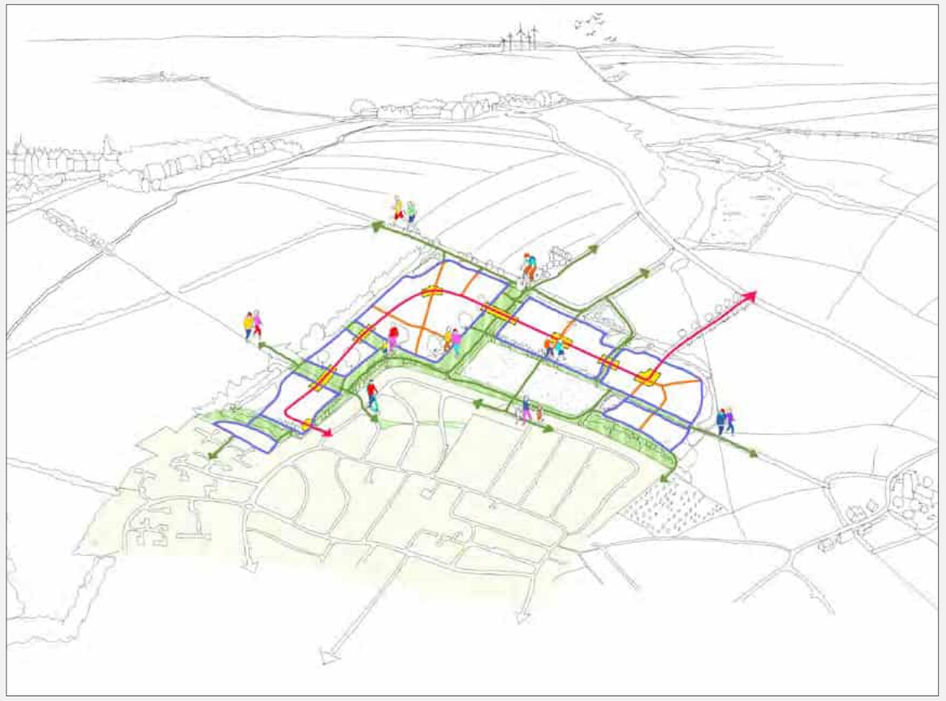


Fig. 5.27: Joined-up, permeable and multi-modal site-wide street network

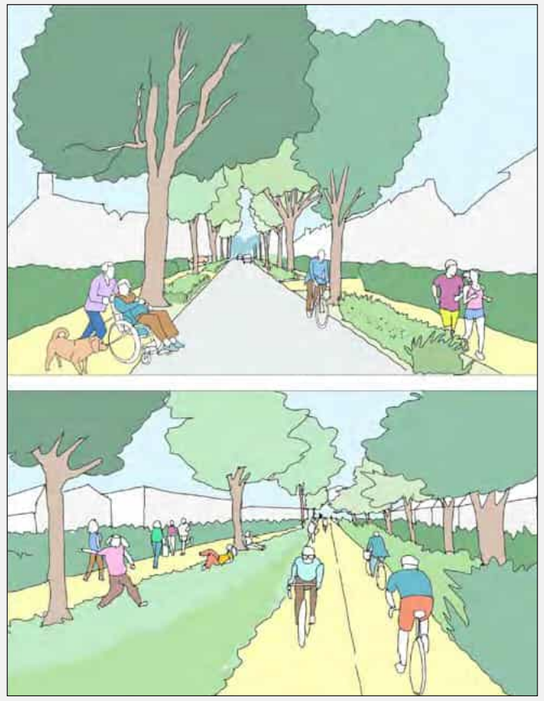


Fig. 5.28: Landscape-integrated healthy streets

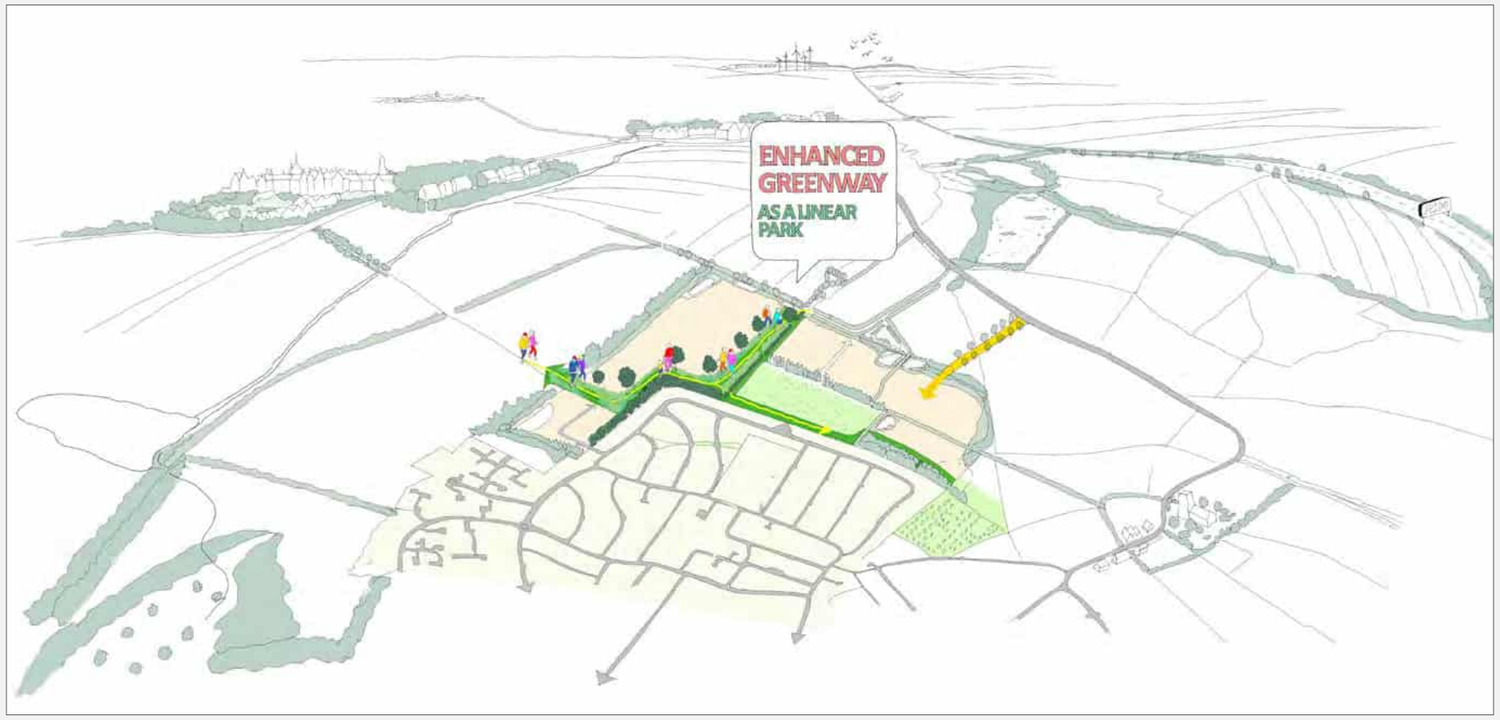


Fig. 5.29: Enhancing Letchworth Greenway as a linear park and provision of facilities on Grange Recreation Ground

Fig. 5.30: Precedent - Parking integrated with landscape, St Andrews, Bromley-by-Bow. Source: Townshend Landscape Architects

Fig. 5.31: Precedent - Tree-lined local residential street, Derwenthorpe, York. Source: Peter Neal/ August 2021

Fig. 5.32: Precedent - Linear park, Alconbury Weald, Phase 1, Cambridgeshire. Source: Peter Neal/ September 2023

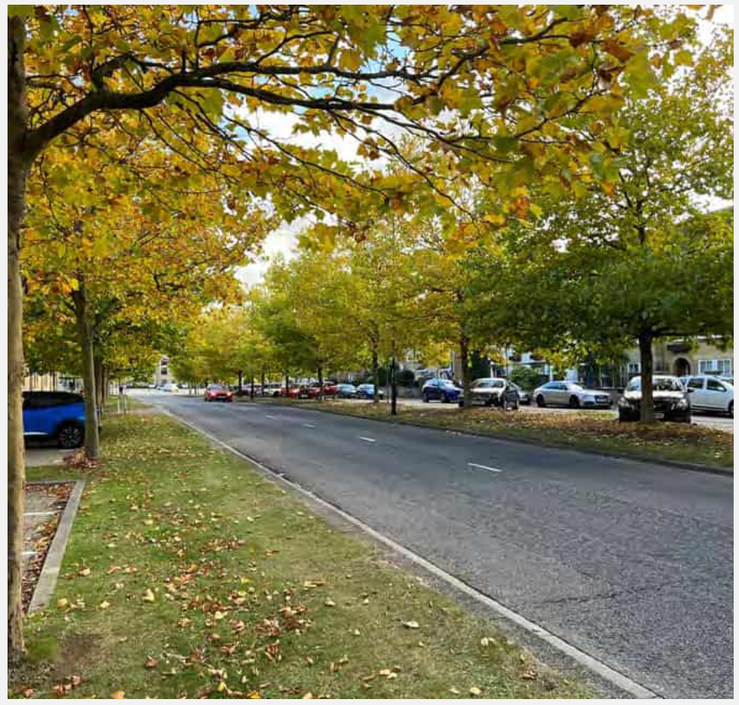


Fig. 5.33: Precedent - Tree-lined main street, Cambourne, Cambridgeshire. Source: Peter Neal/ October 2022

Fig. 5.34: Precedent - Edge lane, Derwenthorpe, York. Source: Peter Neal/ August 2021

Fig. 5.35: Precedent - Edge lane, Trumpington Meadows, Cambridgeshire. Source: Peter Neal/ August 2021

Objective 5

Enhancing legibility and local distinctiveness

5.24 To adopt key GC layout principles (Fig. 5.36) of vista, closure, accent, group design and the integration of landscape across multiple scales of development (GI networks, streets and plots - Fig. 5.41) to inform the creation of a contextually-responsive, visually varied yet coherent character gradient: from town to countryside. This would include a blend of formal and informal spaces within the masterplan, created through variations in massing, densities, built form and open space configurations, rooted in an understanding of the Letchworth's landscape and townscape character.

5.25 To manage and mitigate visual sensitivities with surrounding settlements (Fig. 5.37), particularly Fairfield Park, through tree and hedgerow planting along the western edge of the peripheral green belt boundary. To maintain and frame key views towards locally prominent landmarks (Fig. 5.38-5.40), such as St. Nicholas Church tower in Norton and long-distance sight lines particularly towards Fairfield and Biggleswade.

5.26 To use key community and civic facilities as landmarks of appropriate relative significance (Fig. 5.42), whilst enhancing the memorability of street intersections through corner buildings. At the smallest scale, distinguish streets through architectural character and the planting of distinctive species.

5.27 To create new landscaped, accessible and attractive links between LG1 and its wider context, in particular from Western Way where active travel is prioritized and a parkway-inspired sense of arrival from Norton Road. This would also include considering opportunities for creating legible routes into the Grange that support wayfinding towards central Letchworth.

5.28 To provide opportunities for an improved understanding of cultural assets discovered from archaeological investigations through interpretation using art, sculpture and heritage trails anchored around new public realm. Use the everyday, ordinarily mundane street furniture (seating, paving etc.) as an opportunity to engage with residents in a variety of art and design programmes, cultivating a shared sense of identity (Fig. 5.43).

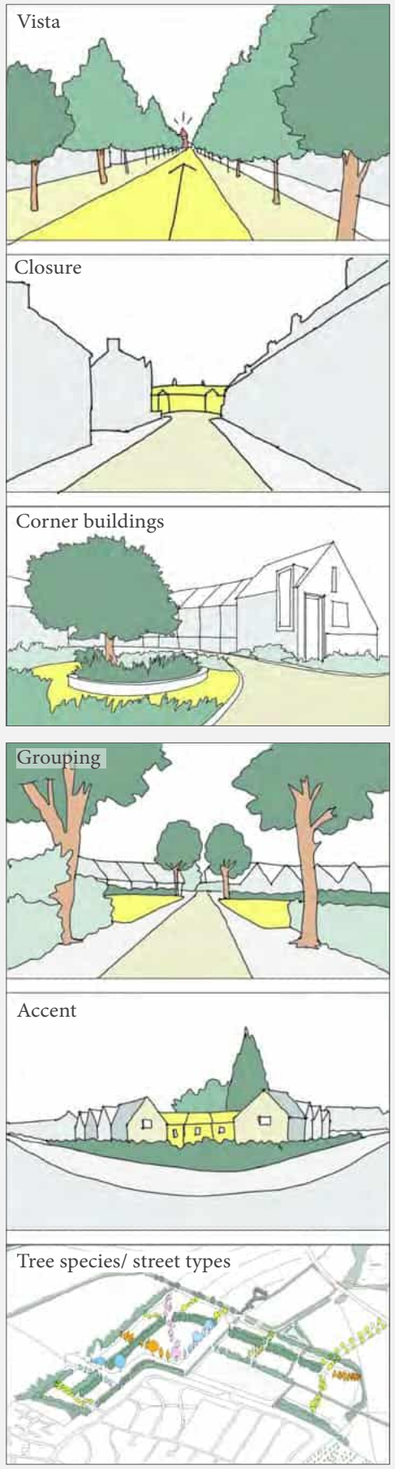


Fig. 5.36: Garden City principles.

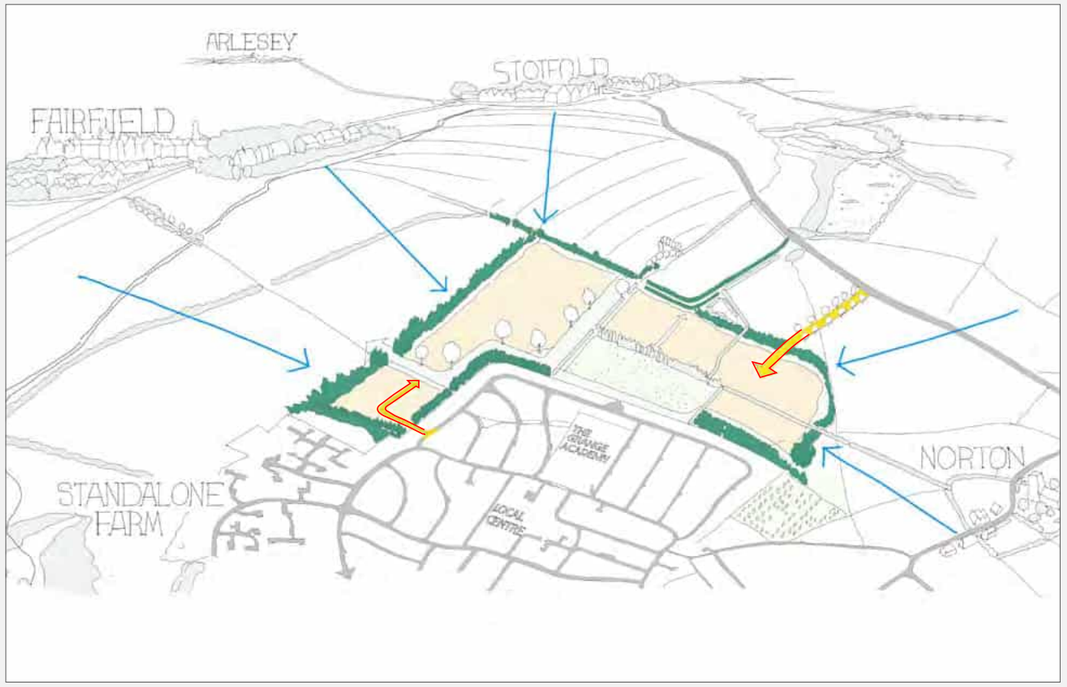


Fig. 5.37: Manage and mitigate visual sensitivities with surrounding settlements.

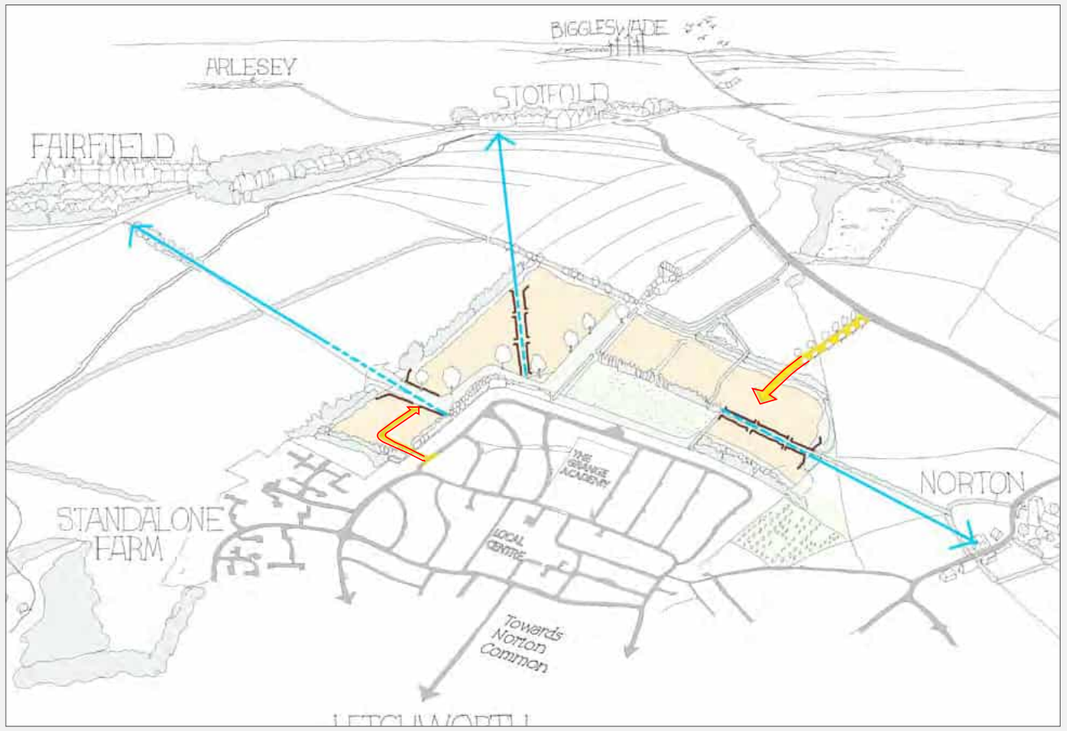


Fig. 5.38: Maintain and frame key views towards locally prominent landmarks.

Fig. 5.39: Open view west to Fairfield Park form LG1.

Fig. 5.40: Present day view of St. Nicholas Church from LG1.

Fig. 5.41: Integration of landscape across multiple scales (green infrastructure networks, streets and plots), Letchworth.

Fig. 5.42: The street vista terminates at a school building at HillShott, Letchworth.

Fig. 5.43: Precedents - Integration of heritage and archaeological interpretation and street/ public space furniture with art and design.

Objective 6

Creating a vibrant neighbourhood

5.29 To create a vibrant neighbourhood hub of co-located facilities as the heart of the community, capitalising on the most accessible location and including a mobility hub, amenities and inter-generational space to meet the needs of all ages anchored around new high-quality landscape-integrated people-centric public realm (Fig. 5.44). It would also include careful consideration of the 'reserved' school site location to ensure easy accessibility from not only within LG1, but also the wider Grange Estate.

5.30 To facilitate easy access between the LG1 local centre, the Grange Estate and wider Letchworth along natural movement desire lines. This would include exploring opportunity to support wayfinding through a potential new north-south pathway link across the Grange Recreation Ground, supporting the cultivation of a shared sense of community. (Fig. 5.45)

5.31 To facilitate the neighbourhood hub as a focus for day to day 'needs'. This would include consideration of uses such as café, shops, other community amenities and flexible multi-functional space to support current and future needs (e.g. small businesses, flexible workspaces, cultural events and public services such as healthcare), supporting the principle of a sustainable and resilient neighbourhood (Fig. 5.47-5.49).

5.32 To adopt an integrated approach with the existing Grange Estate residents to understand what facilities are currently missing or needed in LG1's local centre, and with Settle (main landowner in the Grange) taking into account their redevelopment plans for the Pelican Way site and sites along Western Way, particularly in relation to any non-residential amenities being considered as part of the proposed redevelopments to ensure that the LG1 proposals complements it (Fig. 5.45).

5.33 To match land uses with the appropriate levels of accessibility they need: retail, community facilities, public amenities and apartments on the most-connected streets, and larger family dwellings on quieter streets and along open spaces that capitalise on green views (Fig. 5.46).

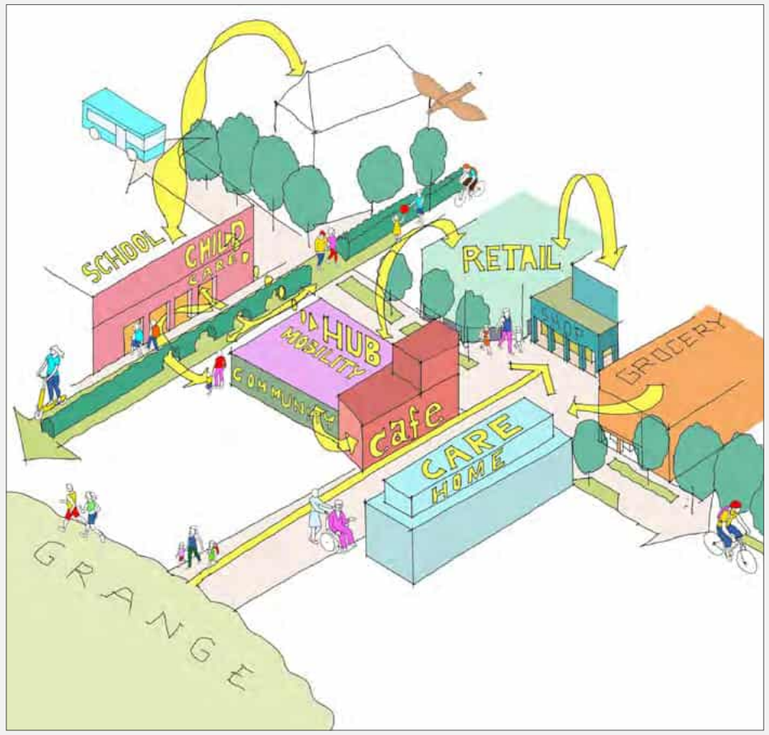


Fig. 5.44: A vibrant neighbourhood hub of co-located facilities.

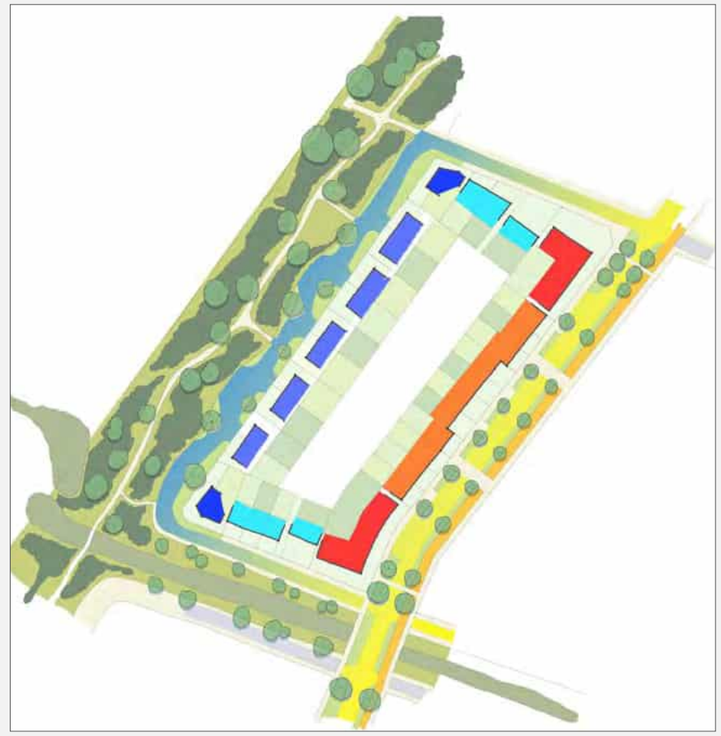


Fig. 5.46: Match land uses with appropriate levels of accessibility.

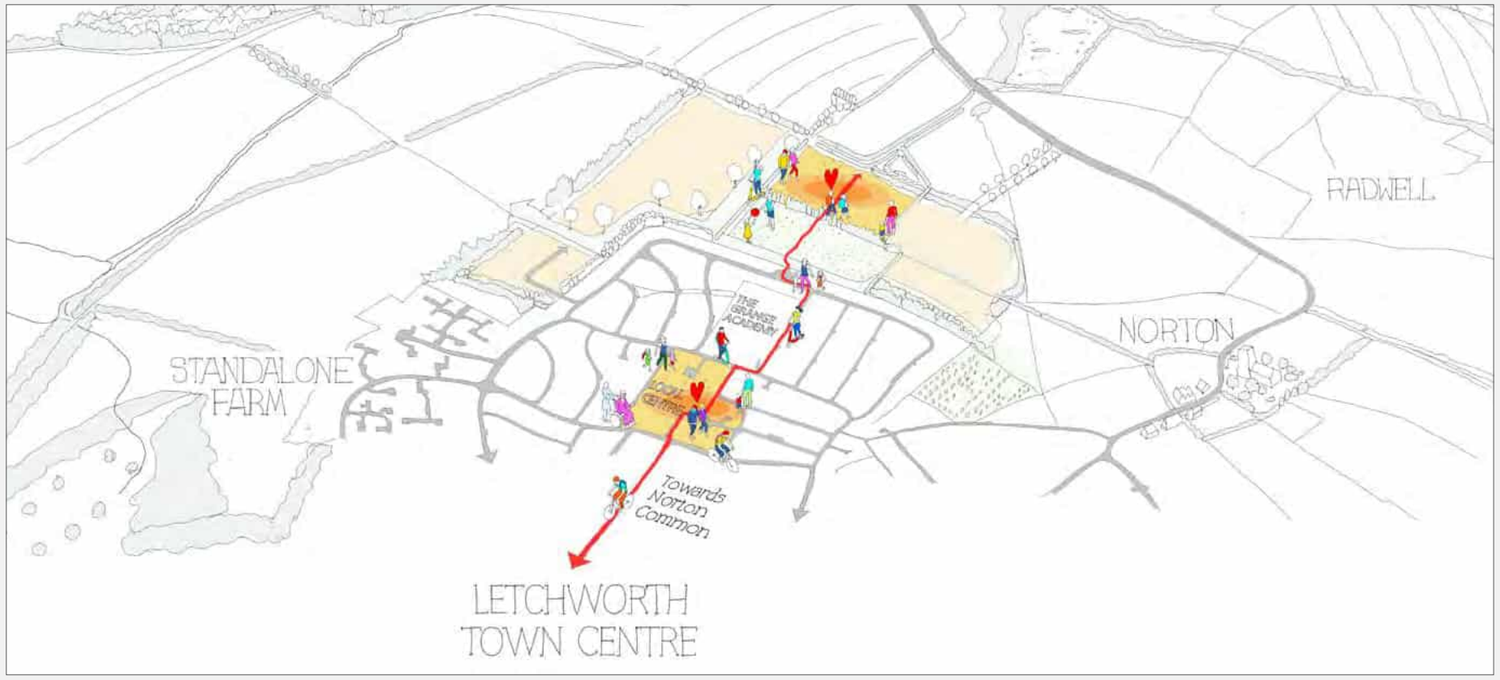


Fig. 5.45: Facilitate easy access between the LG1 local centre, the Grange Estate and wider Letchworth.

Fig. 5.47(A): Precedent - Town centre, daytime, Letchworth
Source: Letchworth Garden City Heritage Foundation/ 2010

Fig. 5.48: Precedent - Streets as social spaces - Local high street parade of shops.
Source: "What Is Placemaking?" Project for Public Spaces, 2007, https://www.pps.org/article/what-is-placemaking

Fig. 5.47(B): Precedent - Town centre, nightime, Letchworth.
Source: Sutton Vane Associates (Lighting Design)/ 2010

Fig. 5.49: Precedent - Streets as social spaces - Local residential street with family dwellings, Marmalade Lane, Cambridge. Source: TOWN

Objective 7

Fostering inclusive communities

5.34 To deliver c. 900 homes through a diversity of dwelling types, sizes and tenures including 40% tenure-blind affordable homes, self-build and an appropriate site for a care home for older people aligned with policy requirements (Fig. 5.50). This would include careful consideration of the location for affordable homes within the masterplan as small clusters distributed across the site, supporting equitable opportunities for new residents and enhanced social integration.

5.35 To create block configurations with a clear distinction between building fronts and backs that are a consequence of the wider landscape framework. Learning from the Garden City prototype developed by Raymond Unwin (Fig. 5.51), the blocks should explore the incorporation of a hierarchy of nature-rich private and communal amenity spaces with sheltered micro-climates and secure access to users where needed (Fig. 5.53, 5.54), by incorporating defensible space principles. This should include careful consideration of the relationship between open spaces and built form (Fig. 5.55, 5.56) that balance the need for individual privacy with opportunities for intergenerational social efficacy that stems from relationships beyond the family.

5.36 To showcase housing innovation by part of the site being utilised to highlight different construction and design methods and tenures, including self-build and community housing within a designated part of the development (Fig. 5.52).

5.37 To facilitate access to opportunities for training, apprenticeships, local upskilling and employment in coordination with North Herts Council, local stakeholders and institutions, where possible, throughout the project's life-cycle. This would include consideration of opportunities for encouraging a local low carbon construction supply chain to benefit the local economy (Fig. 5.52).

5.38 To promote a long term stewardship plan that will ensure that the community has a stake in the management and stewardship of the new development.

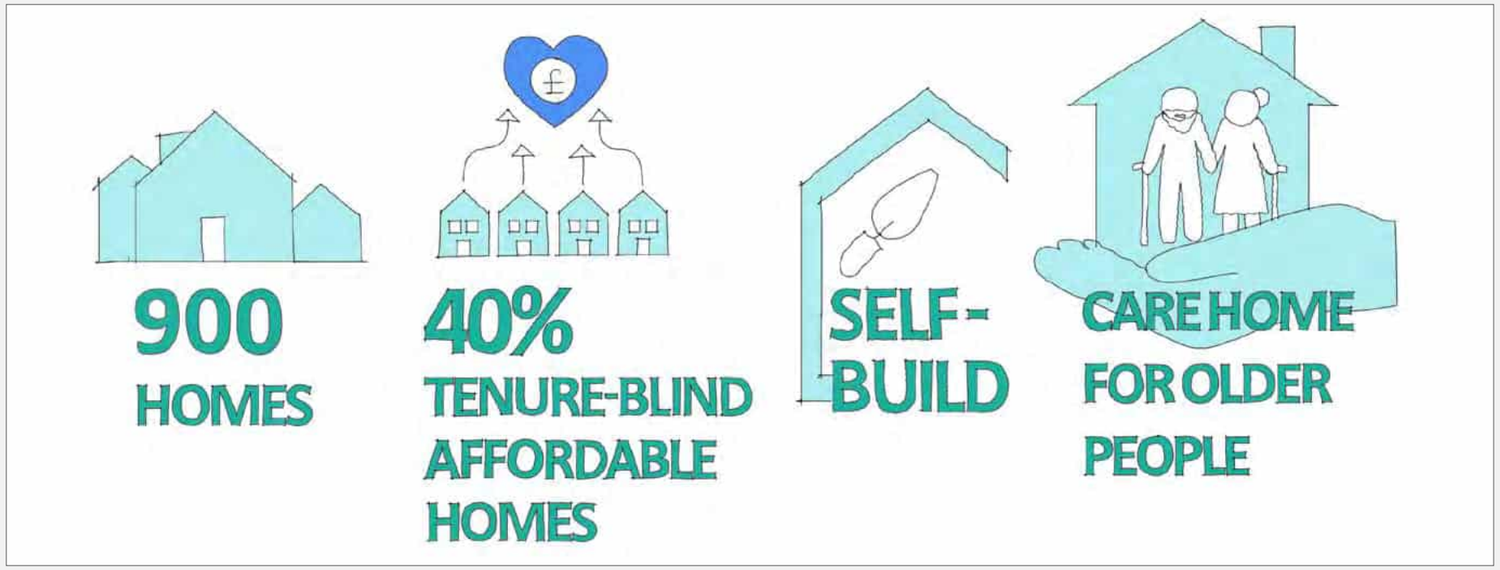
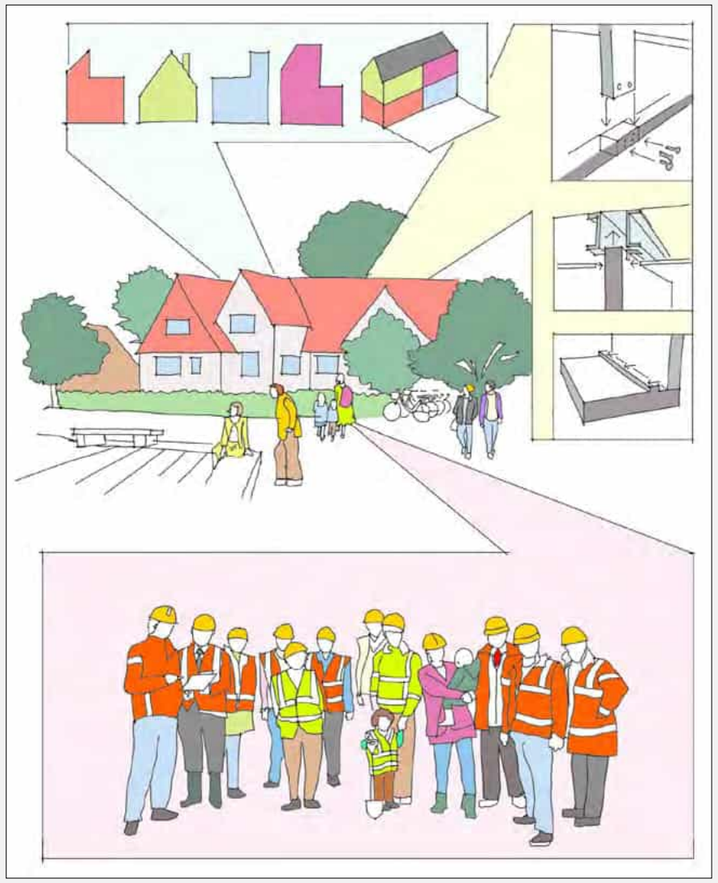


Fig. 5.50: Summary of policy requirements for residential use.



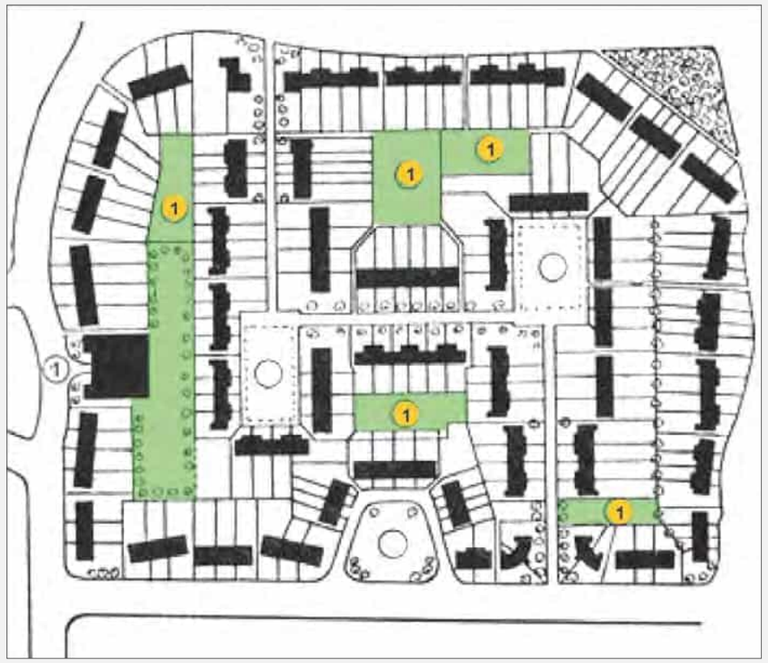


Fig. 5.51: Unwin's spatial prototype: groups of cottages with a cooperative centre. Source: Unwin, R., Town Planning in Practice

Fig. 5.52: Showcase housing innovation by part of the site being utilised to highlight different construction and design methods and tenures.

Fig. 5.53: Precedent - Communal allotments within blocks along Rushby Mead, Letchworth.
Source: Letchworth Garden City Heritage Foundation/ February 2023

Fig. 5.54: Precedent - Secure, resident-only communal spaces used for unsupervised toddlers play, Goldsmith Street, Norwich. Source: Jim Stephenson/ Mikhail Riches Architects

Fig. 5.55: Precedent - Relationship between public space and built form, Marmalade Lane, Cambridge. Source: TOWN

Fig. 5.56: Precedent - Relationships between public space and built form, Derwenthorpe, York. Source: Peter Neal/ August 2021

Objective 8

Creating climate-efficient, resilient buildings as a modern interpretation of the ‘Letchworth look’

5.39 To develop a sustainability strategy that considers opportunities for sustainable construction practices, reduced operational energy demand, low embodied energy, energy generation and a fabric-first approach to building envelope specification within the overall scheme viability for the development (Fig. 5.57).

5.40 To consider a contemporary palette of materials combined with creative, pragmatic and functional detailing within LG1’s built form to achieve a contemporary interpretation of the key Garden City architectural characteristics and features (rooted in the Arts and Crafts style), reflecting the ‘Letchworth look’ (Fig. 5.57-5.62), whilst meeting modern-day needs.

5.41 To integrate modern-day needs such as car and cycle parking, electric charging, refuse storage and private amenity within landscaped-integrated streets and plots to achieve the modern-day equivalent of Unwin’s ‘street pictures’. (Fig. 5.62-5.64)

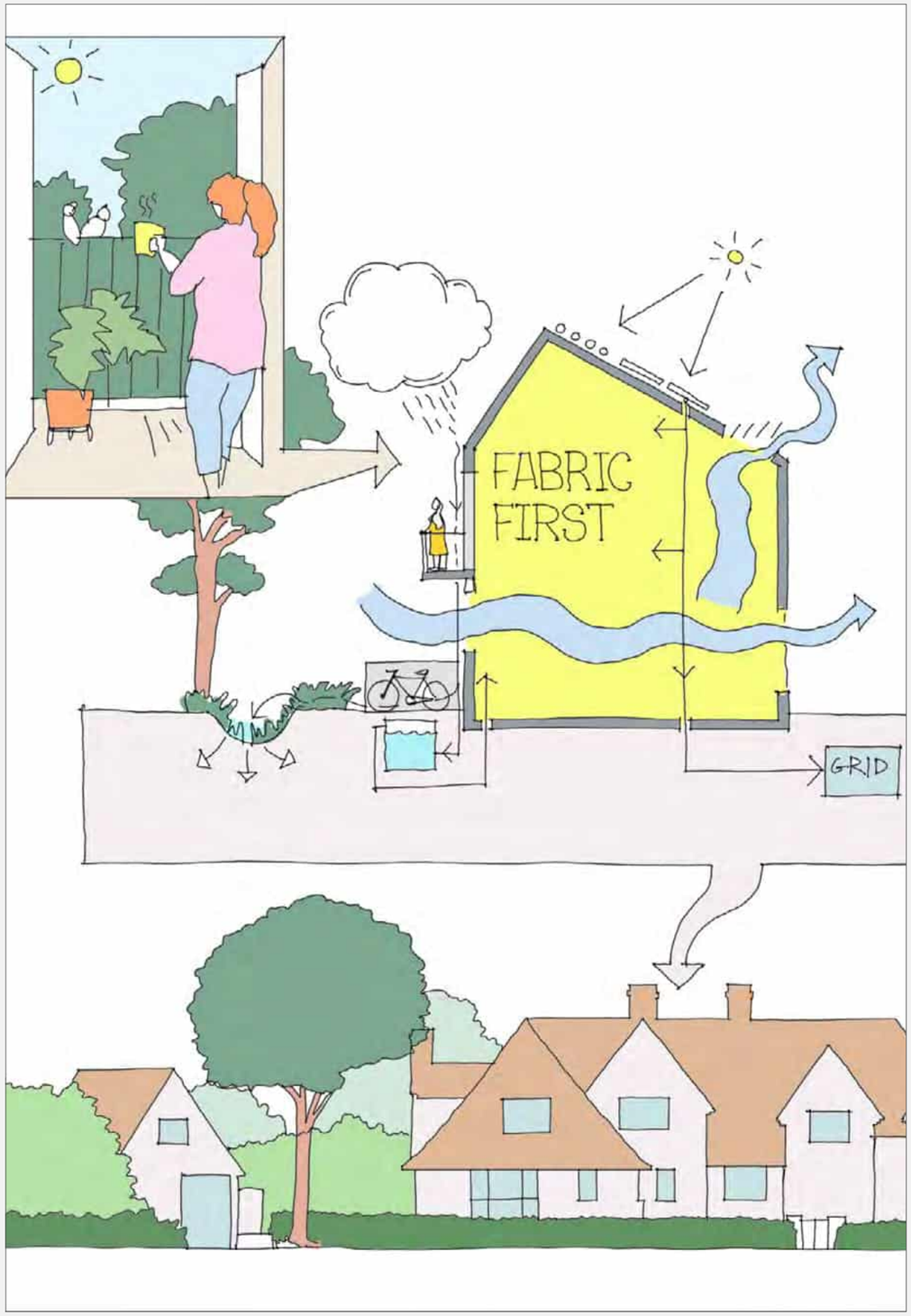


Fig. 5.57: Climate-efficient homes as a contemporary interpretation of the ‘Letchworth look’.

Fig. 5.58: Lytton Avenue as an example of Unwin’s ‘street picture’, Letchworth.
Source: Garden City Collection

Fig. 5.59: Typical architectural characteristics embodied in the ‘Letchworth look’.
Source: EcoResponsive Environments

Fig. 5.60: Building disposition on plot offering views of landscape, Letchworth.
Source: Peter Neal

Fig. 5.61: Westholm as an example of Unwin's 'street picture', Letchworth.
Source: Garden City Collection

Fig. 5.62: Precedent - Interpretation of Arts and Crafts architecture, Derwenthorpe, York.
Source: Joseph Rowntree Housing Trust/ Derwenthorpe Residents Association

Fig. 5.63: Precedent - Contemporary Garden City housing, Derwenthorpe, York. Source: Peter Neal/ August 2021

Fig. 5.64: Precedent - Contemporary Garden City housing, Derwenthorpe, York. Source: Peter Neal/ August 2021

Conclusion

5.42 Cumulatively, these eight placemaking objectives (Fig. 5.65) set a robust foundation for the creative reinterpretation of the original Garden City principles for 21st century, as part of LG1's masterplan development.

5.43 A long-term stewardship and governance strategy will be key to achieving these placemaking objectives in practice, in particular, regarding issues associated with the management and maintenance of the green and blue infrastructure and the curation of uses in the neighborhood hub as socio-economic needs change over time.

Cumulatively, these place-making objectives set a robust foundation for the creative modern-day reinterpretation of the original Garden City principles and for the development of LG1's strategic masterplan framework.

Fig. 5.65: LG1's placemaking objectives integrate the principles of sustainable design within the overall scheme viability for the development.

Appendix B

Urban design study

1001_Land to the north of the Grange (LG1)

Urban design analysis, townscape assessment and characterisation study

Final Report
29 February 2024

The aim of the study is to develop urban design analysis, townscape assessment and characterisation studies in relation to the Land north of the Grange (LG1), addressing current and emerging issues whilst supporting Letchworth's well-loved character; in accordance with The Foundation's adopted vision, local plan policies and the characteristics of context and identity supported through the National Design Guide.

The outcome of this study is a clear distillation of the urban design and townscape implications of the site's local characteristics in relation to its wider context. This encompasses landscape, urban structure, built form and architectural characteristics, to inform the development of LG1's strategic masterplan framework.

Prepared by

EcoResponsive Environments

Prepared on behalf of

Letchworth Garden City Heritage Foundation

Contents

1_**INTRODUCTION** 04

2_**PLANNING CONTEXT AND DESIGN GUIDANCE** 07

3_**HISTORICAL DEVELOPMENT** 14

4_**LANDSCAPE AND ENVIRONMENTAL CHARACTER** 51

5_**SETTLEMENT TYPE AND FORM** 70

6_**BUILT FORM AND ARCHITECTURE** 96

7_**CONCLUSION** 133

1

Introduction

1. Introduction

1.1 This urban design analysis, townscape assessment and characterisation study has been prepared on behalf of the Letchworth Garden City Heritage Foundation (LGCHF). It forms part of the planning baseline and evidence base that will be used to inform the future masterplan framework for the Land to the north of the Grange (LG1) located on the northern boundary of Letchworth Garden City. This strategic 45 ha (112 acre) housing site is allocated in the adopted Local Plan 2011-2031[1] for a new neighbourhood of approximately 900 homes and the planning objectives are described in Policy SP15: Site LG1 - North of Letchworth Garden City.

Purpose of study

1.2 The aim of the study is to develop urban design analysis, townscape assessment and characterisation studies to address current and emerging issues whilst supporting Letchworth's well-loved character, in accordance with The Foundation's adopted vision, local plan policies and the characteristics of context and identity supported through the National Design Guide. This would contribute towards a well-designed development for LG1 that responds positively to the features of the site and the surrounding context.

1.3 To this end, this study includes an appraisal of the site's historical, social and cultural development, settlement patterns, landscape character and built form.

1.4 The outcome is a clear distillation of local characteristics to inform LG1's opportunities and constraints, design principles and the strategic masterplan development process; in terms of landscape, settlement type and form, layout, built form and architecture.

Structure of the report

1.5 To achieve the aim of this assessment, aligned with the scope of study as agreed with North Herts Council (NHC) and LGCHF, this report is structured in five sections as outlined below:

Part 2: Planning context and design guidance

1.6 This section summarises the relevant national and local planning policy context, national best-practice design guidance and LGCHF's adopted vision for LG1; in accordance with which LG1's strategic masterplan will need to be developed.

Part 3: Historical development

1.7 The purpose of this historical analysis is to understand Letchworth's past evolution, in order to inform the future development of LG1 through the master planning process. We focus on understanding the reasons why Letchworth's character has changed over time, as well as identifying the more constant factors which give the place the historical continuity that underlies its townscape identity.

Part 4: Landscape and environmental character

1.8 The purpose of this section is to draw out the urban design and townscape implications of the local landscape and environmental characteristics to inform LG1's strategic masterplan. This includes a review of the strategic green infrastructure of the wider context and LG1's landscape structure including topography, hydrology and geology, views and visibility, footpaths, rights of way and access to recreational facilities, ecology and habitat to inform LG1's landscape infrastructure.

Part 5: Settlement type and form

1.9 The purpose of this analysis is to draw out the urban design and townscape implications of the local settlement type and form characteristics to inform LG1's strategic masterplan. This includes morphological assessments of the urban structure of surrounding settlements including Stotfold, Fairfield, Arlesey, Baldock and Letchworth to inform LG1's layout and form.

Part 6: Built form and architecture

1.10 This section focuses on analysing the evolution of the spatial characteristics of Letchworth's built form and architecture. It draws out its urban design and townscape implications to inform the LG1's built form and architecture as a contemporary interpretation of the Garden City principles. This includes an assessment of the underlying nature of Letchworth's architectural DNA by analysing the block configurations, plot types and massing variations, streetscape character and key architectural characteristics.

References:

1. NHC (2022) Local Plan 2011-2031, adopted 8 November 2022. See: https://www.north-herts.gov.uk/sites/default/files/2022-12/North%20Hertfordshire%20Local%20Plan%202011-2031.pdf

Study area boundary

1.11 LG1 is located close to the northern boundary of NHC and Central Bedfordshire Council (CBC). The study area boundary encompasses the immediate and wider context of LG1, as agreed with LGCHF and NHC (Fig.1.1) and includes the below:

- Heritage districts of Letchworth (pre-1930s) including Croft Lane and Norton CA
- Developments from 1930-1950s
- Modern suburban area of Letchworth (post 1950s)
- Grange Estate
- The immediate wider region to the East, West and North of LG1 including Stotfold, Fairfield, Arlesey, Pix Brook Corridor, Radwell Meadows and Baldock

1.12 High-level appraisals of the wider context and LG1's immediate adjacencies are included, as relevant, in the various sections of this report. High-level appraisals of recent developments such as Fairfield Meadows, Fairfield Gardens, and Hartington Place, is also included, to examine aspects required to support a modern-day Garden City character for Letchworth.

Methodology

1.13 Aligned with the agreed scope of study with NHC and LGCHF, the methodology includes desk-based research, site visits, and review of the below, as relevant:

- Relevant planning policies and design guidance
- LGCHF's adopted vision and core principles for LG1
- Other baseline studies such as the Accessibility Audit, Landscape Character and Sensitivity Study, Utilities Assessment, Surface Flood Risk Assessment, Heritage Assessment and Archaeological Assessment. They have been cross-referenced, as relevant.

1.14 The detailed methodology adopted for analysing historical development, landscape and environmental character, settlement type and form, and built form and architecture is outlined at the outset of each section.

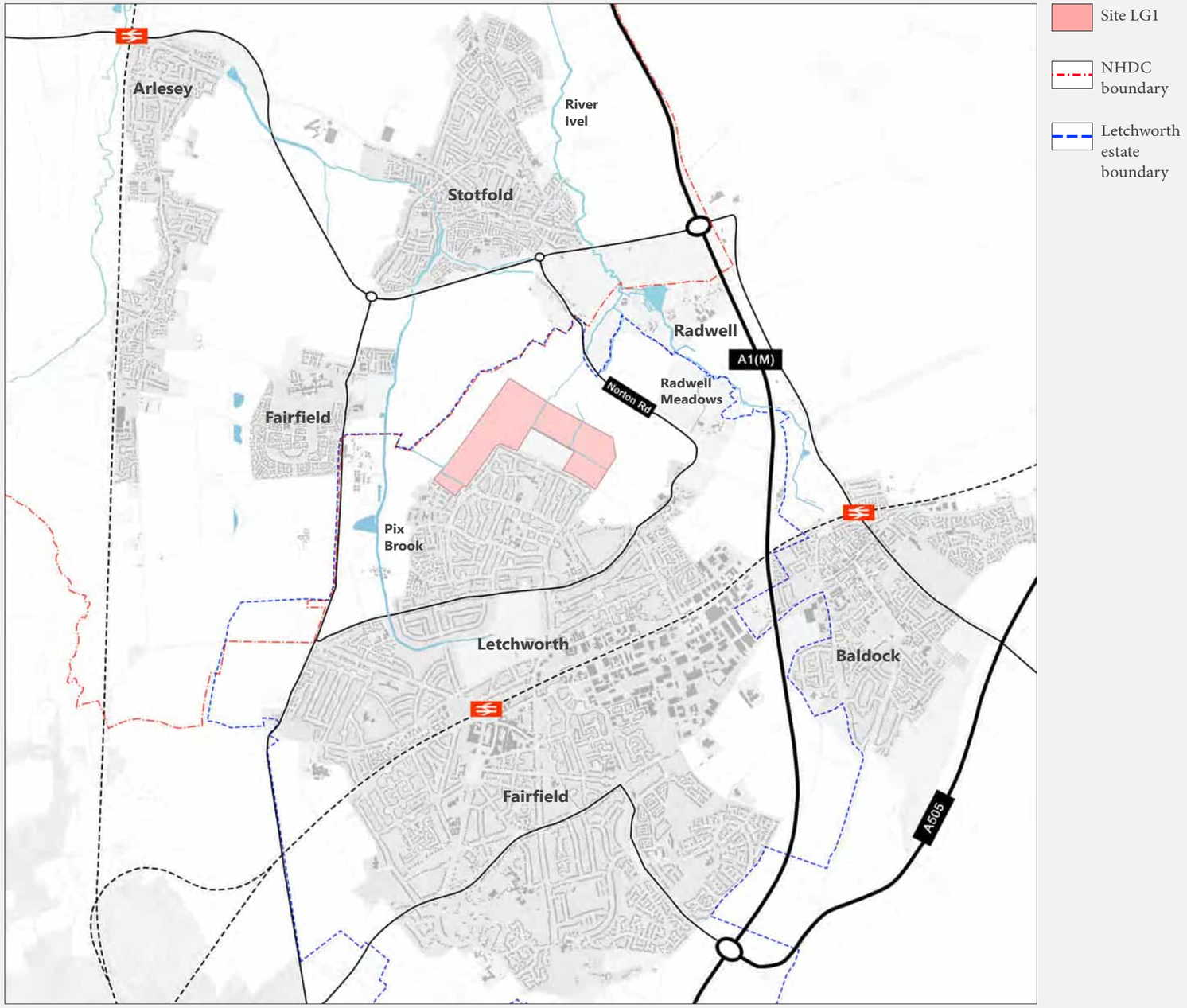


Fig. 1.1: Site location and study area boundary

2

Planning context and design guidance

2. Planning context and design guidance

National planning context and design guidance

2.1 The National Planning Policy Framework (NPPF) (MHCLG/2021)[1] and National Design Guide (NDG) (MHCLG/ 2021)[2] provides the current national planning framework and design guidance for LG1. Aligned with the NPPF, as part of the Government's documentation of planning practice guidance, the NDG outlines the priorities for well-designed places in the form of ten characteristics (p.8).

Landscape and environmental character

2.2 NPPF defines green infrastructure as 'a network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity' (p.67). In conserving and enhancing the natural environment planning measures should address climate change mitigation. Developments should 'not increase flood risk elsewhere' (p.48, para 167) and 'take a strategic approach to enhancing networks of habitats and green infrastructure' (p.50, para 175).

2.3 The NDG's themes of Context and Identity emphasises on the importance of 'understanding how places or developments sit within the landscape, to influence the siting of new development and deciding how natural features should be retained or incorporated into it' (p.10-16). NDG's theme of Nature (p.26-28) highlights the importance of providing a network of high quality, green open spaces with a variety of landscapes and activities; including play (N1), improving and enhancing water management (N2), and supporting rich and varied biodiversity (N3). NDG's theme of Public Space (p.31) also highlights the role of landscape in ensuring high quality and attractive public spaces (P1).

Settlement type and form

2.4 NPPF emphasises that planning measures should support the development of 'strong, vibrant and healthy communities', help 'protect and enhance our natural, built and historic environment' and contribute towards building a strong, responsive economy (p.5, para 8). In promoting healthy and safe communities and delivering well designed places, planning measures should aim to 'promote social interaction', create places that are safe, inclusive and accessible', and enable and support healthy lifestyles through provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling' (p.27, para 92; p.30, para 104c; p.39, para 130f).

2.5 NPPF highlights that development proposals should be 'sympathetic to local character and history' and 'establish or maintain a strong sense of place, using the arrangement of streets and spaces to create attractive, welcoming and distinctive places to live, work and visit' (p.38-39, para 130c & 130d; p.55, para 190c & 190d). In promoting sustainable transport, it highlights the importance of the 'patterns of movement, streets, parking and other transport considerations' (p.30, para 104e) that contribute to making high-quality, sustainable places.

2.6 The NDG's themes of Context and Identity emphasises the importance of understanding how places or developments 'relates to local cultural context, local history and the significance and setting of heritage assets when determining how a site may be developed' (p.10-16).

The National Planning Policy Framework (NPPF) and National Design Guide (NDG) provides the current national planning framework and design guidance for LG1.

References:

1. MHCLG (2021) National Planning Policy Framework, revised on 20 July 2021, Department for Levelling Up, Housing and Communities. See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

2. MHCLG (2021) National Design Guide, January 2021, Department for Levelling Up, Housing and Communities. See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962113/National_design_guide.pdf

NDG's themes of Movement (M1 & M2, p.22-24), Public Space (P1, P2 & P3, p.30-32), Uses (U1 & U3, p.34-36) and Built form (B1 & B3, p.18-21) provide further design guidance for vibrant, safe and healthy places.

Built form and architecture

2.7 NPPF emphasises on 'the creation of high-quality, beautiful and sustainable buildings'; highlighting that planning policies should ensure that developments 'function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development' (p.38, para 130a); 'are visually attractive as a result of good architecture, layout and appropriate and effective landscaping' (p.38, para 130b); are 'sympathetic to local character and history, including the surrounding built environment and landscape setting' (p.39, para 130c); and 'establish or maintain a strong sense of place using the arrangement of building types and materials to create attractive, welcoming and distinctive places' (p.39, para 130d).

2.8 The NDG's themes of Context and Identity highlights the importance of understanding and relating 'well to the site, its local and wider context' and respond to its 'existing local character and identity' (Fig.2.1 & 2.2) in terms of the patterns of built form, including local precedents for routes and spaces and the built form around them, to inform the layout, grain, form and scale of development (p.10-16). The NDG's themes of Built form (B2, p.19-20), and Homes and Buildings (H1, H2 & H3, p.38-40) provide further guidance for designing appropriate building types and forms that are healthy, comfortable and provide safe internal and external environments including attention to details such as storage, waste, servicing and utilities. Furthermore, themes related to Resources (R2 & R3, p.42-44) and Lifespan (L2, p.47) emphasise on the careful selection of materials and construction techniques, resilience and adaptability of the building stock.

2.9 Specific policies have been cross-referenced in the relevant sections of this report.

Fig. 2.1: View of Sollershott West; a heritage district of Letchworth (pre-1930s)

Fig. 2.2: View of Hartington Place; a recent contemporary development in Letchworth

Local planning context

2.10 The current North Hertfordshire Local Plan 2011-2035[3] was adopted in November 2022 and provides the current planning framework for the district. The NHC adopted Local Plan 2011-2031 and Proposal Map sets the allocation boundary for LG1 (Fig.2.3). This Strategic Housing Site is for a new neighbourhood of approximately 900 homes. A comprehensive and deliverable Strategic Masterplan for the entire allocation should follow and implement Garden City principles.

2.11 The Local Plan notes that 'although development of the town to Ebenezer Howard's original vision of 32,000 residents has been achieved, it is considered there remains scope for a sensitive extension of the town to the north, which respects the town's original ideals while making provision for the needs of the 21st Century' (para 4.208). The masterplan will need to demonstrate how the core principles of vista, closure, accents and group design (Appendix 5, p.315-316), which are characteristic of Letchworth's locally distinctive townscapes and character, are incorporated into new developments.

Landscape and environmental character

2.12 The NHC adopted Local Plan 2011-2031 describes the diverse range of green infrastructure and environmental assets of North Hertfordshire and the contribution that the natural environment makes to the character and distinctiveness of the district.

2.13 Policy SP9 on Design and Sustainability (p.69-70) requires strategic masterplans and planning applications for strategic housing sites to create an 'accessible multifunctional green infrastructure network' that supports 'healthy lifestyles, ecological connectivity and climate adaptation' (para vi & vii) and which 'positively reflect and respond to the local landscape, townscape and historic character' (para i).

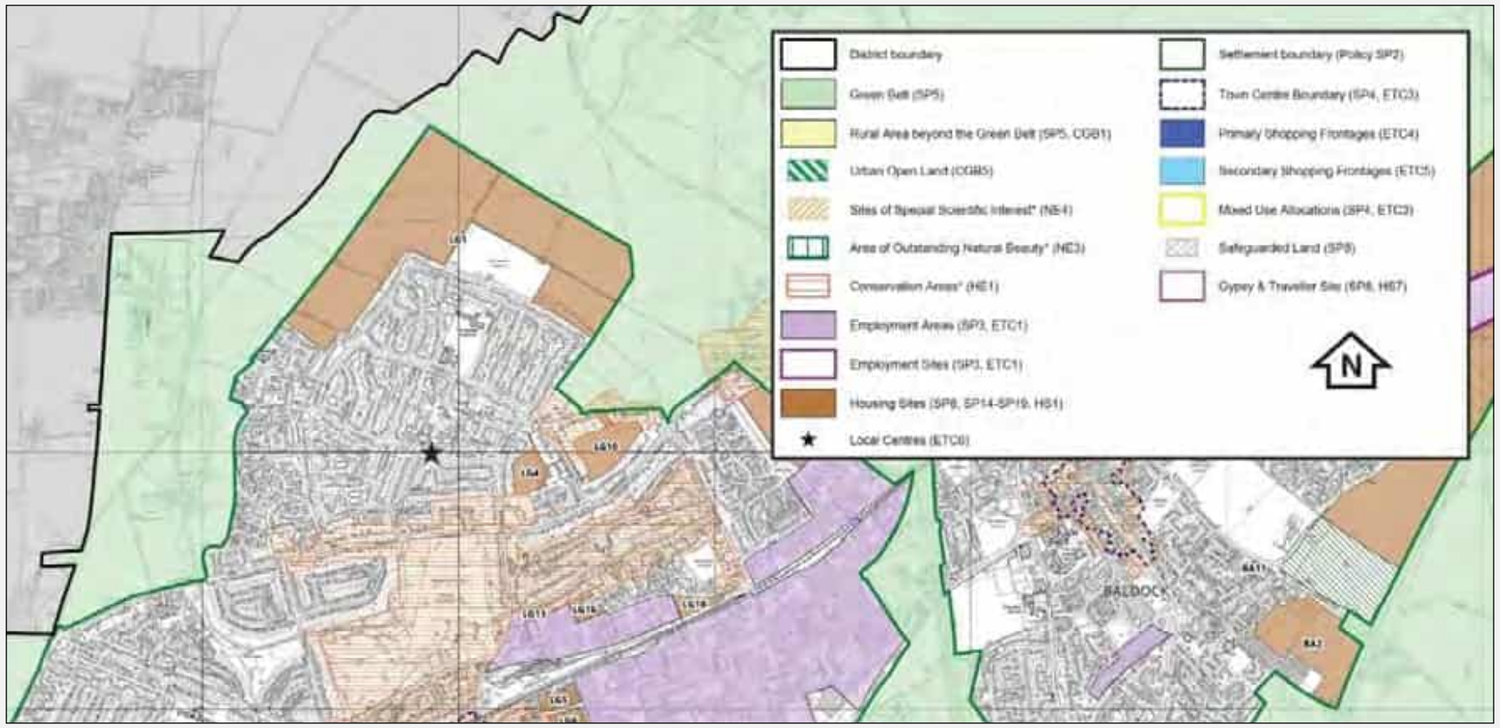


Fig. 2.3: Excerpt from NHC Local Plan 2011 - 2031 Policies Map B, Letchworth Garden City

Source - NHC Local Plan 2011-2031 See: https://www.north-herts.gov.uk/north-herts-local-plan-2011-2031

The NHC adopted Local Plan 2011-2035, and in particular, Policy SP9 on Design and Sustainability, Policy SP15 on LG1, and Appendix 5 on Letchworth's Garden City design principles provide the current local planning context for LG1.

References:

3. NHC (2022) Local Plan 2011-2031, adopted 8 November 2022. See: https://www.north-herts.gov.uk/sites/default/files/2022-12/North%20Hertfordshire%20Local%20Plan%202011-2031.pdf

2.14 Policy SP15 on LG1, North of Letchworth Garden City (p.87-88) requires a 'comprehensive SUDs approach (para i)', 'existing trees to be retained' (para e), any 'hedgerow losses to be kept to a minimum' (para e), 'structural planting to create a sense of place' and 'a long-term, defensible Green Belt boundary, particularly to the north-west and east' (para j), and 'diversion and / or re-provision of the Letchworth Greenway to provide a revised route around the new urban edge' (para k). Other local planning policies in relation to landscape and green infrastructure include Policy SP12 (p.78), Policy NE1 (p.149), Policy NE2 (p.150) and Policy NE4 (p.153-154). For further details on strategic Green Infrastructure (GI) policy context of NHC and CBC please refer to the Landscape Character and Sensitivity Study report.

Settlement type and form

2.15 The NHC adopted Local Plan 2011-2031 outlines both physical and non-physical attributes of North Hertfordshire and the contribution that the various settlements' type and form makes to the character and distinctiveness of the district.

2.16 Policy SP9 on Design and Sustainability (p.69-70) requires strategic masterplans and planning applications for strategic housing sites to 'create spaces and streets which positively reflect and respond to local townscape and historic character' (para c. i; for further discussion refer to Built Heritage Baseline Appraisal Report and the Archaeological Study Report); create integrated, accessible and sustainable transport systems (para c. ii; for further discussion refer to Accessibility Audit Report); provide a clear hierarchy of well-connected routes integrated with the wider context (para c. iii); plan for integrated mix-use communities whilst addressing cumulative cross boundary planning and infrastructure matters (para c. iv & v); and ensure a hierarchy of linked high-quality, attractive public realm that is safe, attractive and supports social cohesion (para c. viii).

2.17 Policy SP15 on Site LG1, North of Letchworth Garden City (p.87-88) requires that development proposals should include 'the most appropriate points of vehicular access considering landscape and traffic impacts to minimise development impacts (para a); comprehensive integration into existing route networks for a joined-up masterplan (para b); an appropriate education solution (para c); sensitively address local heritage assets and Scheduled Monuments including the Croft Lane and Norton Conservation Areas (para d); provide neighbourhood-level retail and community facilities (para f), atleast 9 serviced plots for self-build (para g) and a site for a care home in Use Class C2 (para h).

Built form and architecture

2.18 The NHC adopted Local Plan 2011-2031 outlines a spatial vision for North Hertfordshire which includes raising the 'standards of sustainable design and architectural quality' to 'make a positive contribution to the local area' (p.35-36). It encourages 'using innovative design to reduce energy consumption and waste from the construction and usage of buildings that optimises the potential of the site and have a positive influence on the environment' (p.140, para 9.6). It also highlights considering potential for 'future changes in technology and lifestyles when planning and designing schemes to ensure flexibility in the use of buildings throughout their life' (p.141, para 9.9).

2.19 It is emphasised that the Garden City principles of vista, closure, accents and group design are integrated into the built form and architecture of new developments (Appendix 5, p.315-316).

2.20 Policy SP9 on Design and Sustainability (p.69-70) requires strategic masterplans and planning applications for strategic housing sites to create buildings, which positively reflect and respond to the local landscape, townscape and historic character' (para c.i).

2.21 Specific policies have been cross-referenced in the relevant sections of this report.

With the allocation of LG1 in the Local Plan, it is considered that there remains scope for a sensitive extension of Letchworth to the north, which respects the town's original ideals while making provision for the needs of the 21st Century.

LGCHF's adopted vision for LG1

2.22 The Foundation's Board of Trustees has adopted the following vision that will form the basis of the development of LG1.

To facilitate the successful implementation of a sustainable landscape-led residential development of Grange North that represents a modern interpretation of Garden City design principles, providing efficient, flexible and well-designed homes to help meet Letchworth's housing and economic needs.

2.23 The scheme will be informed by local community engagement, incorporate arts and culture and will showcase innovative housing solutions which explore modern sustainable construction, self-build and community house building.

2.24 The development will include a vibrant local centre with a primary school and local facilities, promote a multi-modal transport approach, encouraging cycling, walking, bus use and sustainable transport improvements across the town whilst substantially reducing reliance on travel using private car.

2.25 It will lead to a significant net gain in biodiversity and facilitate the delivery of new open spaces. It will also bring significant financial benefits through value capture from the development to help facilitate community reinvestment packages for the Grange and across the town, whilst providing a range of jobs, training and apprenticeships for local people.

2.26 The development will include housing across tenures (at least 40% will be affordable rent, shared ownership or community land trust) and will include a programme of improvements to local infrastructure, community facilities, parks and open space.

Landscape and environmental character

2.27 Following a Green Infrastructure workshop with LGCHF's Housing Development Committee, held virtually on 20 August 2021, a clear and positive vision for the green infrastructure component of the LG1 masterplan was set out, with a set of priorities for further development.

2.28 A green infrastructure vision statement was agreed, to support and guide the evolution of LG1's strategic master plan with NHC, HCC and the local community. LGCHF's green infrastructure vision statement[4] emphasises that development on LG1 'will be landscape-led, reflecting a modern interpretation of Letchworth Garden City design.

2.29 This will include a series of private and public open spaces with opportunities for integrated sustainable urban drainage, habitat creation, urban agriculture, children's play and community gardening, set within a functional and productive landscape structure that will include tree lined corridors. It should reflect the best of Letchworth's landscape legacy, respond to climate change, enhance the desirability of the development, the health and wellbeing of residents and minimise environmental impact.

2.30 The development will maximise opportunities derived by retaining and recycling surface water, and will ensure a net gain of at least 10% of biodiversity on LG1. It will retain as many existing mature trees and hedgerows as possible and with a substantial net gain in both.

2.31 The Greenway will be protected and enhanced as a linear park, and there is opportunity to work with the local community to provide a programme of landscape and environmental enhancements to the Grange Estate and recreation ground.' This is well-aligned with the national planning policy and design guidance, the local policy context of SP9 and SP15, and the strategic green infrastructure policy context of NHC and CBC.

References:

4. LGCHF (2022) Green Infrastructure Workshop Feedback paper, based on a workshop held in August 2021 with LGCHF's Housing Development Committee.

Settlement type and form

2.32 Following a Transport Infrastructure workshop with LGCHF's Housing Development Committee, held virtually on 26 November 2021, a clear and positive vision for the transport infrastructure component of the LG1 masterplan was set out, with a set of priorities for further development. A transport vision statement[5] was agreed, to support and guide the evolution of LG1's strategic master plan with NHC, Highways County Council (HCC) and the local community. LGCHF's transport infrastructure vision statement emphasises that LG1 should adopt a guiding principle of 'a sustainable transport strategy that supports modal shift, discouraging car use'.

2.33 The development should be accessible and well-integrated with Letchworth and the surrounding transport networks with access points onto Norton Road (Fig. 2.4) and Western Way in agreement with HCC, and through measures such as protecting and enhancing the Greenway (Fig. 2.5) as a linear park. It should support a 10% modal shift, incorporating positive opportunities for walking, cycling and public transport; incorporating a sustainable travel hub and a new demand responsive bus system that will reduce the need for a private car. Impacts on existing residents in the Grange Estate must be minimised, with the proposed layout prohibiting rat running.

2.34 Other aspects of the vision include reflecting the Garden City principles in informing the spatial layout of LG1's streets and blocks; and delivering a vibrant local centre that provides a range of uses, including the school, transport hub, commercial floorspace and residential accommodation (see Lichfield's Housing and Retail Needs Assessment report for further details).

Built form and architecture

2.35 In terms of built form and architecture, the core values and principles include all development being tenure blind with sustainable, energy efficient homes that exceed government minimum unit sizes and is aligned with LGCHF's design guidance for new housing developments[6] that covers aspects such as general requirements for new dwellings (p.5-6), layout design principles (p.7-8), design detail for contemporary style developments (p.10), energy and sustainability (p.11-12).

Fig. 2.4: View of pathway linking LG1 to Norton Road

Fig. 2.5: Letchworth's Greenway providing access to the countryside

2.36 Taken cumulatively, LGCHF's adopted vision and core values for LG1 is well-aligned with the national planning policy and design guidance, the local policy context of SP9 and SP15, and the strategic transport infrastructure policy context of North Hertfordshire.

References:

5. LGCHF (2022) Transport Infrastructure Workshop Feedback paper, based on a workshop held in November 2021 with LGCHF's Housing Development Committee.

6. LGCHF (2019) New Housing Developments in Letchworth Garden City. Revised October 2019.

3

Historical development

3. Historical development

Introduction

The purpose of this historical analysis is to understand Letchworth's past evolution, in order to inform the future development of LG1 through the master planning process. We focus on understanding the reasons why Letchworth's character has changed over time, as well as identifying the more constant factors which give the place the historical continuity that underlies its townscape identity.

Fig. 3.1: Aerial view of LG1
Source: LGCHF

3.1 In response to changing political-economic issues, Letchworth has inevitably evolved a range of forms over time; generating distinct character areas that together constitute a unique but constantly-developing overall identity. Through the following sequence of time-periods, structured around key events, we analyse this evolution for Letchworth and its surrounding settlements; focusing on the layers of landscape, public routes and spaces, land uses and buildings that cumulatively create the settings for everyday life and local place identity.

3.2. We conclude by identifying character areas from each time-period that offer lessons for addressing current and emerging issues in ways that best support Letchworth's identity, to light the way towards creating a future for LG1 (Fig. 3.1) that is rooted in the past without being stuck in the past.

Methodology

3.3 Information was sought from a variety of available sources in order to meet the objectives of the assessment:

- Review of Archaeological Assessment undertaken by Archaeological Solutions Ltd. in 2016 including review of the information drawn from relevant Archaeological Databases, Historical and Cartographic Sources and other secondary sources
- Review of historic development plans from LGCHF
- Garden City Collection archives
- Review of relevant planning studies such as Urban Design Assessments and Conservation Area Studies
- Desk-based research and relevant literature review

Key events summary

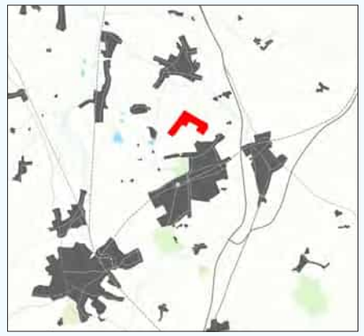
Pre-1800

- Valleys of River Ivel and Pix Brook produced evidence of prehistoric settlements such as Norton village, dominated by agrarian economy
- lcknield Way established in prehistoric times
- c.1086 Domesday survey lists Letchworth with 15 households
- c.1086 Domesday survey lists village of Norton
- c.1100 St. Nicholas Church in Norton, surviving today
- c.1130-40s Baldock and Great North Road established

1800-1905

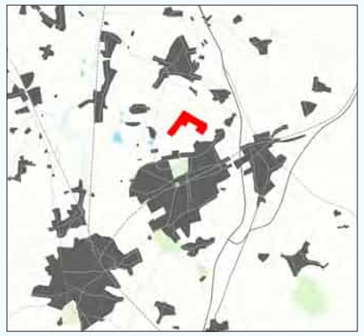
- 1825 - Enclosure Act
- 1901 - Letchworth's population was 96
- Great Northern Railways established
- 1856-60 - Fairfield Hospital built
- 1898 - Howard's Garden City vision published
- 1903 Howard set up First Garden City Ltd.
- 3,800 acres of land purchased to develop Letchworth

1905-1920



- 1905 - Letchworth station gained full passenger service
- 1905-1907 - Cheap cottages exhibition
- 1914-1918 - World War 1
- 1912-1920 - Spirella building constructed
- Letchworth well under construction by 1918
- Letchworth Urban Design Council (LUDC) formed in 1919.

1920-1946

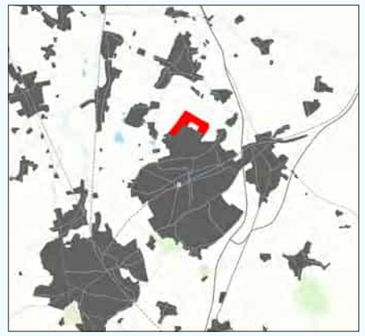


- 'Homes fit for heroes' campaign after World War 1
- 1929-31 - Great Depression
- 1931 - Low interest rates, Letchworth expands
- State-of-art industrial premises with electricity attracting businesses
- 1939 - Letchworth's total population 17,400
- 1939-1945 - World War 2

1946-1974

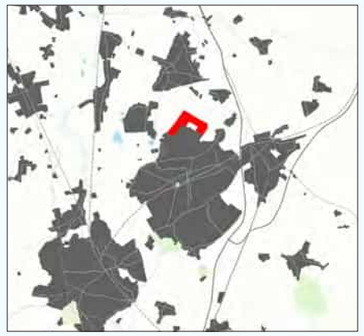
- 1947 - Town & Country Planning Act
- LUDC gains CPO powers post WWII in the TCPA 1947
- Housing delivery led by public sector
- Grange, Jackman and Lordship estates constructed
- 1963 - Letchworth Garden City Corporation formed, in debt till 1974
- 1967 - A1 junctions 8-10 opened

1974-2000



- 1980s - Several key community facilities are built in Letchworth.
- Letchworth expands west of Grange Estate; small-scale infill sites developed
- Surrounding settlements expand
- Thatcherite era: Out-of-town retail, Right to Buy policies
- 1995 - LGCHF formed

2000-present



- Housing crisis
- Climate change crisis
- Biodiversity emergency
- 2003 - Garden City Greenway opened
- 2008-2020 - Several small-scale infill sites developed in Letchworth
- Significant expansion of Fairfield, for example, Fairfield Park with approximately 2000 homes, and Stotfold

Pre-1800

3.4 We start from Early Modern times: the first period from which useful map records survive. This map from 1695 (Fig. 3.2) shows the key elements then thought worthy of note that had survived from earlier times. Elements shown had originated from across the prehistoric, Anglo Saxon and Mediaeval periods.

Political economy

3.5 The prominently drawn administrative boundaries of counties and, within them, smaller scale 'hundreds', had first been defined in Anglo Saxon times, between about 700 and 1100.

Landscape

3.6 From prehistoric times, we see the underlying topography of the Chiltern chalk hills, together with the main river drainage system. The Dury and Andrews' map of Hertfordshire dates to 1766 (Fig. 3.3), confirming that Norton parish remained overwhelmingly agricultural in character. The future site LG1 appears to include sections of several fields with at least one field boundary traversing the site on a north-north-east to south-south-west alignment.

Public routes and spaces

3.7 The route of Icknield Way, surviving from prehistoric times and later improved by the Romans, runs mostly along the contours, to save the energy of humans' and animals' feet. Where the map shows details of larger settlements such as Hitchin and Baldock, it brings out very clearly the highly-connected networks of public spaces inherited from mediaeval times to support energy-efficient movement.

Plots and buildings

3.8 The name 'Letchworth' - meaning 'homestead in an enclosure' in Anglo-Saxon - was first officially recorded in the Domesday survey.

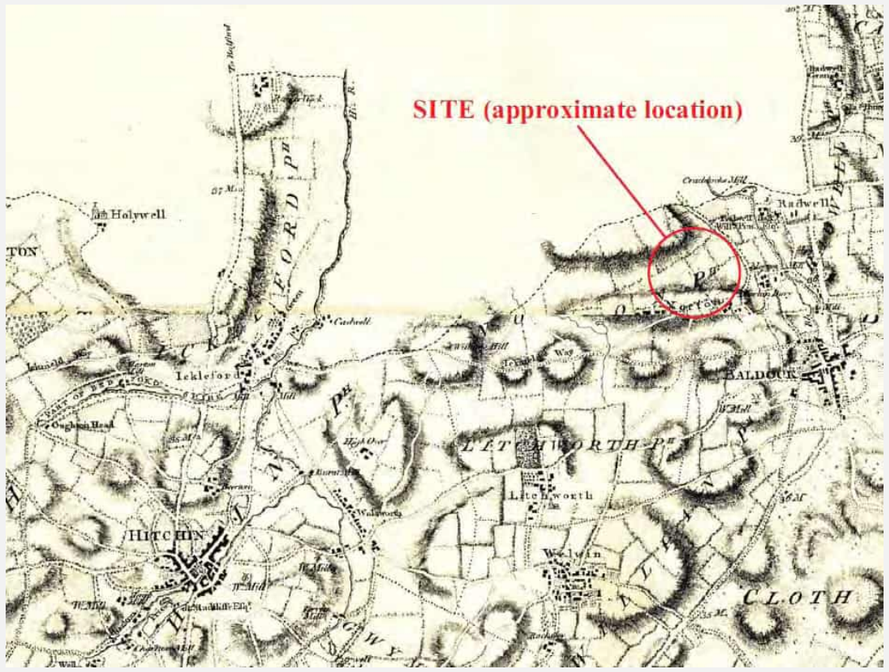


Fig. 3.2 (top): Extract of John Oliver map of Hertfordshire, 1695. Source: Hertfordshire Archives

Fig. 3.3 (left): Dury and Andrews' map, 1766. Source: Source: Archaeological Solutions 2016 study

The parish and village of Norton thrived throughout the post-medieval and early modern periods dominated by its agricultural economy. Post medieval buildings survive to this day and are located east of LG1. St. Nicholas Church dating back to 1100 is visible from LG1.

3.9 The Domesday survey of 1086 lists Old Letchworth as accommodating 15 households of 9 villagers, 4 cottagers, 1 slave and a priest, suggesting the presence of a church. It was one of the three original villages which were absorbed into Letchworth Garden City, the other two being Willian and Norton. The village of Norton is known to have existed by 1007, with remains of the mediaeval settlement visible as earthworks in a field beside St. Nicholas Church, which dates back to the early 1100s and is visible from LG1 today (Fig. 3.4).

3.10 The parish and village of Norton survived throughout the post-mediaeval and early modern periods. By the 18th century, it remained a relatively small settlement dominated by its agricultural economy. Post-mediaeval buildings survive in the village, all to the east of LG1. Croft Lane, in close proximity to the south-eastern boundary of LG1, was historically part of the village and includes dwellings with thatched roofs, detached homes on substantial plots with the overriding character of a traditional country lane (Fig. 3.5). Larger settlements such as Hitchin and Baldock contain buildings densely organised around the public routes.

Fig. 3.4: Present day view of St. Nicholas Church from LG1
Source: Peter Neal

Fig. 3.5 Norton Village, Croft Lane c.1900
Source: Garden City Collection

LG1 summary: Wider context

3.11 The site's wider context in the early 18th century, consisted of the small parish of Norton close to the large settlement of Baldock, while the village itself comprised a relatively small, linear settlement, with Nortonbury to the north-east. The majority of the parish consisted of agricultural land traversed by trackways and footpaths.

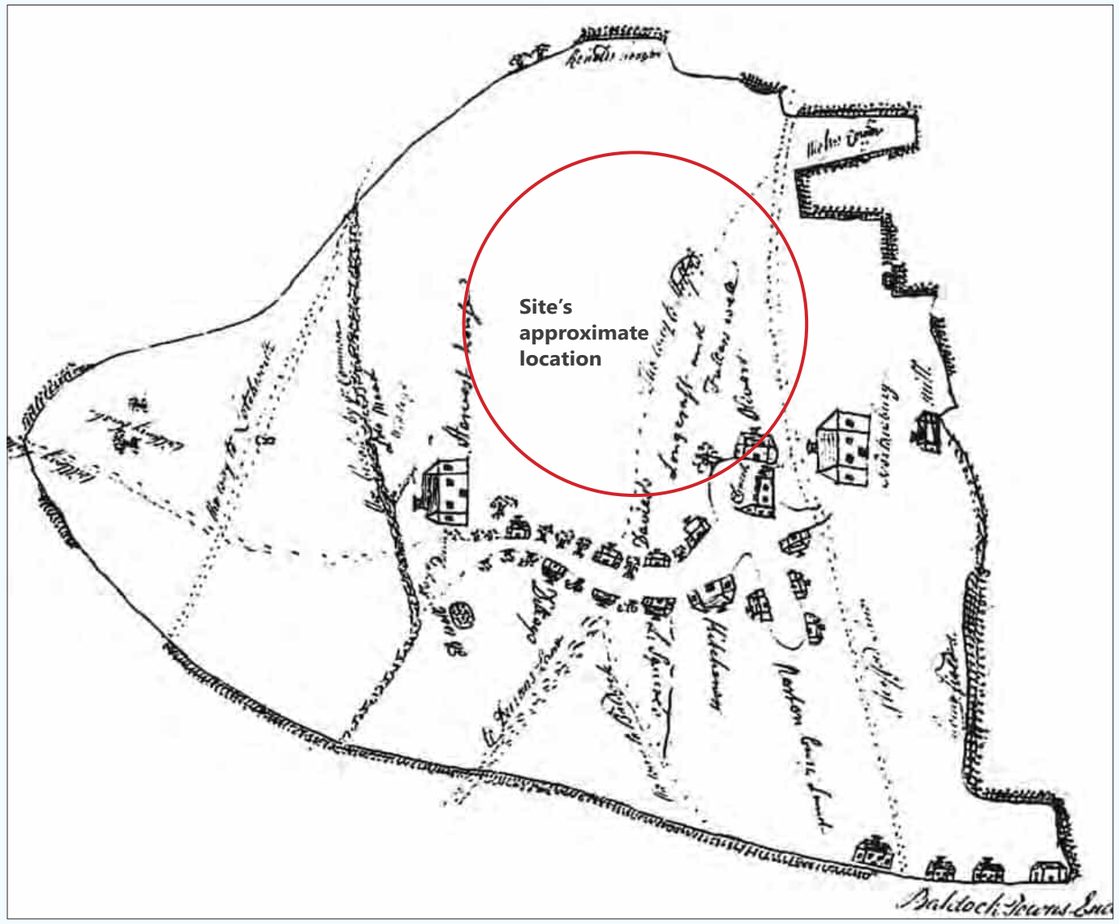


Fig. 3.6: Norton, c.1700.
Source: Archaeological Solutions 2016 study

LG1 summary: Local context

3.12 The parish of Norton enclosure map shows the site undeveloped with Norton village to the east. As agricultural land, it formed part of multiple land holdings. The north-western areas lie within land owned by Francis Pym, the south-eastern corner of the site was held by Edward Payne and John Pryor. Much of the southern boundary of the site was defined by 1798.

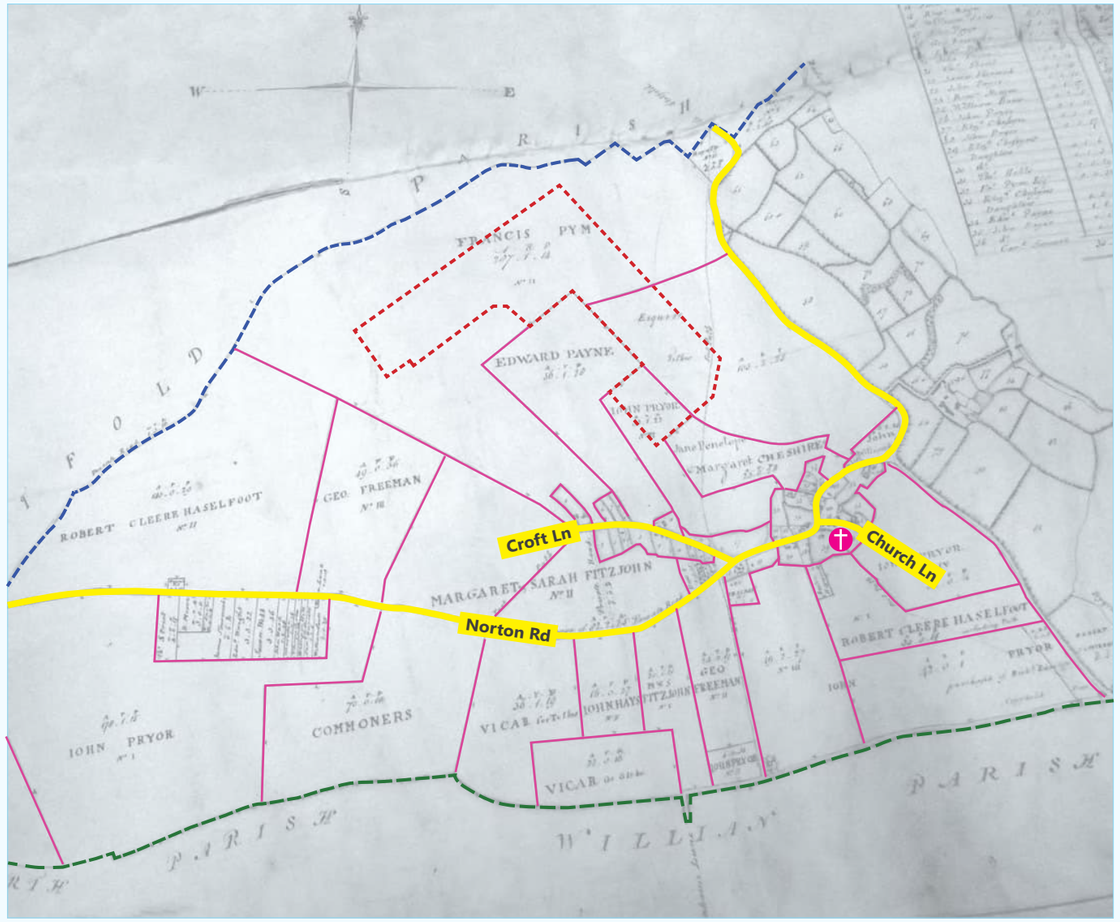


Fig. 3.7: Parish of Norton Enclosure map - Ordinance Survey preliminary map, 1798
Source: Archaeological Solutions 2016 study

Stotfold Parish boundary — **Field boundary**
Willian Parish boundary — **St. Nicholas Church (survives till date)**

Relevant findings for LG1 (Pre-1800)

3.13 This period highlights the importance of the historic village of Norton (located close to the east and south-east boundaries of LG1) as a key character area to offer lessons for LG1's masterplan development (Fig. 3.8); in particular with regard to the local characteristics of rustic country lanes and streetscapes, urban grain and plot typologies that underlie its distinctive rural charm. This includes townscapes along key surviving streets such as Croft Lane and Church Lane, and views of St. Nicholas Church that can be seen from LG1. The unique qualities of the former were recognised in 1974 through designation as a Conservation Area.

3.14 Further analysis to draw out the urban design and townscape lessons for LG1 will be covered in the following section on Built Form and Architecture.

Fig. 3.8: (Top) Coloured postcard of Norton village showing the thatched house (now demolished) with its picket fence with the church and cottages beyond c.1920
Source: Garden City Collection

(Bottom) Norton, Village, Garden City c.1900
Source: Garden City Collection

1800-1905

Political economy

3.15 By the start of the twentieth century, Old Letchworth - one of three original villages which, together with Norton and Willan, were absorbed into Letchworth Garden City - was still a very small settlement: the census of 1901 listed a population of only 96. In part at least, this was because of a lack of countryside employment. From 1798, the Enclosure Act had restricted the use of land to its particular owner, ending people's traditional rights to use common land held through the open field system.

3.16 Drawing on the technological advances of the industrial revolution, this reorganisation of land enabled the increasing mechanisation of agriculture through the nineteenth century. In turn, as this reduced the demand for agricultural workers, increasing numbers of people were drawn to the new job opportunities which industrialisation had generated in larger urban settlements. It was a reaction against the unhealthy working and living conditions offered by most industrial towns that inspired Ebenezer Howard's counter-vision of the Garden City. By 1903, there was enough interest in Howard's idea for The Garden City Pioneer Company Ltd to be founded and negotiate the purchase of 3,800 acres of agricultural land from a number of landowners, to build this great social experiment: the world's first Garden City.

Landscape

3.17 The landscape setting of the site chosen to become present-day Letchworth offered excellent potential for putting Howard's new vision into practice. The elevated landscape promised healthy fresh air with access to plenty of green open space. Part of the former common grazing land established by the 1798 Enclosure Act has been retained as common land known as Norton Common. Neither Bryant's map of Hertfordshire, which dates to 1822 (Fig. 3.9) nor the 1st edition Ordnance Survey map dating from 1882 (Fig. 3.10), depict any significant developments to LG1 or its surrounding area. The site

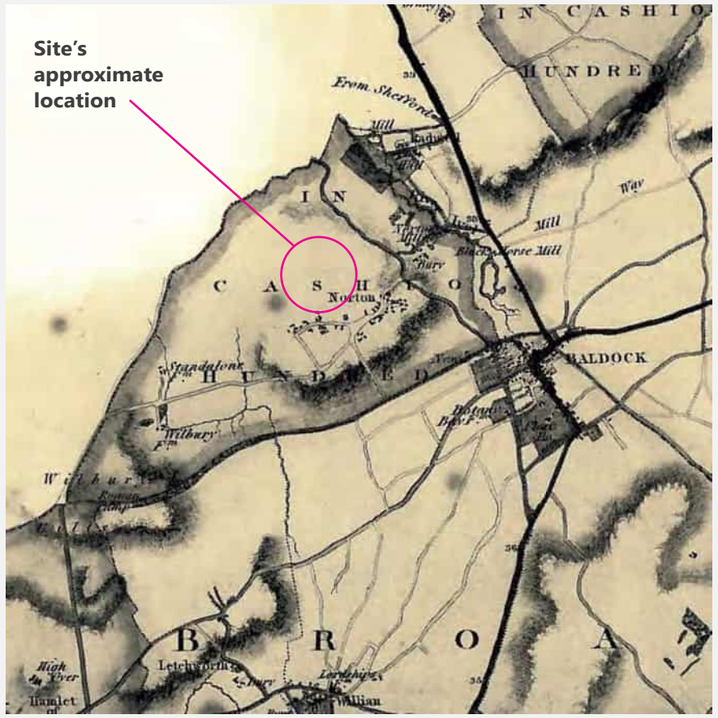


Fig. 3.9: Bryant's map, 1822
Source: Archaeological Solutions 2016 study

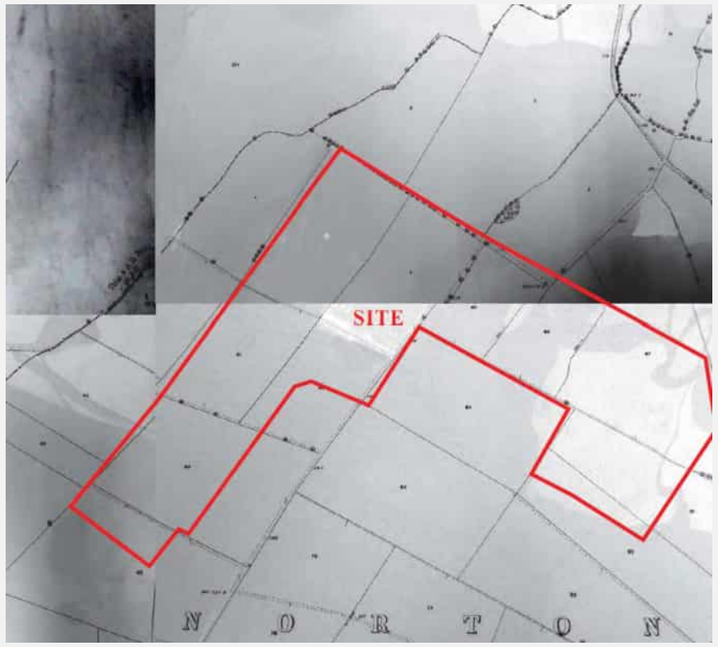


Fig. 3.10: 1st edition Ordinance Survey map, 1882
Source: Archaeological Solutions 2016 study - need a better scan

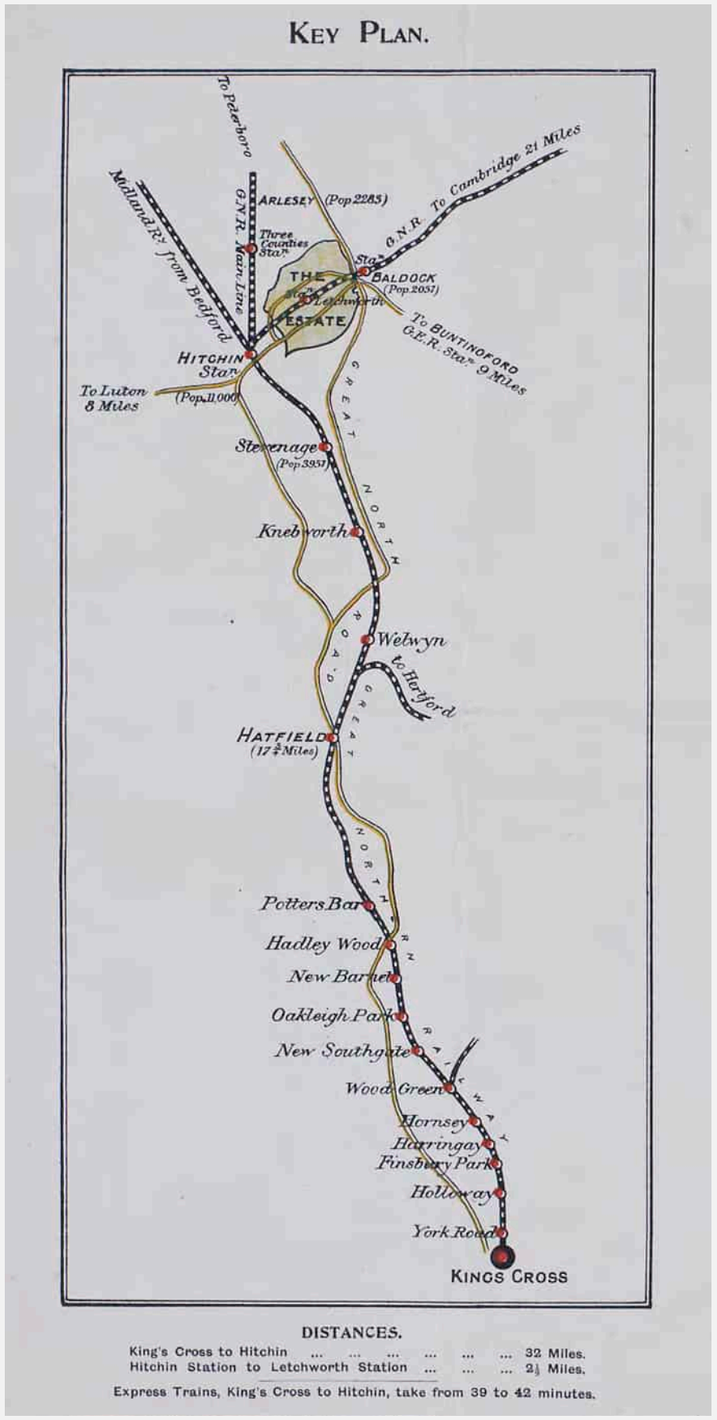


Fig. 3.11: Strategic connectivity of Letchworth
Source: Garden City Collection

remained agricultural land. Much of the site, located between the county boundary to the north-west and Norton village to the south-east, was defined by field boundaries and a footpath. It consists of parts or wholes of eight adjoining fields.

Public routes and spaces

3.18 Letchworth's location offered good road access via the Great North Road, and the potential for constructing a new rail station (Fig. 3.11). Rail proximity to Hitchin junction offered scope for attracting new employment opportunities through easy access for people and goods to London and North East via the Great Northern Railway, and to the Midlands through the Midland Railway.

Plots and buildings

3.19 In 1903, First Garden City Ltd was formed, vested with the purchased land in order to implement the development. The size and shape of the purchased land was defined by established field boundaries and by the layout of rail lines and public routes, including the prehistoric Icknield Way. These pre-established boundaries therefore underpin the subsequent development of the Garden City's own spatial structure, following the competition-winning design by Barry Parker and Raymond Unwin in 1904 (Fig. 3.12). One of the first houses to establish an archetypal 'Letchworth look' in housing design were built along Croft Lane and Cashio Lane, both part of the historic village of Norton. These were larger villa-type houses, distinguished by containing buildings by important Letchworth Garden City Arts and Crafts architects; notably Barry Parker, Raymond Unwin and Cecil Hignett.

3.20 In terms of the wider context, Fairfield Hospital, originally called the Three Counties Hospital, was built in 1856–60. Presently, there is intervisibility between the culpae of the hospital/spire of the church and western parts of LG1 adding to the site's local distinctiveness. But it does not contribute to its overall heritage significance. Refer to the Built Heritage Baseline Appraisal for details.

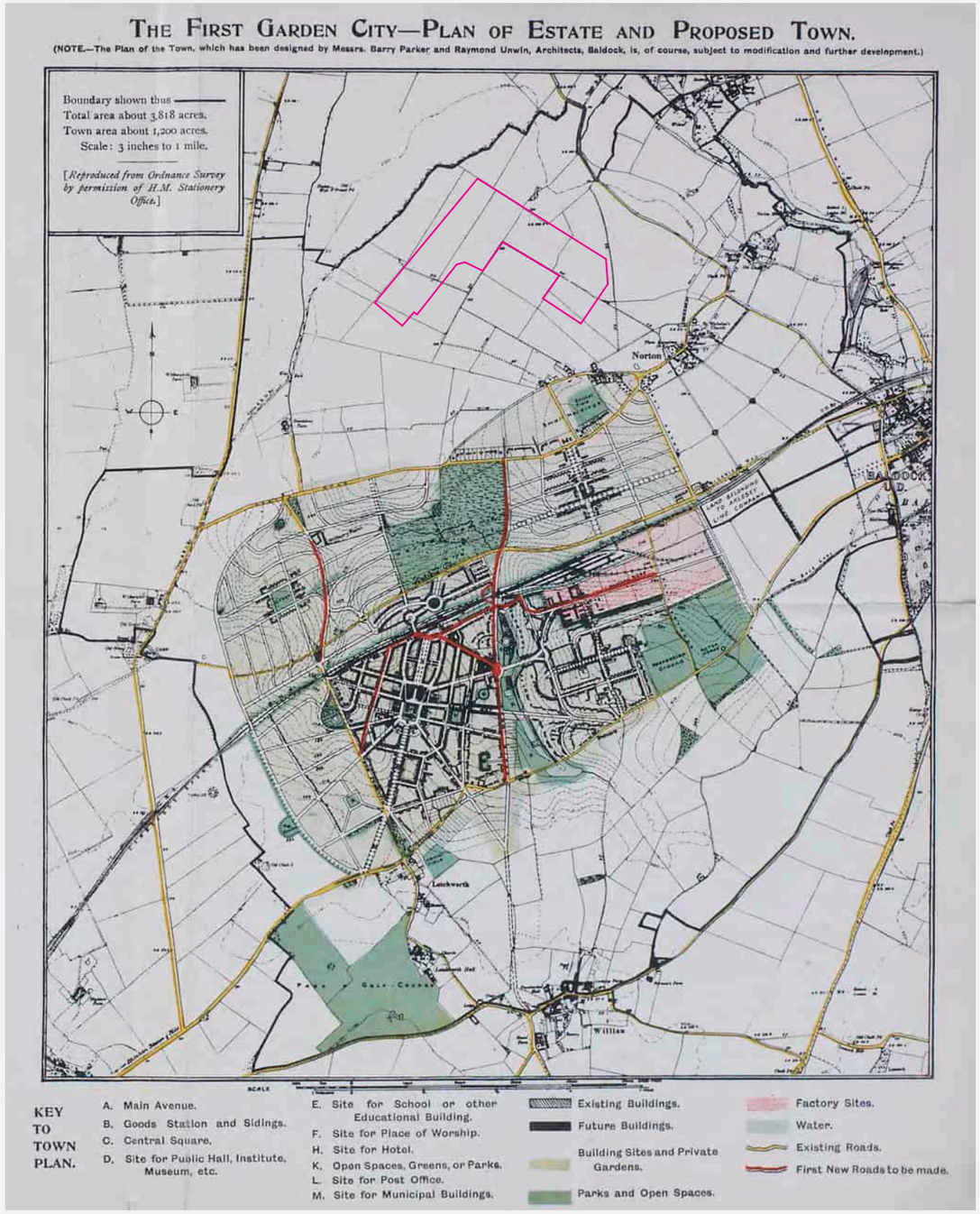


Fig. 3.12: Parker and Unwin's Proposed First Plan of Letchworth
Source: Garden City Collection

Pre-established field boundaries underpin the development of the Garden City's own spatial structure.

LG1 summary: wider context

3.21 The Fairfield Hospital was a significant development in this period. Still within the Norton parish, however, the site and its wider context largely remained as agricultural land.

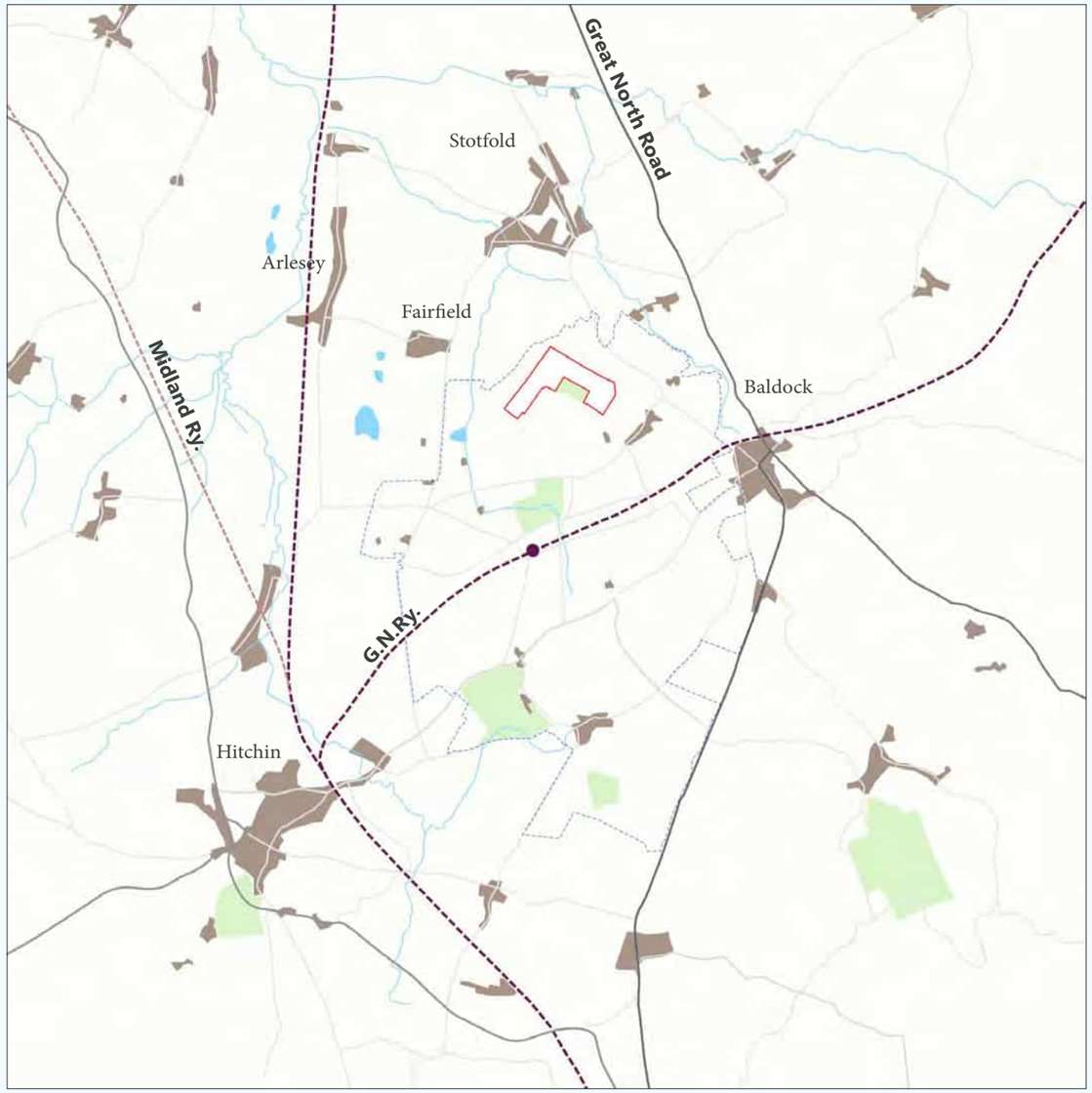


Fig. 3.13: LG1 in relation to the wider context, 1800-1905

Key green spaces

1800-1900

LG1 summary: local context

3.22 Much of the site, located between the county boundary to the north-west and Norton village to the south-east, is defined by field boundaries and a footpath. It consists of parts or wholes of eight adjoining fields.

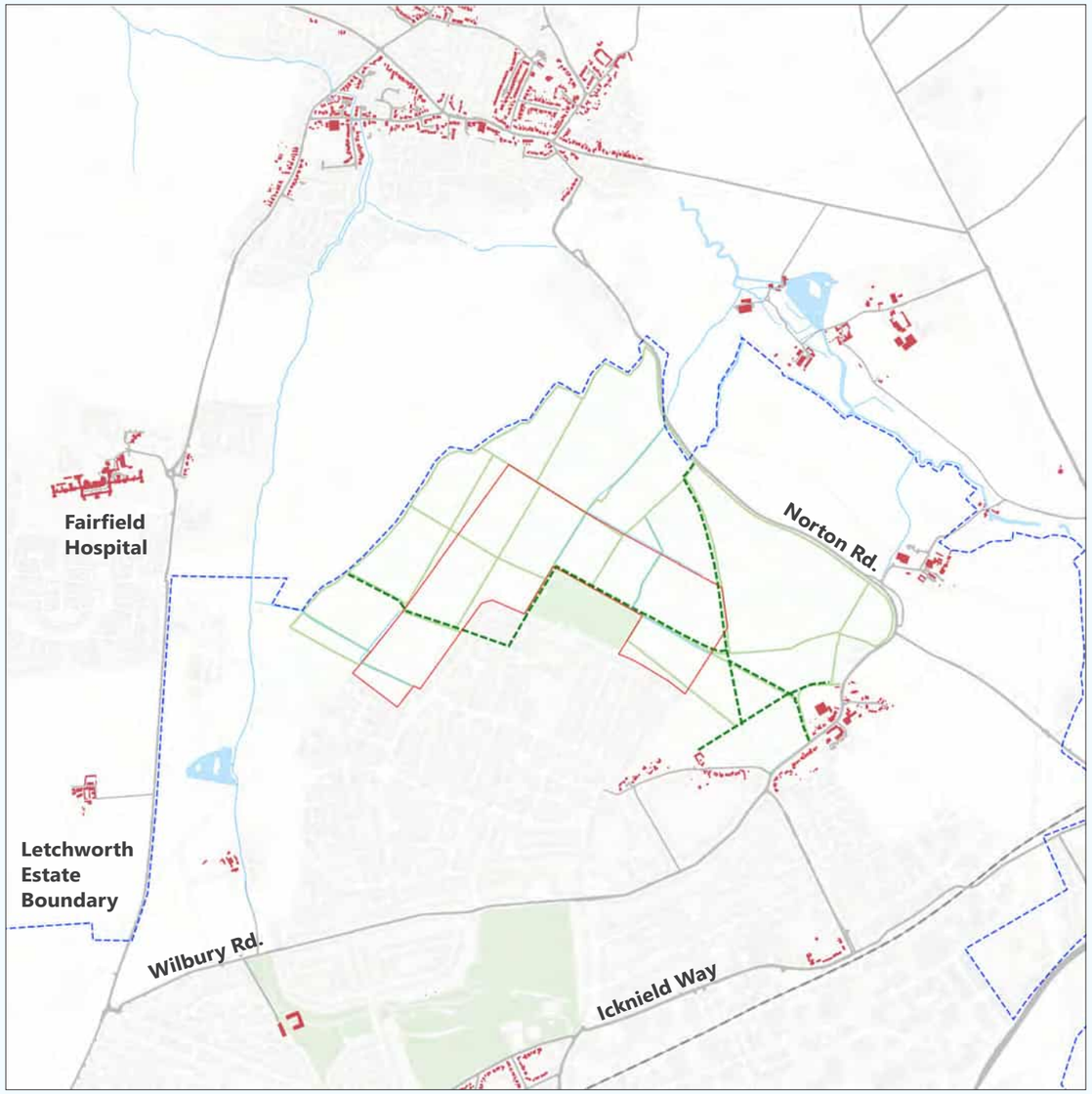


Fig. 3.14: LG1 in relation to the local context, 1800-1905

Key green spaces

1800-1900

Footpath

Field boundaries

LG1

Relevant findings for LG1 (1800 - 1905)

3.23 This period emphasises the importance of Norton village as a character area to inform LG1's urban design and townscape character. The Unwin- and Parker-designed houses from the early 1900s, along Croft Lane and Cashio Lane (Fig. 3.15), offer lessons on locally distinctive Garden City architectural principles for larger homes within a distinct rural setting. With LG1 at the interface between urbanity and countryside, this is particularly relevant. It also highlights historic origins of buildings within the wider context of LG1 such as the Fairfield Hospital with current intervisibility of the culpae of the hospital/spire of the church from LG1.

3.24 Further analysis to draw out the urban design and townscape lessons for LG1 will be covered in the later section on Built Form and Architecture.

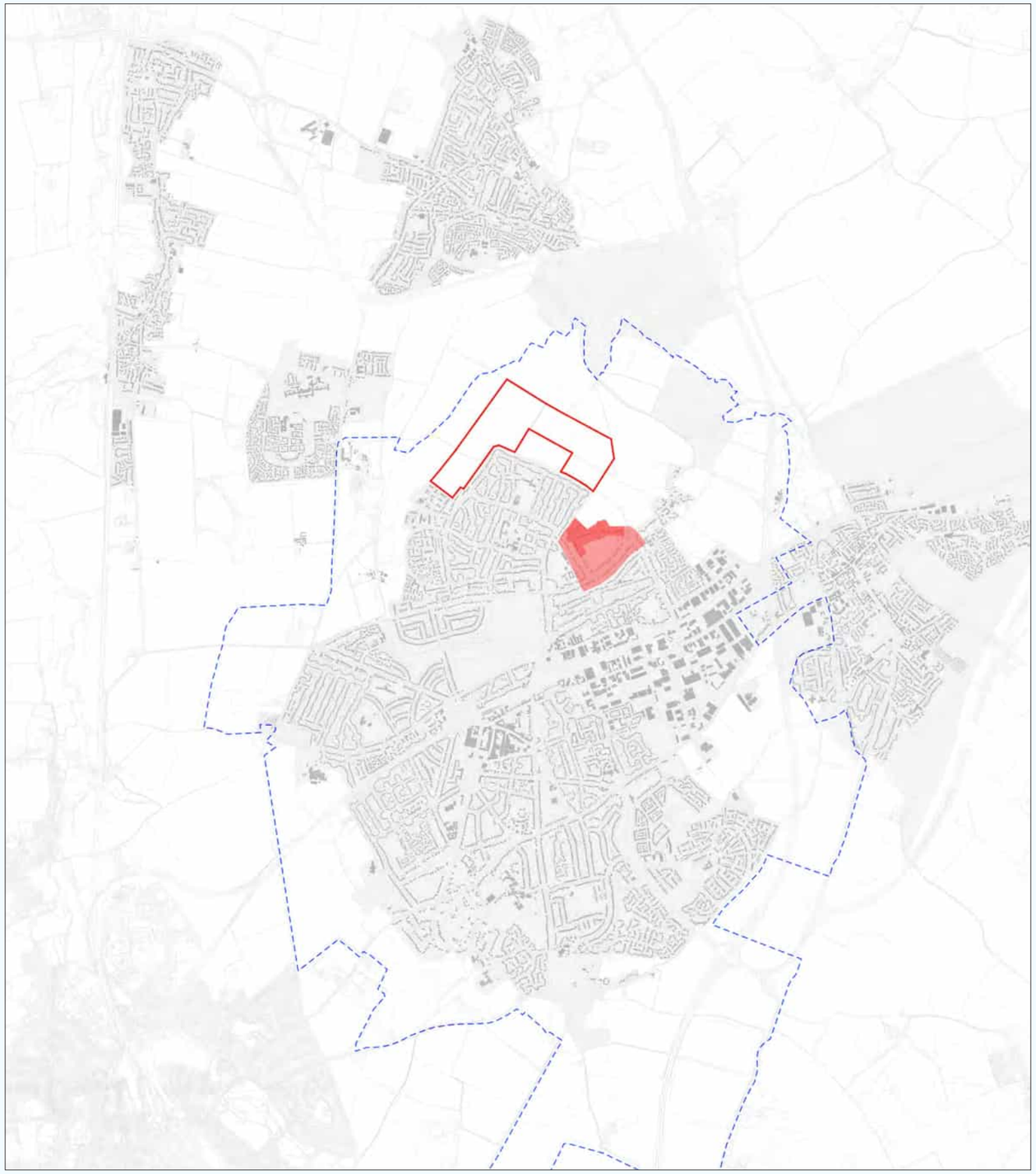


Fig. 3.15: Selected character area from period 1800-1905 for further study
Source: Based on Ordnance Map data received from LGCHF

Block bounded by Croft Lane, Cashio Lane and Norton Road

Croft Lane CA boundary

1905-1920

Despite WW1, Parker and Unwin design for Letchworth was well under construction by Spring 1918.

Political economy

3.25 Letchworth's industrial employment was maintained throughout the war, in part because the largest business - the Kryn and Lahy metal works, set up in 1915 with Belgian finance - became a munitions factory; with many of its employees drawn from the 2000 Belgian war-refugees who made Letchworth their home. Raymond Unwin, serving as Supervisor of the Ministry of Munitions housing programme, had responsibility for housing these workers.

3.26 Despite wartime interruptions after 1914, the Parker and Unwin design for Letchworth was well under construction by Spring 1918 (Fig. 3.16). As a planned settlement not directly influenced by local precedents, the development of Letchworth differed from the incremental growth-pattern of other nearby settlements. Despite these differences, Letchworth's spatial structure is still underpinned by the characteristics of the inherited landscape, communications routes and land ownership pattern.

Landscape

3.27 Within the town's built-up area, the pattern of the inherited landscape's structure of planting and watercourses underpins Letchworth's internal layout. The alignment of Pix Brook, for example, generates the linear form of Howard Park (Fig. 3.17, see overleaf), with its social facilities and 'splash park'. At a still closer focus, following Unwin's understanding that 'nothing so helps the early appearance of a building site as the preservation

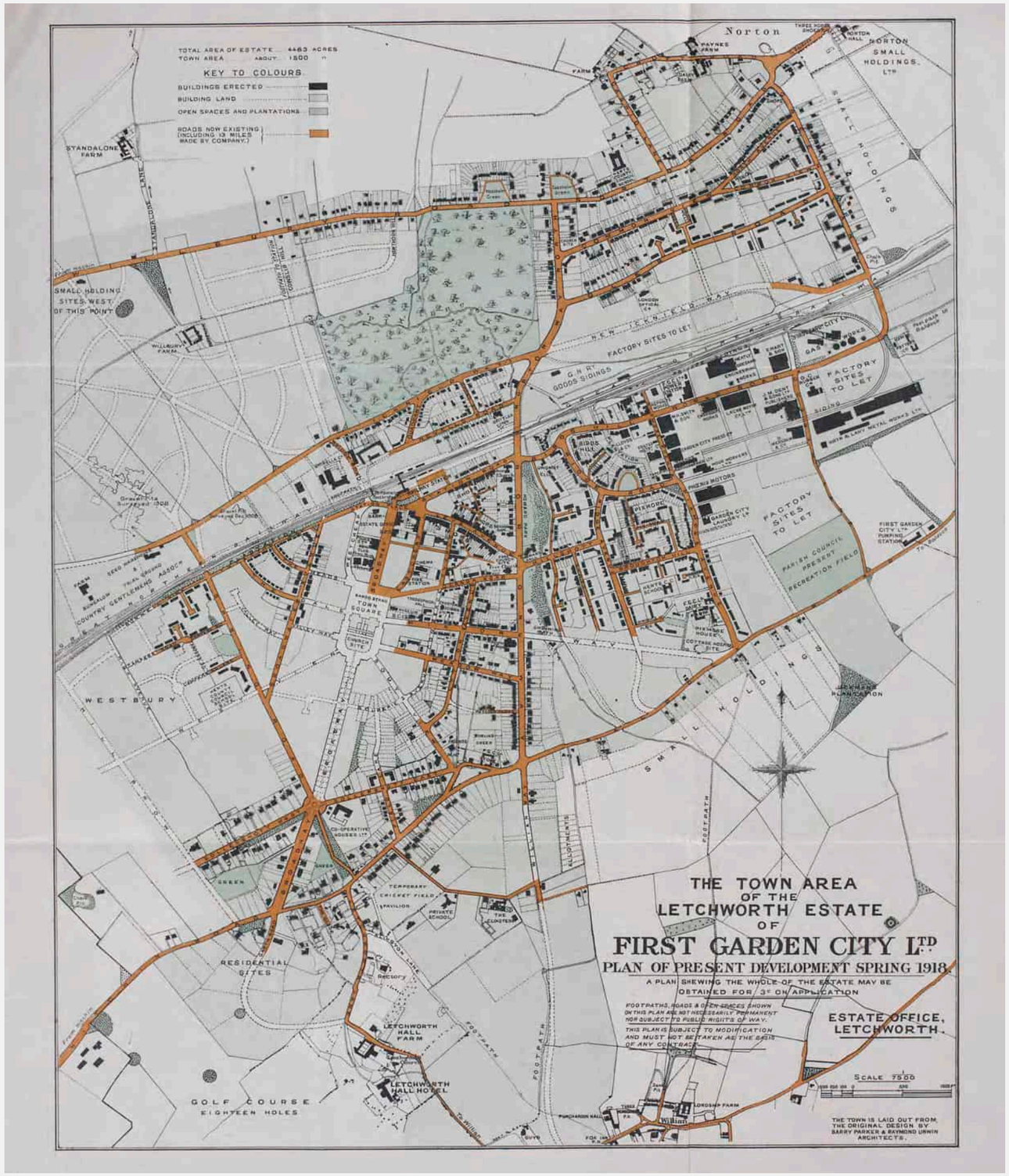


Fig. 3.16: Letchworth, 1918
Source: Garden City Collection

of existing trees, and….hedgerows', the main space of Broadway was initially set out in relation to the alignment of existing oak trees (Fig. 3.18).

3.28 The original garden city layout typologies provided a great deal of green space in the public realm, with houses grouped around gardens; for example at Meadow Way (Fig. 3.19), Lytton Avenue, Westholm (Fig. 3.20) and Ridge Road. Unwin himself, however, criticised his own original ideas - typically open-minded, he wrote in 1907 that the 'Spaces in the garden city tend to be too large in proportion to the buildings; we have much yet to learn as to the best treatment'.

3.29 At LG1 scale, the pattern of field boundaries continues to reflect historic alignments established through the 18th - 19th Century Parliamentary Enclosure.

Public routes and spaces

3.30 Overall, this landscape-related street system takes the form of a well-connected network, suited to the needs of the pedestrian (Fig. 3.16); following Unwin's analogy with water-flows: 'Drainage will not run uphill to suit the prettiest plan; nor will people….go where they do not want to go…..taking generally the shortest route'.

3.31 The particular identity of each space within this well-connected system was emphasised by the choice of street trees, with different species used for each street. Culs-de-sac within large-sized blocks at Birds Hill, Ridge Road, were an exception; in this instance they helped to maximise the use of available land, whilst concealing the Industrial Estate from the Town Centre.

Land uses

3.32 The fundamental influence of communication routes, landscape characteristics and field boundaries together underpin Letchworth's pattern of land-uses. In communications terms, for example, the industrial estate, the power station and the gas works are all located at the Eastern edge of the settlement, nearest to the

Fig. 3.17: Howard Park, Letchworth
Source: Garden City Collection

Fig. 3.18: The Broadway, Letchworth
Source: Garden City Collection

Fig. 3.19: Meadow Way, Letchworth
Source: Garden City Collection

Fig. 3.20: Westholm, Letchworth

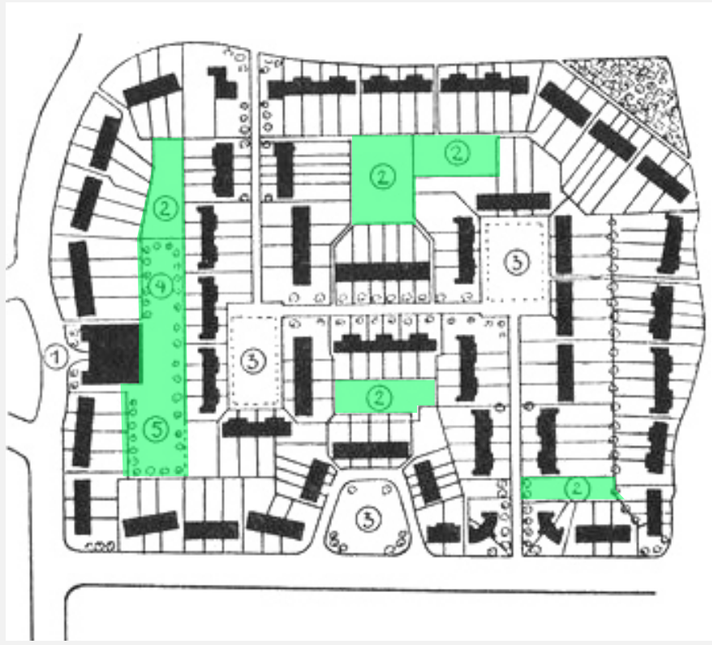
Great North Road, with new sidings tying them closely to the rail system (Fig. 3.16). This Eastern location also makes best use of natural forces, allowing the prevailing southwest wind to carry industrial pollution away from the residential and leisure areas, whilst the overall size and shape of the industrial estate is clearly influenced by inherited field boundaries.

3.33 At a smaller scale, the street blocks of the Pixmore estate contain plots not only for dwellings with their private gardens, but also for shared outdoor spaces, larger than those that any individual could afford (Fig. 3.21). 'Through the medium of cooperation', as Unwin put it, 'all may enjoy a share of many advantages....the individual possession of which can only be attained by a few'. Explaining that 'effective individual co-operation is limited to the comparatively small number who can have immediate personal knowledge of each other and can come into constant personal relation', Unwin suggested that to support neighbourly relations and cooperative activities, these communal areas should be close to each dwelling and accessible without passing through the street, thereby creating internal courtyard spaces.

3.34 The names of the various estates - Pixmore, Birds Hill, Westbury - are all derived from the inherited names of long-lasting landscape elements.

Plots and buildings

3.35 By 1920 the emerging settlement contained landmark buildings such as the Spirella Building (Fig. 3.22), and distinct residential districts including high density terraced estates to the eastern side of the town nearest to the industrial estate (Fig. 3.23), medium to low density semi-detached and detached cottages to the north and west, and low density larger individually designed houses to the south of the town centre. Most of these areas are now included as part of Letchworth's CA boundary.



Communal resident-only gardens

Fig. 3.21: Pixmore Estate 1907-9: Short terraces with articulated building lines, greens, minimal road lengths and spacious communal gardens were key elements in Garden City housing. Source: Unwin R., Nothing Gained From Overcrowding p.18.

Unwin suggested that to support neighbourly relations and cooperative activities, communal areas should be close to each dwelling and accessible without passing through the street, thereby creating land-locked internal courtyard spaces in the early Garden City block typologies.

Fig. 3.22: Spirella Building pre-WW1.
Source: Garden City Collection

Fig. 3.23: High density terraced workers housing on Common View
Source: Garden City Collection

3.36 Village greens, gardens and trees play an important role in defining the character of the early housing areas. Buildings are carefully related to the public spaces of the street system, following Unwin's advice to use 'the main building lines and masses, placing any important features in his design, such as terminal feature at the end of a road, or any buildings required to limit the size and give a sense of frame to the 'street picture': see, for example Hillshott (Fig. 3.24).

3.37 At the smaller scale of materials and detailing, the local distinctiveness of early garden city housing is rooted in the Arts and Crafts tradition. Barry Parker - in his role as Chief Architect for First Garden City Limited - was responsible for a series of regulations intended to secure 'the high standard of beauty which … can only result from simple, straight-forward building, and from the use of good and harmonious materials' (Fig. 3.25). 'Useless ornamentation', in particular, was discouraged.

3.38 Within the framework of these principles, innovative construction was encouraged. The Cheap Cottages Exhibition was a key event in helping to shape and establish Letchworth Garden City nationally soon after its birth; at a time when First Garden City Ltd. was having difficulty raising its profile. The exhibition responded to the shortage of cottages in rural areas, caused by restrictive by-laws that allowed only expensive materials. The town was the scene of numerous examples of innovative construction, including prefabrication, concrete panels, and block work, attracting some 30,000 visitors to two main exhibitions in 1905 and 1907, at which entrants were challenged to design and construct a home for £150 including the cost of the land. Most of these entries are still standing, and some are now listed.

Fig. 3.24: Ealry view along Hillshott. The street vista terminates at a public school building.
Source: Garden City Collection

At the smaller scale of materials and detailing, the local distinctiveness of early garden city housing is rooted in the Arts and Crafts tradition.

Fig. 3.25 Architectural drawing of houses for Garden City Tenants. Groups 12 and 33 Pixmore by Barry Parker and Raymond Unwin. Possibly houses on Broughton Hill.
Source: Garden City Collection

LG1 summary: wider context

3.39 Letchworth was predominantly built South of the railway line. Letchworth Garden City station gained full passenger service in 1905, attracting industrial employment. Surrounding settlements expanded significantly.

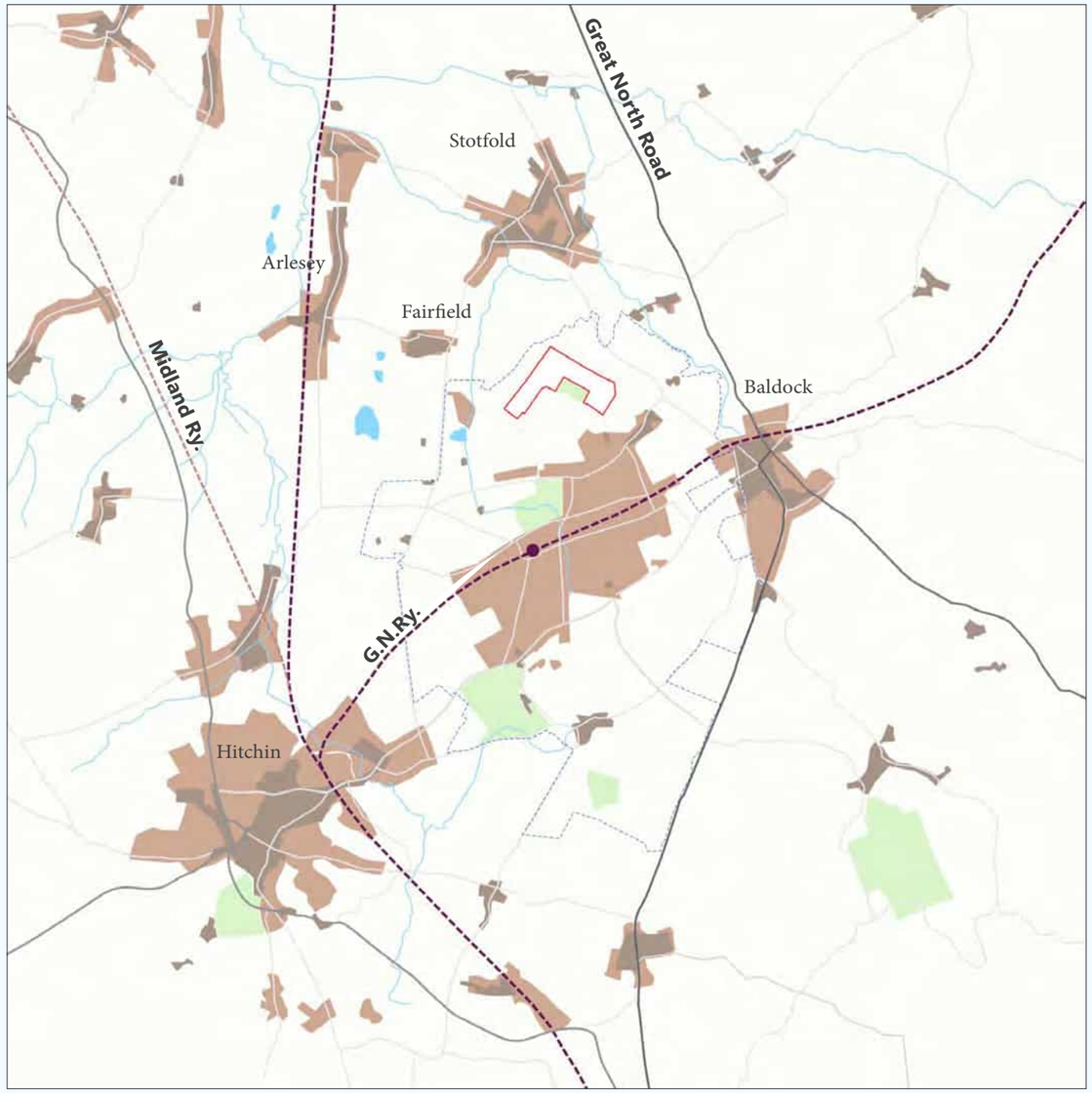


Fig. 3.26: LG1 in relation to the wider context, 1905-1920

Key green spaces
1800-1900
1900-1920

LG1 summary: local context

3.40 There is no significant change or development of the site itself. The former parish of Norton (Cashio Lane, Croft Lane) and areas east of Norton Common were developed as part of the early Garden City Housing.

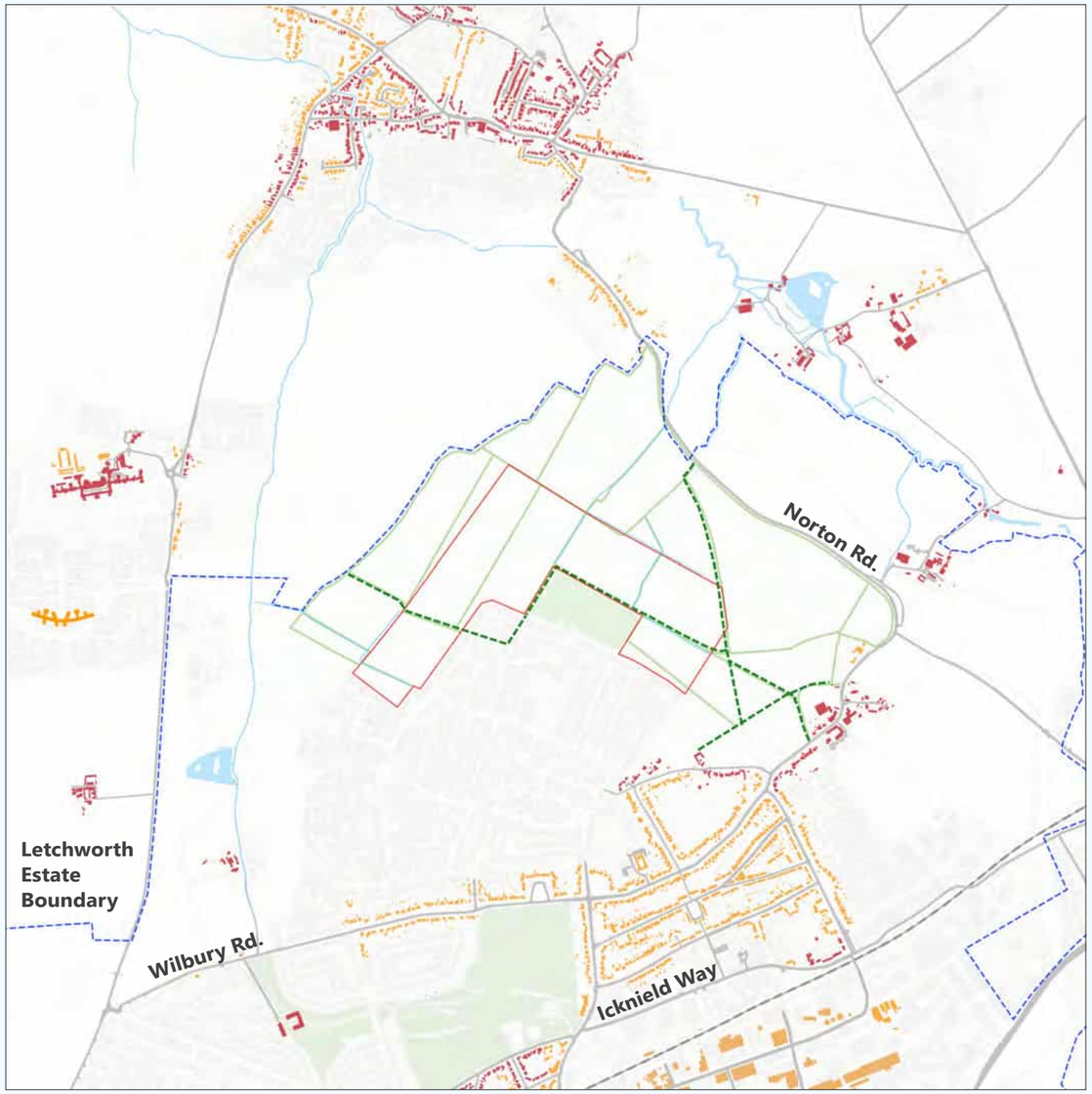


Fig. 3.27: LG1 in relation to the local context, 1905-1920

Key green spaces
1800-1900
1900-1920
Footpath
Field boundaries
LG1

Relevant findings for LG1 (1905 - 1920)

3.41 This period sets establishes some of the fundamental principles of the original Garden City ethos in terms of layout and town planning. It provides the foundation for masterplanning LG1's urban design and townscape character as a modern-day Garden City, as well as detailed design elements that are referred to as the 'Letchworth look'.

3.42 Key character areas for further study to draw out the urban design and townscape lessons for LG1 have been identified are the Early Pioneer Estates with higher density housing – Rushby Mead, Ridge Road, Birds Hill, Ridge Avenue, Shott Lane (Area 3 of Letchworth CA boundary) and the larger Garden City Housing - Broadway, Sollershott West, The Glade and part of Pasture Road (Area 6 of Letchworth CA boundary). These are strategically chosen to cover a variety of housing typologies (Fig. 3.28).

3.43 Further analysis will be covered in the later section on Built Form and Architecture.

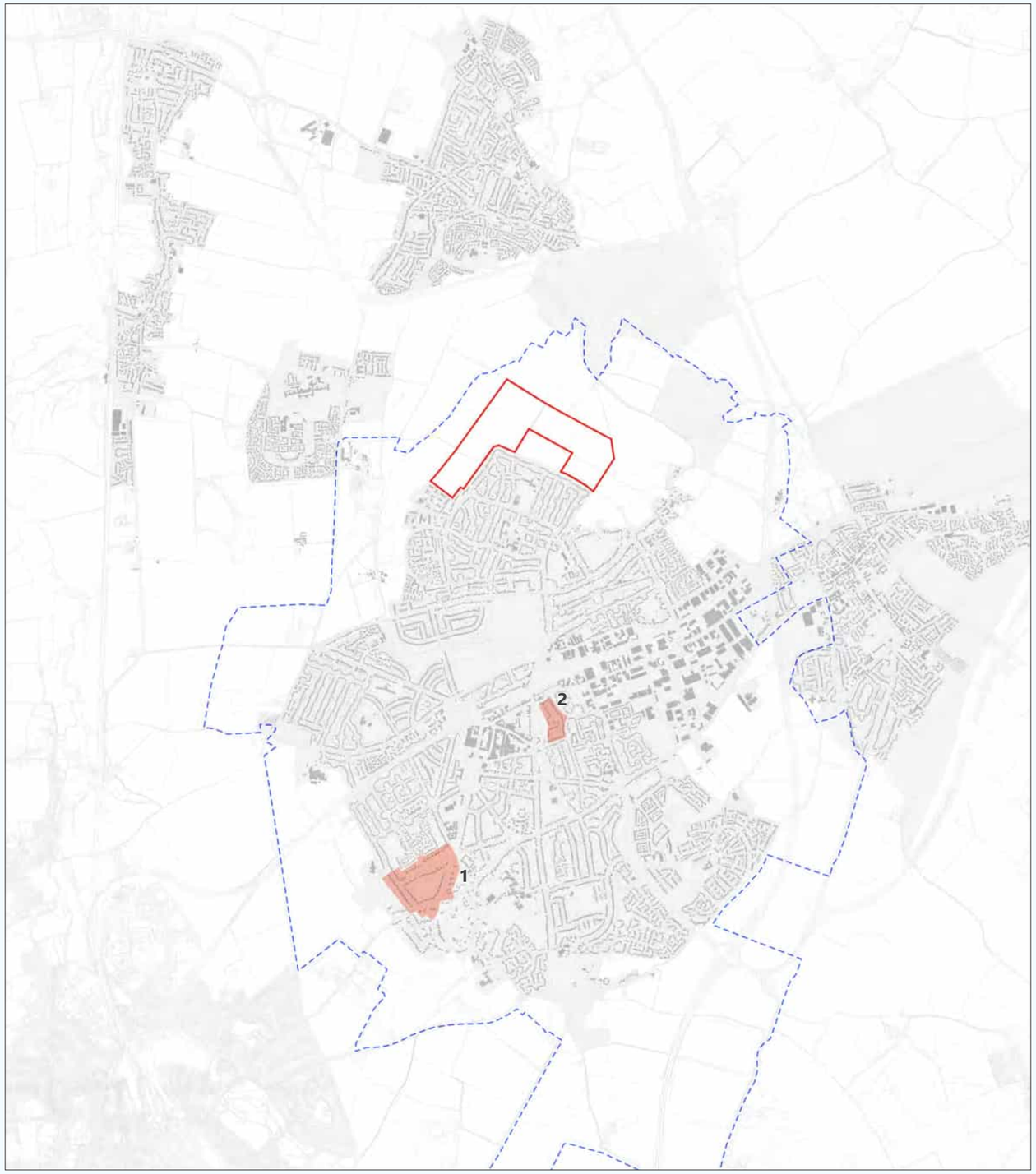


Fig. 3.28: Selected character areas from period 1905-1920 for further study
Source: Based on Ordnance Map data received from LGCHF

1 **Block bounded by Sollershott West, Highfield, Hitchin Road and Broadway**

2 **Block bounded by Rushby Mead, Birds Hill, Ridge Road, Ridge Avenue and Hillshott**

1920-1946

Political economy

3.44 Letchworth, with the country as a whole, faced hard times at the end of the First World War. The 1920s became a decade of economic stagnation, with low growth and high unemployment followed by the global downturn of the Great Depression from 1929-31. The years after 1932, however, saw rising living standards in London and the Southeast. Letchworth, with its excellent road and rail links, was well-placed to take advantage of this upturn.

Landscape

3.45 Overall, this period saw the planned expansion of Letchworth into its surrounding landscape within the Estate boundaries. Westbury and Wilbury Estates were developed by the government through the acquisition of large block leases, to enable the delivery of housing (Fig. 3.29). This is the first example of significant public sector housing in Letchworth, carefully master planned in line with the founding design principles and integrated within the landscape - for example, houses grouped around crescents and gardens were still popular, as seen in the blocks along Eldefield, Monklands, High Avenue and West View.

3.46 At the LG1 scale, the traditional pattern of field boundaries generally remained intact.

Public routes and spaces

3.47 During this period many of Letchworth's present day roads were established. Before mass car-ownership, most of the motor vehicles were engaged in deliveries of goods and services. The relatively few parking spaces required were located either on streets or in individual front gardens. The fine-grained connectivity so valuable for pedestrians, however, is beginning to coarsen: some of the blocks are now larger than those of the previous period, and the proportion of cul-de-sacs is increasing.

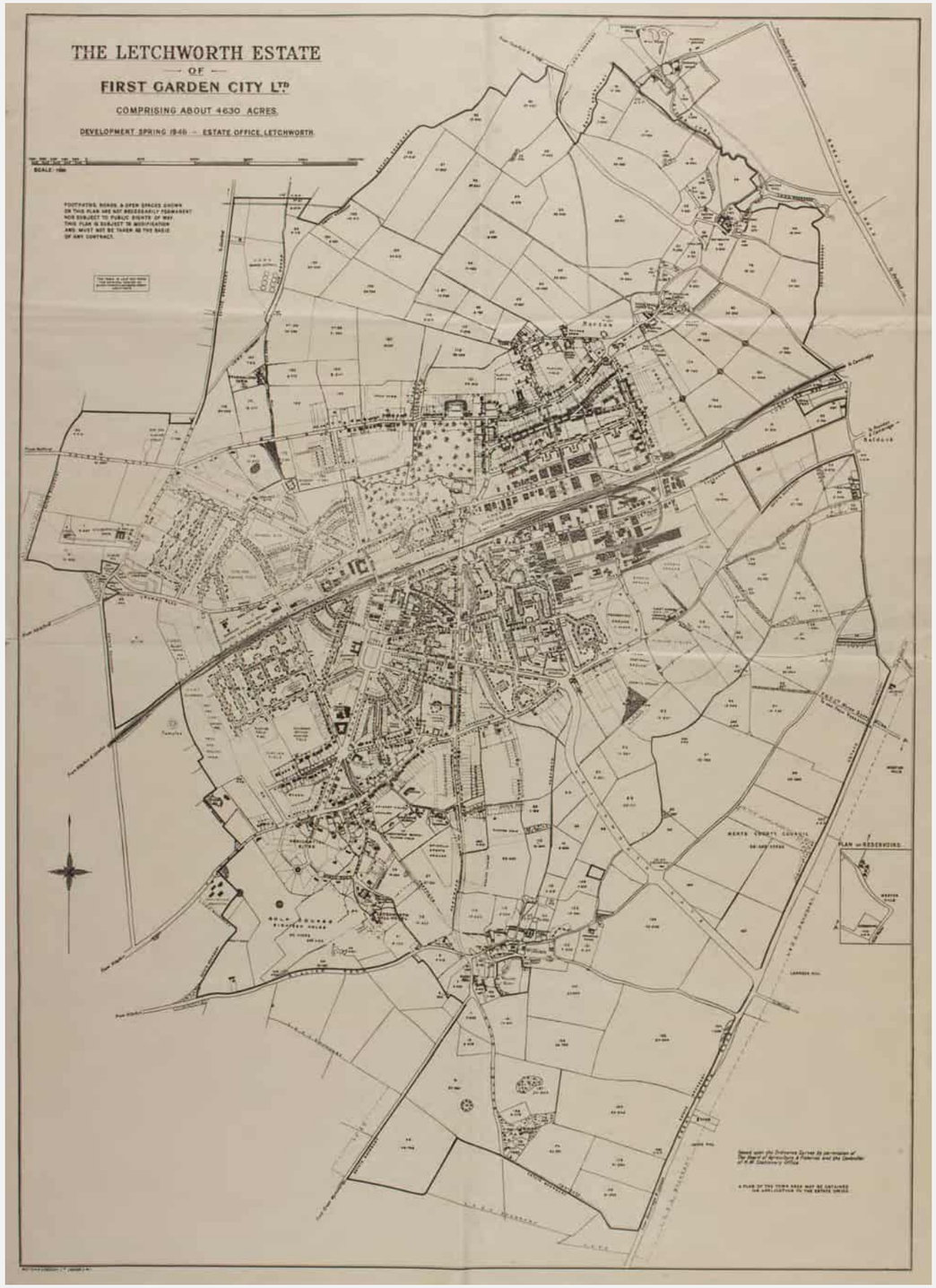


Fig. 3.29: Letchworth, 1946
Source: Garden City Collection

Fig. 3.30 Iceni Pottery Company
Source: Garden City Collection

Fig. 3.31: St. Edmundsbury Weavers
Source: Garden City Collection

Fig. 3.32: British Tabulating Machine Company. Source: Garden City Collection

Land uses

3.48 At this time, the financial surplus from development was being recycled back into the community. Utilities were also owned by First Garden City Ltd. with surplus going back into the grid. The town's economy was therefore growing, and with the availability of electricity, was attracting new firms from a variety of innovative industries; including engineering, clothing, vehicles, printing, metal industries, furniture and scientific instruments (Fig. 3.30, 3.31, 3.32). This development was initially supported by the endeavours of First Garden City Limited, through positive marketing of the estate and by providing land and premises in the right location. This led to a range of industrial employers attracted by the good quality premises and the availability of housing. A range of major employers such as WH Smith book binders, Marmet, Spirella and Ascot car manufacturers, supported a thriving town centre. Some of these employers, such as Spirella, were attracted by the values associated with the Garden City concept.

3.49 Letchworth's robust employment situation was able to support a steadily increasing population; rising from the 10,313 people recorded in the 1921 census to an estimated 17,400 at the start of the Second World War in 1939. All these new people needed new homes; so house-building, with widespread political support through the 'Homes fit for Heroes' campaign after 1918 and fuelled by low interest rates after 1931, proceeded apace. Letchworth expanded mostly by developing land towards the west; completing the town centre, developing the Westbury and Wilbury Estates (Fig. 3.33), and accommodating individual private houses on larger plots near the southwest edge of the town. The incorporation of communal outdoor spaces within the blocks has been discontinued by this period, although houses grouped around crescents and gardens were still popular, as seen in the blocks along Eldefield, Monklands, High Avenue and West View (Fig. 3.34).

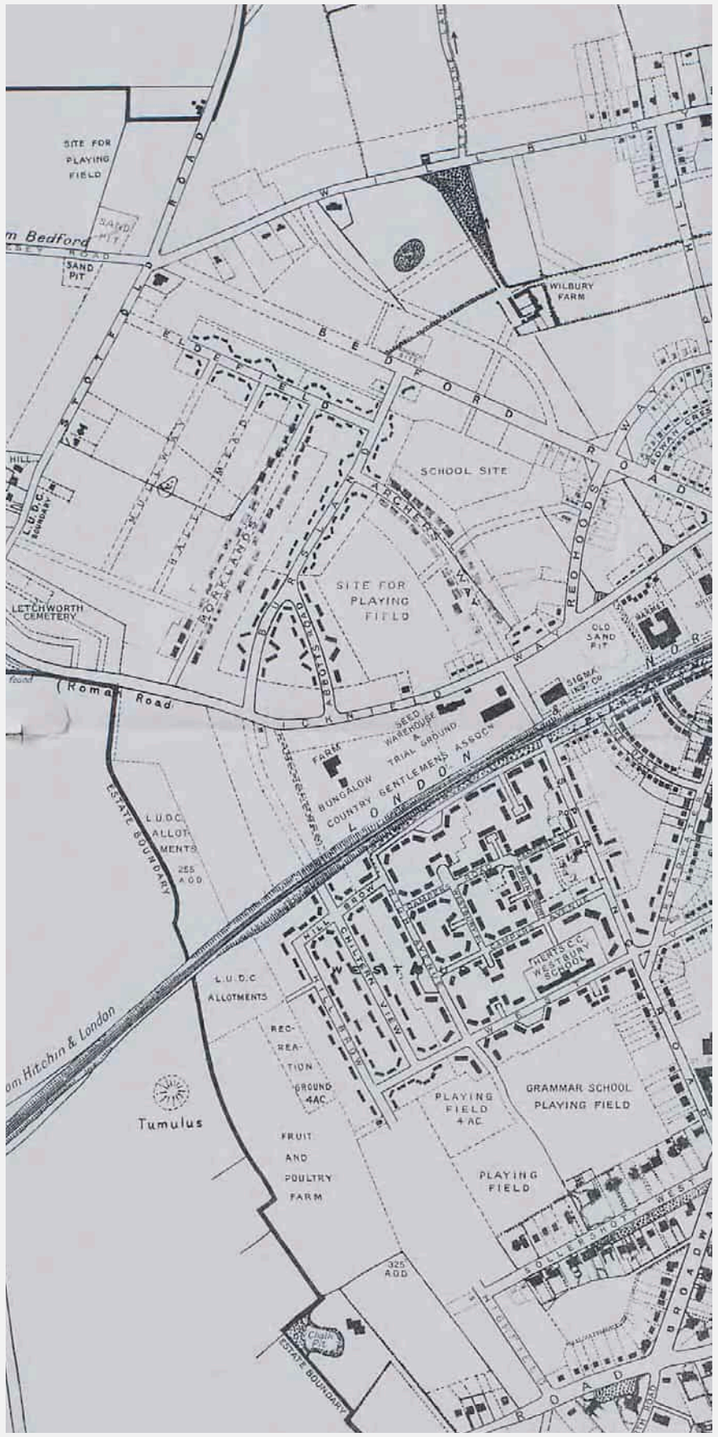


Fig. 3.33: 1936 map extract showing Wilbury and Westbury estates
Source: Garden City Collection

Fig. 3.34: Aerial view along Mullway, Hallmead, Monklands towards Eldefield showing house groupings around crescents and gardens.
Source: Garden City Collection

Letchworth expanded mostly by developing fields towards the west; completing the town centre, developing the Westbury and Wilbury Estates.

The incorporation of communal outdoor spaces within the blocks had been discontinued, although houses grouped around crescents and gardens were still popular. Housing plots maintain a clear front/ back distinction. Influence of the Arts and Crafts architectural elements can still be seen.

Plots and buildings

3.50 Interwar residential areas on the north-western side of Letchworth comprise a mix of brick built detached and semi-detached houses and prefabricated bungalows of medium to high density, with small to medium sized open plan front gardens with some low boundary walls (Fig. 3.35, 3.36). These formed part of a nationwide programme initiated in 1945 and continuing into the 1950s.

3.51 Early in this period, plots for public facilities such as schools were still given an important street presence, integrated with the street/ block structure, though their entrances were increasingly located 'round the side' or 'round the back' (Fig. 3.37); thereby losing the clear distinction between street-orientated fronts and private backs that had been characteristic of the original Garden City principles. Nearly all dwellings, however, have plots that maintain a clear distinction between front and back.

Fig. 3.35: Early housing on Wilbury Road
Source: Garden City Collection

Fig. 3.36: Newly built cottages in Monklands. Built by Howard Cottage Society, Source: Garden City Collection

Fig. 3.37: Westbury School integrated within a larger block
Source: Garden City Collection

LG1 summary: wider context

3.52 The Garden City expanded mostly by developing land towards the west. Letchworth's robust employment situation supported a steady increase in population. Hitchin, Baldock, and Stotfold also expanded.

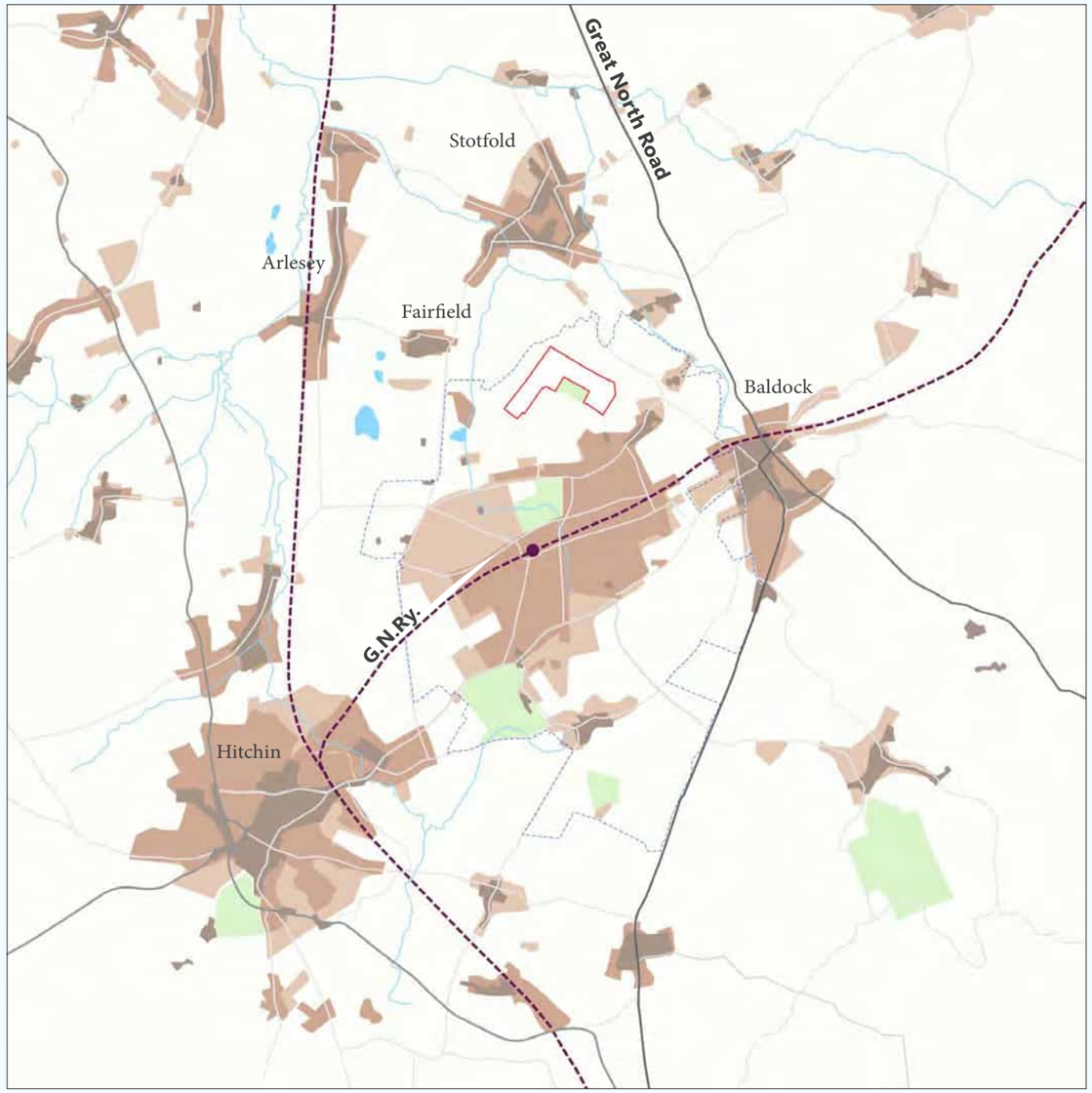


Fig. 3.38: LG1 in relation to the wider context, 1920-1946

Key green spaces
1800-1900
1900-1920
1920-1946

LG1 summary: local context

3.53 There was no significant change to the site, which remained in agricultural use with unaltered field boundaries. Land in the site's immediate vicinity also remained agricultural, being 'distant' from Letchworth's expansion.

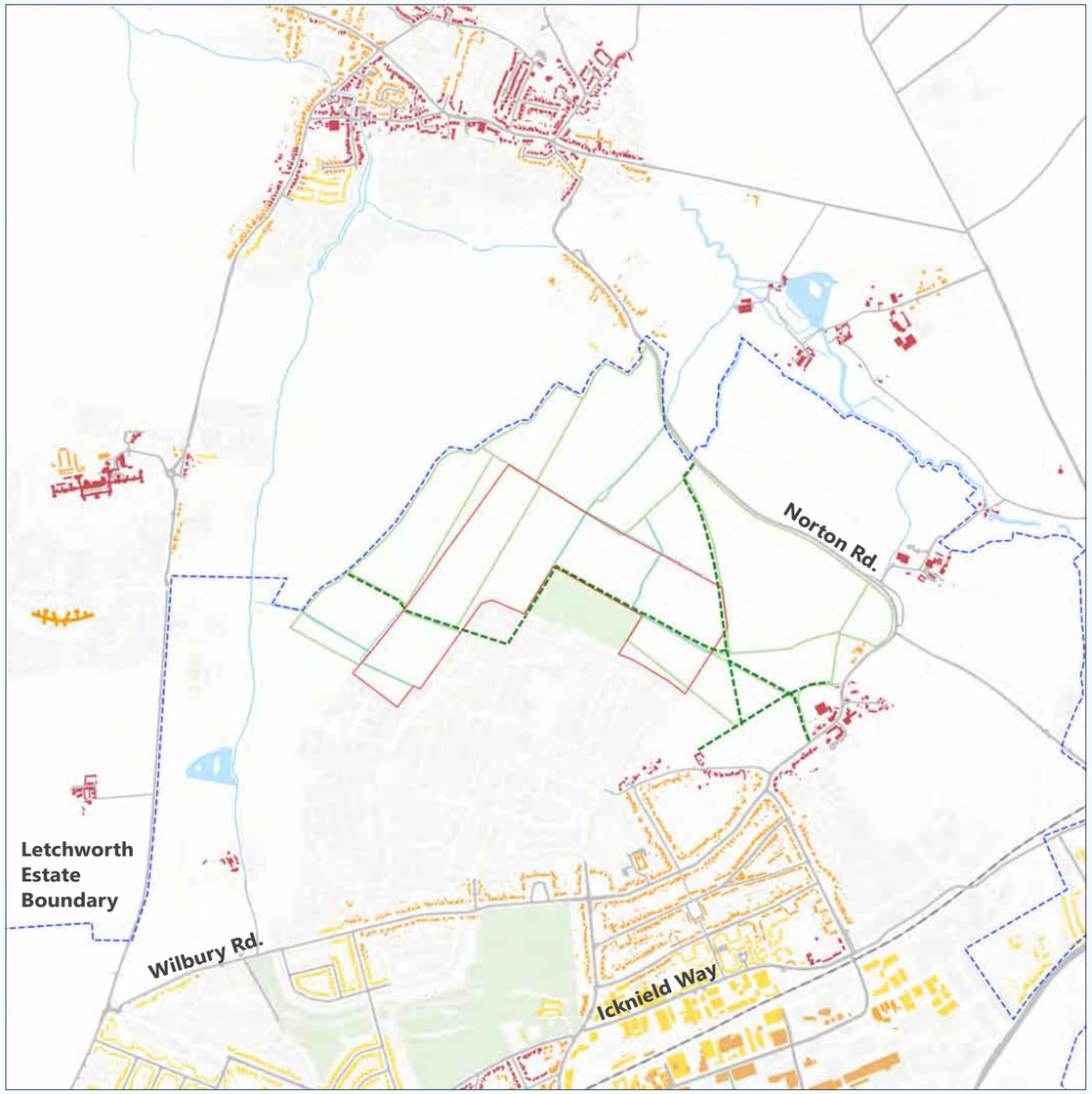


Fig. 3.39: LG1 in relation to the local context, 1920-1946

Key green spaces
1800-1900
1900-1920
1920-1946
Footpath
Field boundaries
LG1

Relevant findings for LG1 (1920 - 1946)

3.54 In this period there was greater prevalence of developing in large blocks/ group compared to smaller parcels and individual plots which formed much of the development in the previous period. It however, continued to reflect the adoption of most of the original Garden City principles, reinforcing their role in imparting Letchworth its unique place identity. The period therefore offers useful lessons for LG1 in relation to the early Garden City characteristics that provide historical continuity to the town's distinct sense of place.

3.55 To this end, the key character areas for further study have been identified as the urban blocks around Mullway, Hallmead and Monklands (Fig. 3.40). Further analysis drawing out the urban design and townscape lessons for LG1 will be covered in the later section on Built Form and Architecture.

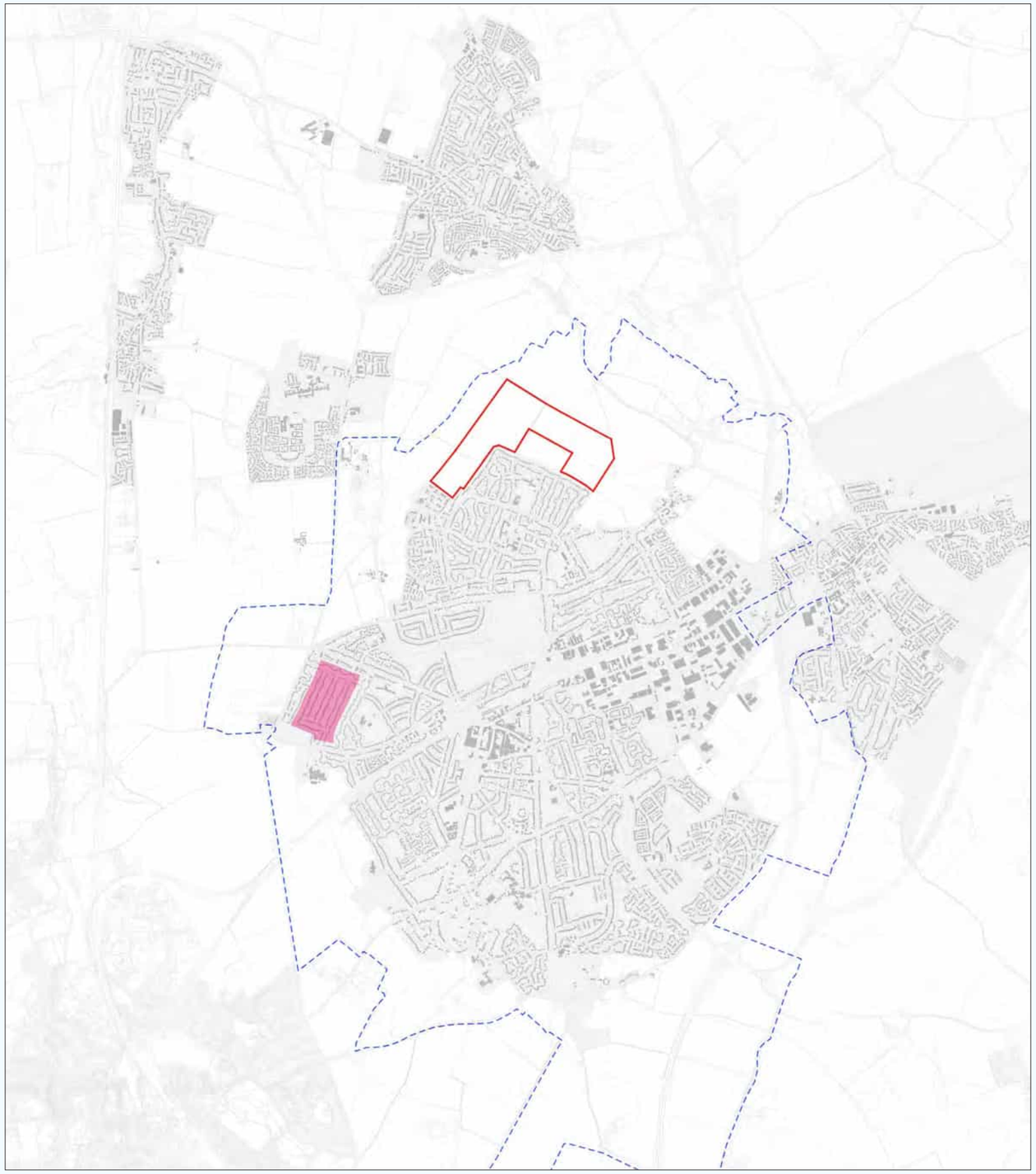


Fig. 3.40: Selected character area from period 1920-1946 for further study
Source: Based on Ordnance Map data received from LGCHF

Blocks bounded by Mullway, Hallmead, Monklands and Eldefield

1946-1974

Political economy

3.56 By the end of WWII, Britain was suffering from a severe housing shortage and the need for significant regeneration arising from bomb damage and the need for slum clearance. A need to decant large numbers of people from towns and cities, led to planning at a national level and targets for new housing delivery by central government, supported by forced acquisition of land by the local and central government, mainly on the edge of existing towns to facilitate expansion. This period also saw the development of the first wave of new towns. With private sector building limited by the strict licensing of scarce building materials and betterment taxation, the focus moved to housing built at scale by public authorities.

3.57 Before the war, land ownership itself had conferred development rights subject to limited control. The passing of the Town and Country Planning Act in 1947 changed this in radical ways. Now planning permission was required from Letchworth Urban District Council (LUDC), who had rights of compulsory purchase (CPO); and all increases in land value due to development were transferred to the state, which was revoked in 1953. Following a CPO, and based on designs by the renowned landscape architect; Sir Geoffrey Jellicoe, the Grange Estate and recreation ground were created on land at the Northern edge of Letchworth as part of the town's planned expansion. Starting in 1947, this expansion increased the town's population to nearly 30,000 (Fig. 3.41, 3.42, 3.43 and 3.44) on completion of the Jackmans Estate.

3.58 With the land value levy repealed in 1953, First Garden City Ltd was once more enabled to reinvest it's financial surplus arising from development, property rent agriculture and utilities (until nationalised) for public benefit. Meanwhile, however, First Garden City Ltd. itself had changed its articles of association; the acquisition of a controlling interest by Hotel York Ltd, with their representative Mrs. Amy Rose, self-appointed Chair of

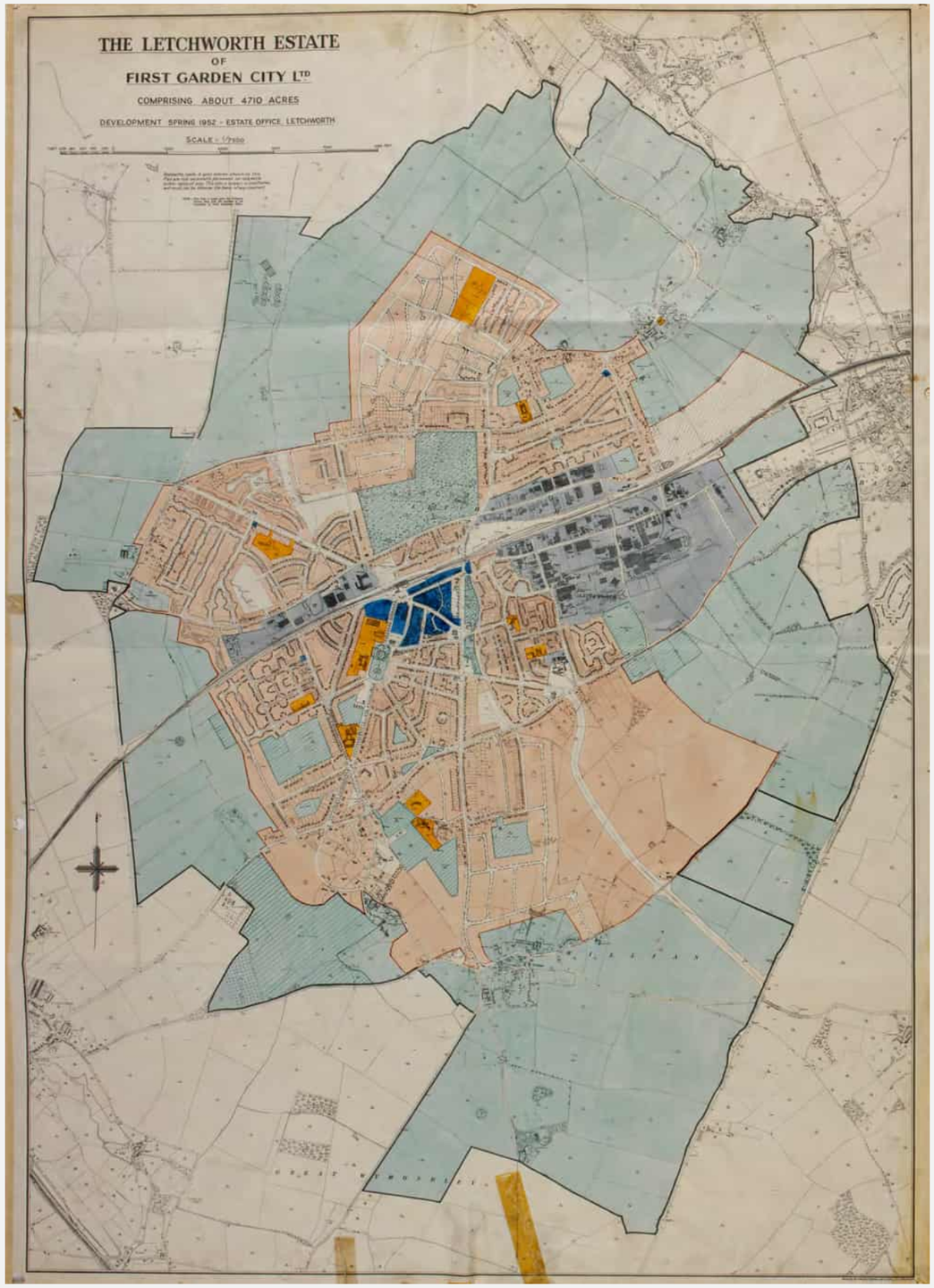


Fig. 3.41: Letchworth in 1952
Source: Garden City Collection

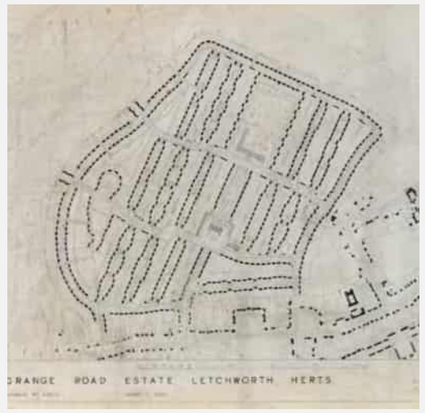


Fig. 3.42 Grange Estate Plan, 1944 by Jellicoe. Source: Garden City Collection

Fig. 3.43 Grange Estate Plan, 1945 by Jellicoe. Source: Garden City Collection

Fig. 3.44 Grange Estate Plan, 1952 by LUDC. Source: Garden City Collection

the Board and Chief Officer, led to the most significant change; allowing value increases to be distributed to shareholders rather than being reinvested as Ebenezer Howard had originally intended.

3.59 In 1959, London County Council's funding for London overspill housing enabled LUDC to compulsorily purchase land to build the Jackmans estate: UK's first Radburn scheme. However, this socially-orientated approach to development also ran counter to the increasingly commercial aspirations of First Garden City Ltd, who started auctioning land off to private buyers and had agreed a plan for substantial expansion of the town utilising the greater proportion of the agricultural estate. Letchworth Urban District Council, with the aid of the local MP, mounted a successful political campaign against this increasingly commercial approach. In 1963 this resulted in Parliament instituting a new Letchworth Garden City Corporation, with officers appointed by the crown, by Hertfordshire County Council and by Letchworth Urban District Council. The level of compensation that had to be paid for taking over the assets of First Garden City, however, meant that the new Corporation remained in debt until 1974. More positively, the unique qualities of Letchworth itself were recognised in 1974 through designation of the Letchworth Conservation Area.

Landscape

3.60 Letchworth's planned expansions into the surrounding landscape in the form of Grange Estate, Jackmans Estates were needed in order to accommodate the intended population. It was only with the completion of the Jackmans Estate that led to this population being met. In this period, the neighbouring settlements of Hitchin and Baldock also expanded significantly into the countryside hinterland.

3.61 Focusing on LG1, the most significant area of change is the loss of boundaries and the creation of larger fields within and adjacent to the northwest boundary, where

Fig. 3.45 (top): LUDC's Jackmans Estate layout following 'Radburn' principles. Source: Garden City Collection

Fig. 3.46 (left): Carousel pub in the Jackman's estate, c.1964
Source: Garden City Collection

there has been post-1950s boundary loss. Much of this change in the size of some fields is attributed to the increasing mechanisation of farming and the drive for greater efficiencies in agricultural practice.

Public routes and spaces

3.62 Rapid growth in car ownership during the 1960s affected the street system at all scales. At the largest scale, for example, this period saw the emergence of the national motorway system. Junctions 8 to 10 of the motorway A1(M), giving access to Letchworth, Baldock, and Stotfold, were opened in 1967. Intended to improve access to particular destinations, in practice the motorway also created severance between them, as well as generating landscape fragmentation.

3.63 At a more local scale, the Radburn layouts (originating from the Radburn Garden City scheme in the US in the1920s) adapted the original Garden City layout principles to the increasing popularity and affordability of motor cars. This had radical impacts on street layouts within Letchworth itself. Exaggerated fears of traffic accidents, based on out-dated experience of early motoring problems from the USA, led to radical departure from Parker and Unwin's earlier street-design principles of joined-up streets. From the sixties onwards, we can see an increasing adoption of 'radburn' design principles (Fig. 3.45, 3.46) that attempted to segregate vehicles from pedestrians in separate spaces by adopting layouts dominated by cul-de-sacs.

3.64 First, for example in the Grange Estate, we see a shift from on-street or on-plot parking to the use of rear garage courts. As the next more radical step, the Jackmans Estate built in 1959-1973 use radburn layouts to limit vehicles to distributor roads and cul de sacs. The Lordship Estate (a private development of farmland to the south built in 1960s-70s), however, is laid out as a typical spine road with culs-de-sac, but with very few rear parking courts.

Land use

3.65 The 1960s saw the emergence of IT-related office employment, with ICL formed from the British Tabulating Company with factory and office premises. The Garden City Corporation was initially restricted in its ability to invest in its industrial portfolio in this period, leading to a gradual decrease in the diversity of innovative light industries that had made Letchworth their home in the 1920s. It was not until the 1980s that significant investment was resumed, with developments such as Business Centre East and West.

3.66 As part of the CPO for the Jackmans Estate, the Council also acquired land at Blackhorse Road to ensure commensurate growth in employment alongside the housing. Although still dominated by industrial use, it is noted that the nature of Letchworth's employment sector was gradually shifting towards IT related employment. Due to good train connectivity and improved motorway access, Letchworth also offered easy commuting links for employment opportunities outside the town.

Plots and buildings

3.67 With the move to Radburn layouts, increasing numbers of buildings lose the clear distinction between front and back, with vehicular access to one face and pedestrian access to the other. Even with more traditional street layouts, public facilities, such as the Grange Estate school, were typically designed as stand-alone elements on large plots, with no clear street frontage (Fig. 3.47).

3.68 Jackmans Estate buildings are predominantly medium to high density, brick-built terraces and flats with some tile and plastic cladding (Fig. 3.48, 3.49), whilst Grange Estate and the privately developed Lordship Estate comprise mainly of detached and semi detached houses.

3.69 Norton Conservation Area (CA) was designated in this period by North Hertfordshire District Council in 1969 and its boundary was amended in 1979. See Norton CA Character Character Statement (Nov 2019) for details.

Fig. 3.47: Aerial photograph of Grange Estate showing the school, c.1963. Source: Garden City Collection

Fig. 3.48: Contrasting housing style on the Grange Estate c.1970s
Source: Garden City Collection

Fig. 3.49: Housing on Radburn Way in Jackmans Estate
Source: Garden City Collection

Mass car ownership had radical impacts on Letchworth's street character with a radical departure from Parker and Unwin's earlier street-design principles towards 'Radburn' design principles.

LG1 summary: wider context

3.70 Grange Estate was built on land north of Letchworth. Jackmans and Lordship Estates extended Letchworth's southern boundary in the 1960-70s. Hitchin and Baldock expanded further.

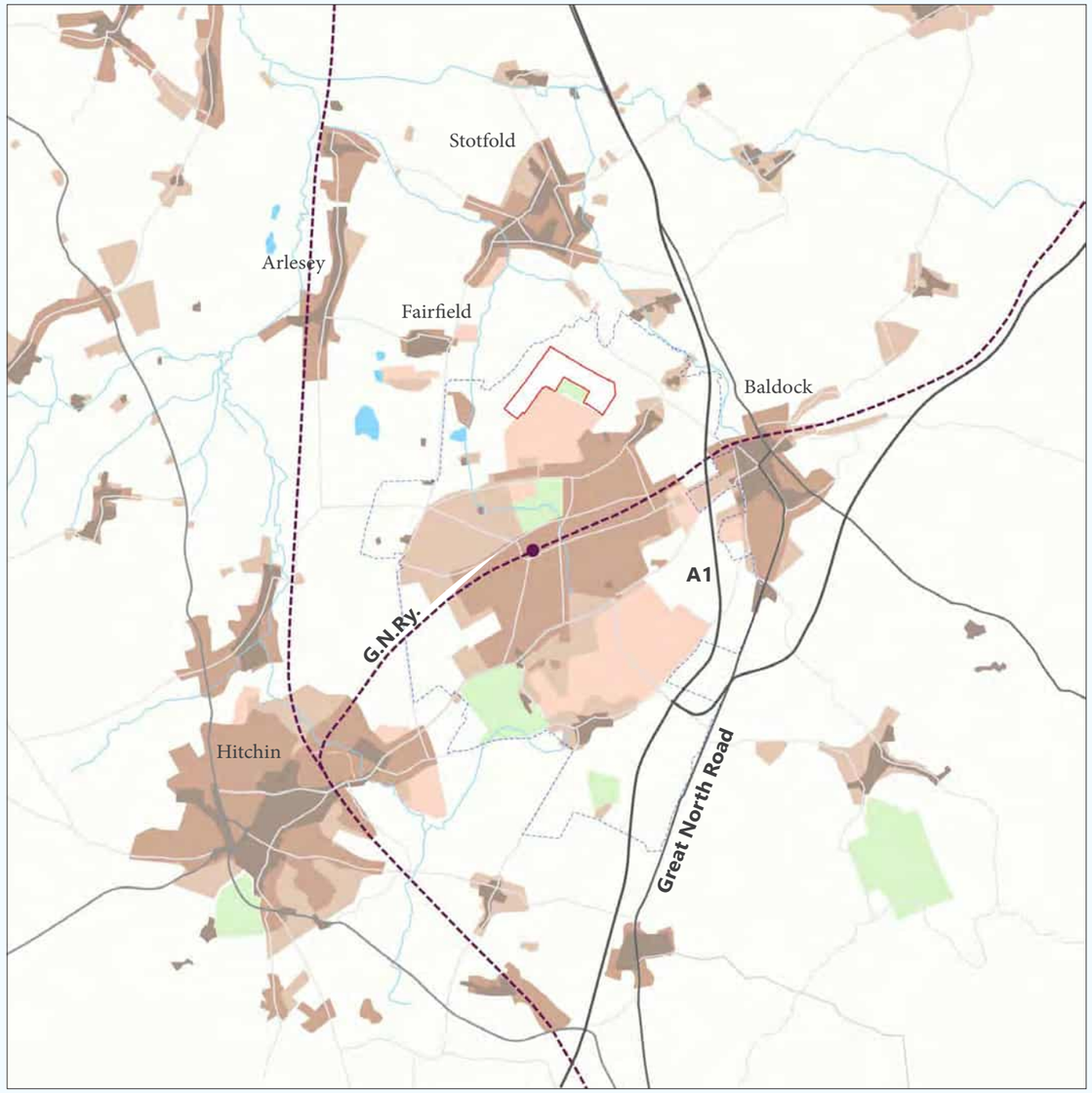


Fig. 3.50: LG1 in relation to the wider context, 1946-1974

Key green spaces
1800-1900
1900-1920
1920-1946
1946-1974

LG1 summary: local context

3.71 Grange Estate and recreation ground border the site's southern boundary. LG1 remains in agricultural use; mechanisation resulted in post-1950s loss of field boundaries within and adjacent to the site's northwest boundary. Norton CA designated.

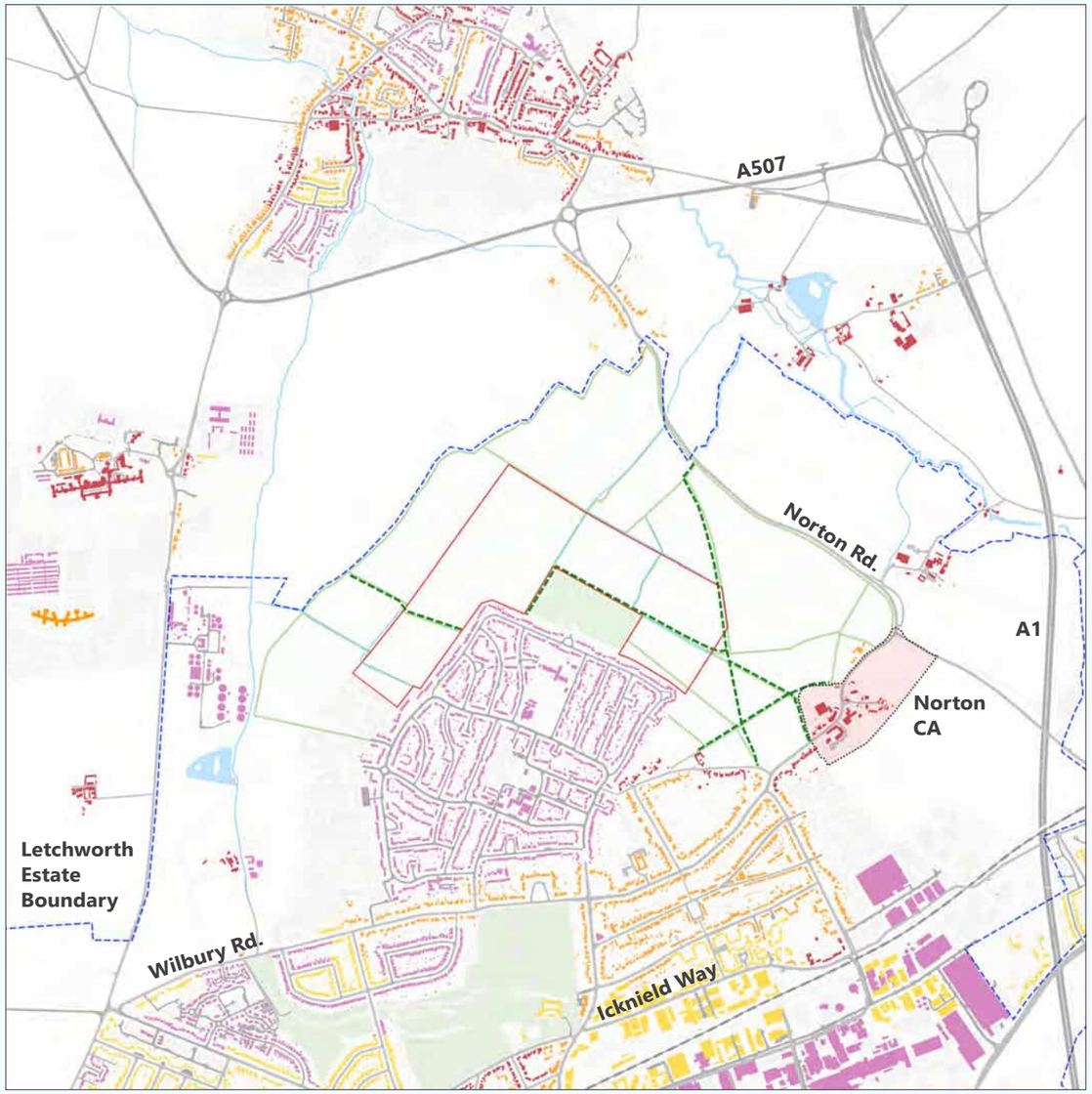


Fig. 3.51: LG1 in relation to the local context, 1946-1974

Key green spaces
1800-1900
1900-1920
1920-1946
1946-1974
Footpath
Field boundaries
LG1
Conservation area (CA)

Relevant findings for LG1 (1946-1974)

3.72 This period focuses on two major planned public sector led expansions of Letchworth, namely Grange Estate and Jackmans Estate, along with the Lordship Estate, a private development of farmland to the south.

3.73 Grange Estate is in close proximity to LG1 bordering its south and west boundaries. It therefore offers urban design and townscape lessons in relation to the sensitive integration of LG1's masterplan with its adjacent context. Jackmans Estate on the other hand, reflects a radical departure from key original Garden City principles in terms of its street layout, block and plot configuration (Fig. 3.52).

3.74 Further analysis drawing out relevant urban design and townscape lessons for LG1 will be covered in the later sections on 'Settlement type and form' and 'Built form and architecture'.

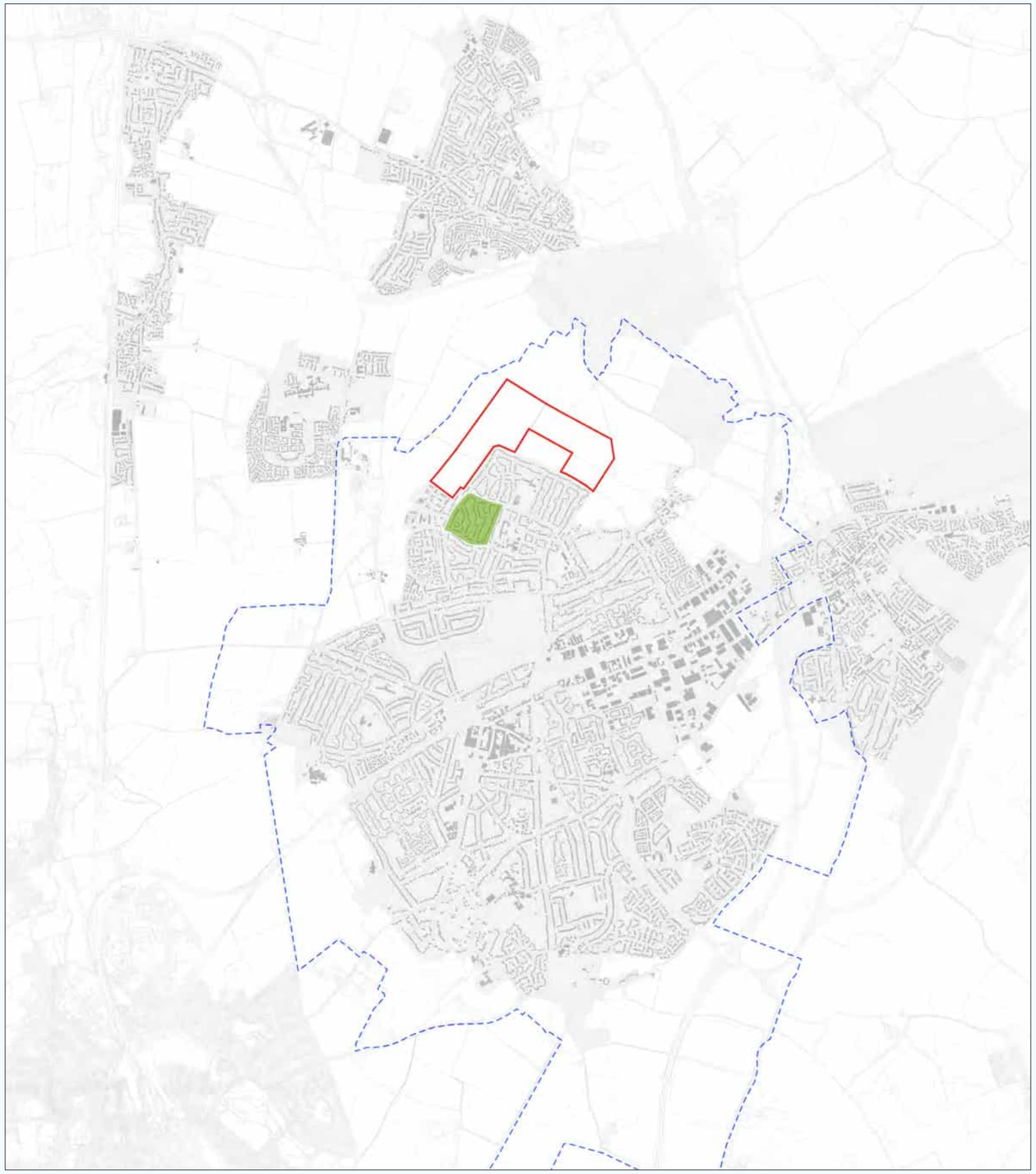


Fig. 3.52: Selected character area from period 1946-1974 for further study
Source: Based on Ordnance Map data received from LGCHF

Blocks bounded by Caslon Way, Heathermere, Northfields, Southfields and Western Way

1974-2000

By the 1980s, disadvantages of the Radburn system's of layout became increasingly apparent

Political economy

3.75 With increasing central government dislike of 'quango' organisations that involved both public and private sectors, the Letchworth Garden City Corporation gave way in 1995 to the Letchworth Garden City Heritage Foundation (LGCHF), as an industrial provident society with charitable objectives. Letchworth CA and Croft Lane CA were designated in 1974 and 1979 respectively, with their boundaries amended, in 1990 and 1991 respectively. For further descriptions on the CAs, please refer to The Letchworth Conservation Area Character Statement which was adopted by NHC on 18th December 2001, and The Croft Lane (Letchworth) Conservation Area Character Statement adopted by NHC in November 2019.

Landscape

3.76 In this period, there was continued expansion of the nearby settlements of Fairfield, Baldock, Stotfold and Hitchin into the countryside. Within the Letchworth Estate boundary, planned urban extensions into the surrounding landscape were delivered, particularly to the west of Grange Estate, north of Blackhorse Road around Cade Close and Kristiansand Way (Fig. 3.53), and Manor Park to the south.

3.77 At the scale of LG1, the site remained agricultural with no further change to field boundaries; but the new Grange Estate extension now bordered LG1's south-west boundary.

Public routes and spaces

3.78 By the 1980s, several disadvantages of the Radburn system's segregation of pedestrians from vehicular routes

Fig. 3.53: Letchworth in 1980-1989, expansions highlighted in red
Source: Ordinance Survey Map procured via ProMap

became increasingly apparent. Intended to improve pedestrian safety, this system had a range of unintended consequences. Increasing awareness of these issues began to lead design guidance back towards well-connected street layouts shared by pedestrians and vehicles, more aligned with Parker and Unwin's original principles. However, in the meantime, extension developments delivered in this period - to the west of Grange, Cade Close and Kristiansand Way, and Manor Park - reflect typical suburban layouts dominated by cul-de-sacs.

Land uses

3.79 At a strategic scale, competition from Hertfordshire New Towns (particularly Stevenage and Hatfield) that provided larger scale opportunities supported by Development Corporation investment, together with lack of investment in local skills and industrial infrastructure during the earlier years of the Corporation until the 1980s, saw an overall decline in skilled employment in Letchworth, including the loss of major employers such as ICL and Spirella. However, the 1990s saw further expansion in terms of Letchworth's employment sector with the development of the new business park providing new premises and the re-development of the Spirella Building for modern offices, a sector underrepresented in Letchworth achieved through the investment of the LGCHF.

3.80 The move towards out-of-town retail during the 1980s had a major impact on the town centre, as a large Sainsbury moved out to Business Park premises. As the Garden City Estate returned to profit, however, new amenities were also built during this period. A working farm, Standalone Farm, was opened to the public in 1980 (Fig. 3.54), the Plinston Hall Leisure Centre (Fig. 3.55) and Theatre was opened in 1982 in a building which had formerly been part of the Grammar School. The North Hertfordshire leisure centre on Baldock Road was opened in 1982, and the former Ernest Gardiner Day Hospital – a community treatment centre (now closed) - was developed in 1984, funded by LGCHF and the League of Friends (Fig. 3.55).

Fig. 3.54: Painting of Standalone Farm, production date c.1995-1997
Source: Garden City Collection

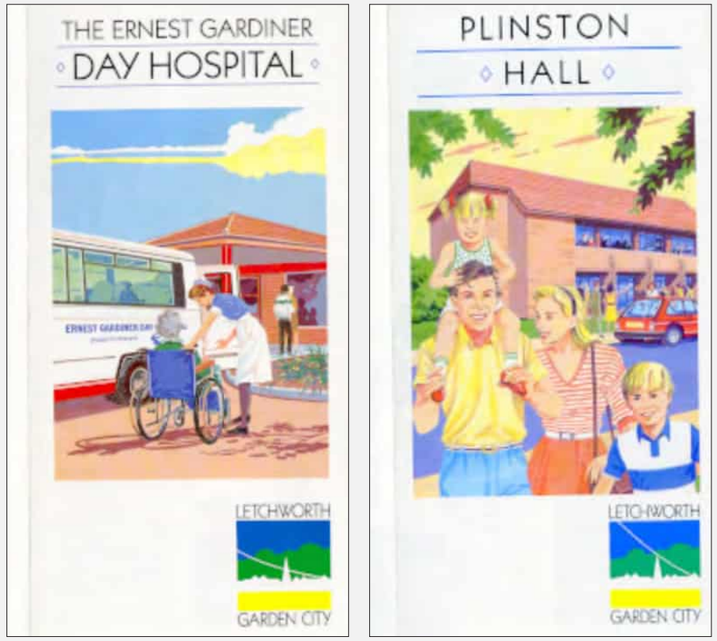


Fig. 3.55: Leaflets for Plinston Hall and Ernest Gardiner Day Hospital
Source: Garden City Collection

Plots and buildings

3.81 During the 1980s-90s, a number of in-fill and/or extension developments, each of about 100 homes, were built as sites became available at the edge of the urban area. They mainly comprised two-three storey, medium to high density suburban housing of varying types with tile cladding and some painted render (Fig. 3.56). Houses have small open plan front gardens and are set around an informal layout of access roads and short cul-de-sacs. This period saw a gradual move back to plots with clearly distinct fronts and backs. Parking, however, was still largely concentrated in poorly surveilled rear courtyards.

Fig. 3.56: Dwellings along Kristiansand Way.
Source: Garden City Collection

LG1 summary: wider context

3.82 The western extension of Grange Estate was the most significant development of this period. Other infill residential developments were small-scale, and dispersed towards the outer edges, for example at Cade Close and Kristiansand Way.

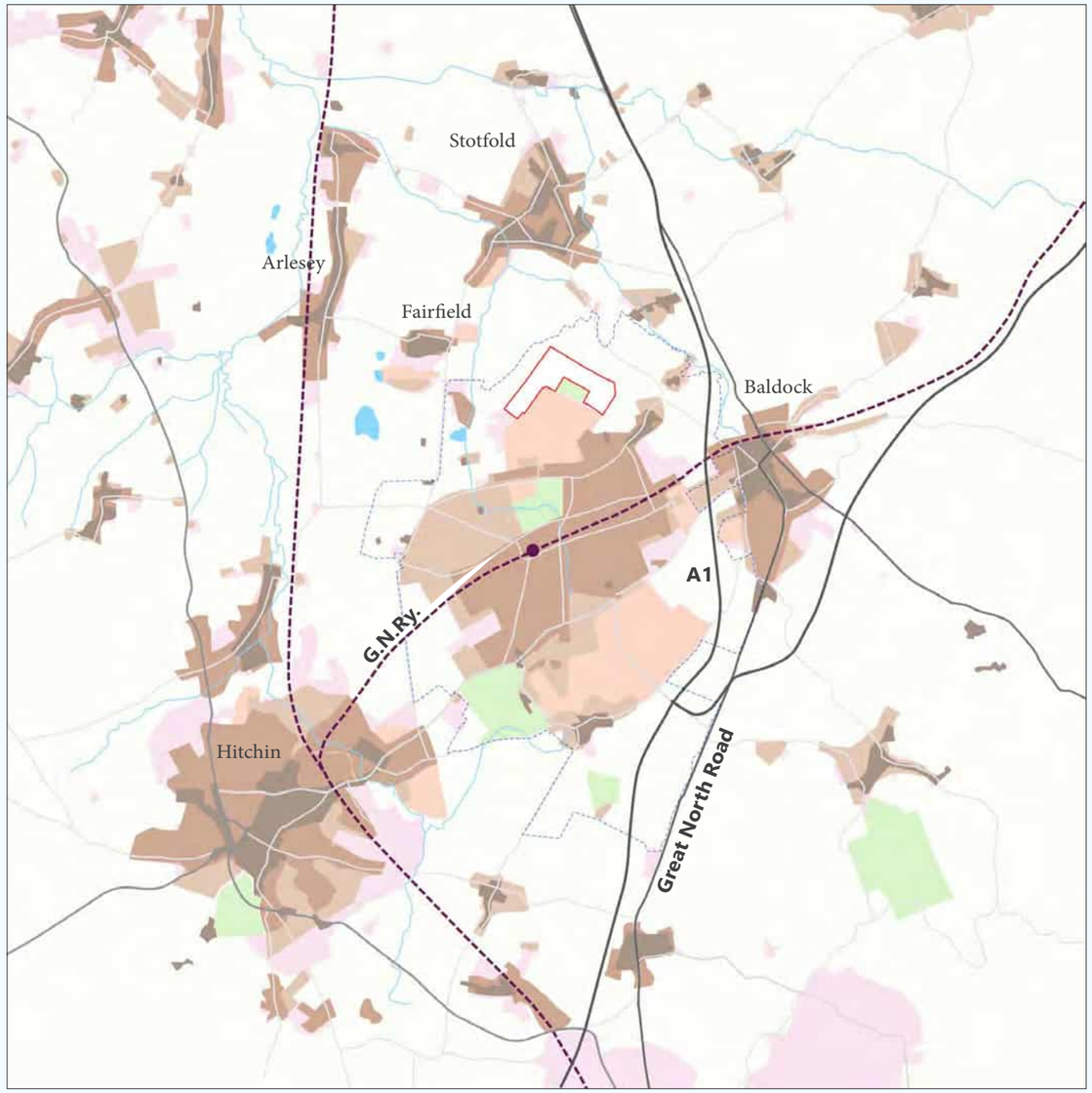


Fig. 3.57: LG1 in relation to the wider context, 1974-2000

Key green spaces
1800-1900
1900-1920
1920-1946
1946-1974
1975-2000

LG1 summary: local context

3.83 LG1 borders the new Grange Estate extension with properties along the site's south-western boundary. The site itself remains in agricultural use with no further change to field boundaries. Croft Lane CA and Letchworth CA designated.

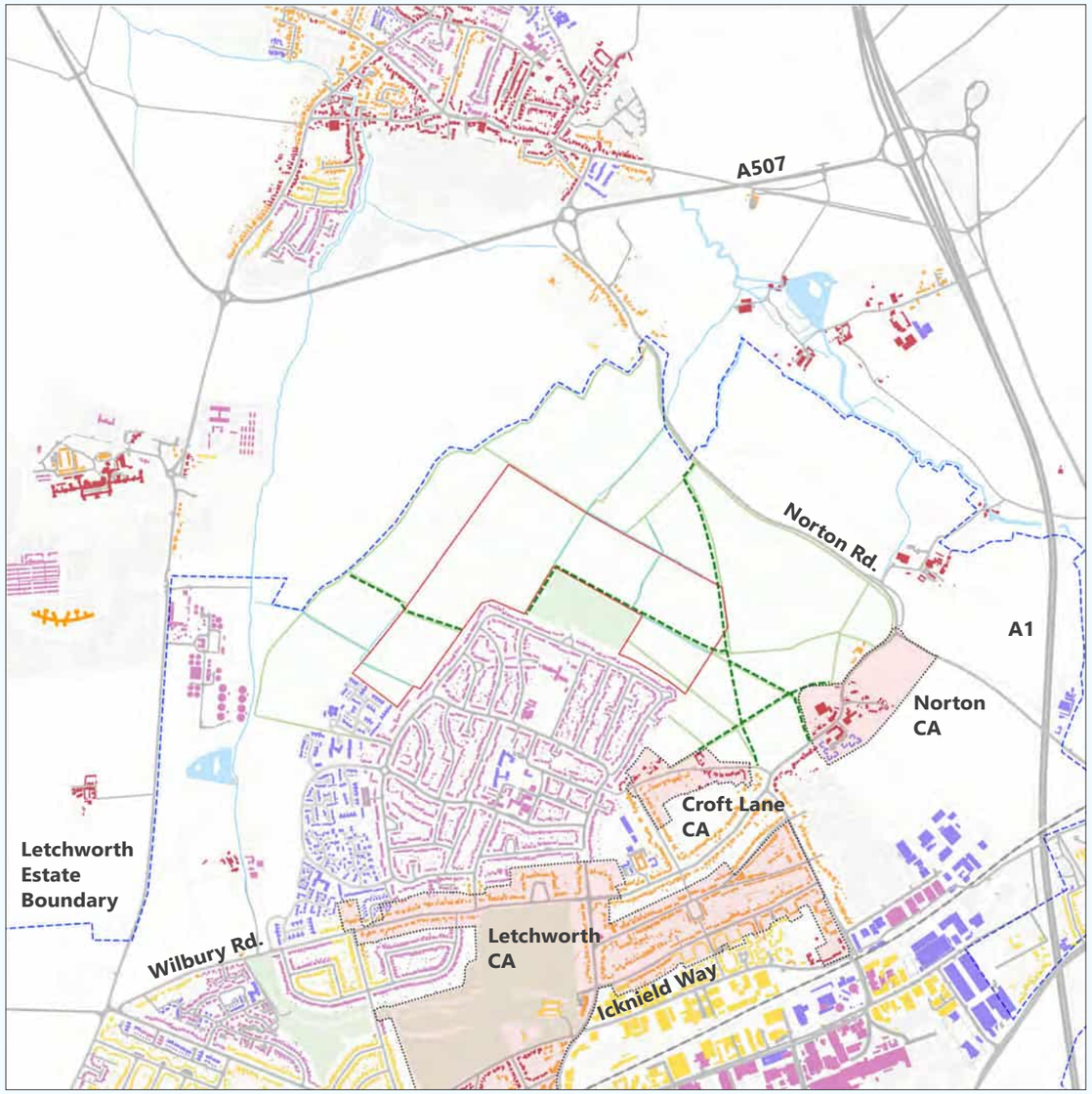


Fig. 3.58: LG1 in relation to the local context, 1974-2000

Key green spaces
1800-1900
1900-1920
1920-1946
1946-1974
1974-2000
Footpath
Field boundaries
LG1
Conservation area (CA)

Relevant findings for LG1 (1974 - 2000)

3.84 This period focuses on a number of in-fill and extension developments, built as sites became available at the edge of the urban area.

3.85 The developments along Cade Close, and Kristiansand Way, in particular, represent continued exploration of the integration of modern-day needs with garden city principles (Fig. 3.59).

3.86 Further analysis drawing out relevant urban design and townscape lessons for contemporary developments LG1 will be covered in the later section on 'Built form and architecture'.

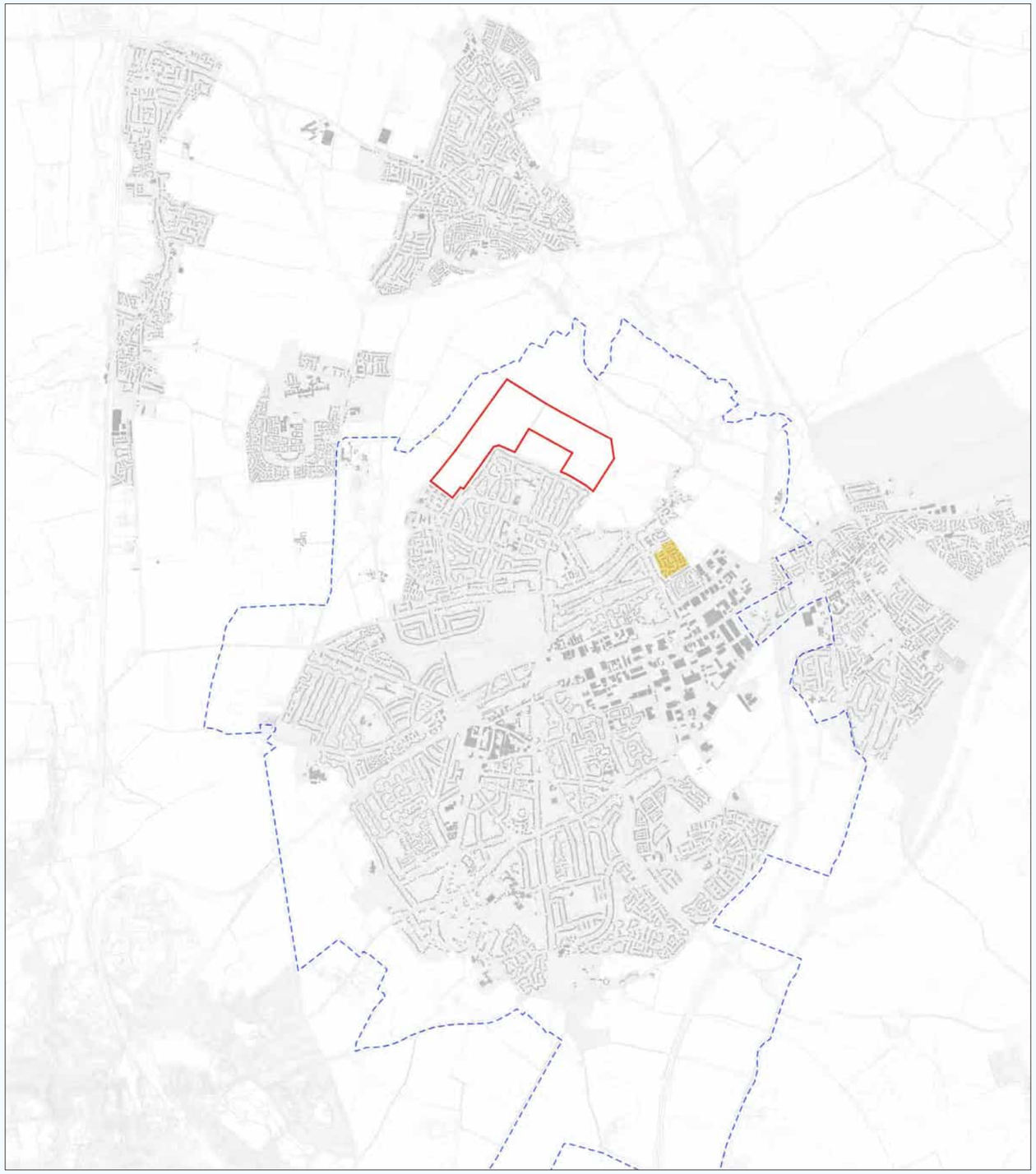


Fig. 3.59: Modern in-fill and extension developments along Cade Close and Kristiansand Way
Source: Based on Ordnance Map data received from LGCHF

Development along Cade Close and Kristiansand Way

2000-present

To address the worsening housing crisis Site LG1 is allocated as a Strategic Site for housing delivery in Local Plan 2011-2031.

Political economy

3.87 The period since 2000 has seen an ever-worsening housing crisis, together with a growing awareness of climate emergency, and public health concerns about sedentary lifestyles and the need to encourage exercise through active pedestrian and cycle travel.

3.88 In early 2013, North Hertfordshire District Council (NHDC) published draft housing numbers for consultation as part of its emerging Local Plan, suggesting a District wide housing requirement of 10,700 for the period up to 2031. It became evident that the identified housing requirement could not be accommodated without incursion into the Green Belt and countryside. At this time, NHDC approached LGCHF to investigate releasing some land on the edge of Letchworth Garden City to assist in meeting the District's overall housing requirements. This led to the identification of LG1 as a strategic development site to the North of Letchworth Garden City for 900 homes (Fig. 3.60). LGCHF then promoted a 2019 RIBA competition for reimagining Garden City principles for 21st century living for LG1.

Landscape

3.89 This period saw large expansions of the nearby settlements, in particular of Fairfield and Stotfold, into the countryside. For example, Fairfield Park (Fig. 3.61) village planned for about 2000 homes was established in the early 2000s around Fairfield Hospital, followed by more recent developments like Fairfield Gardens and Four

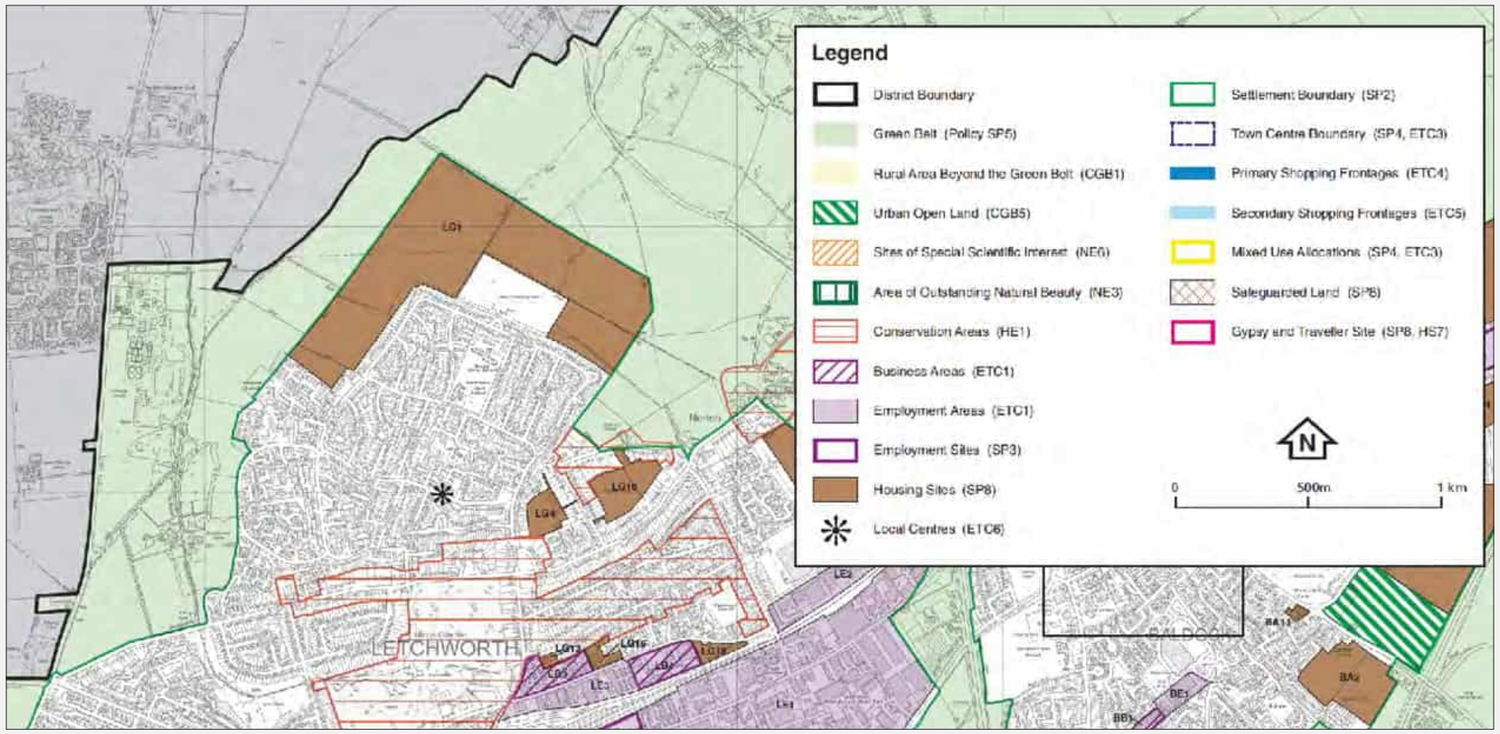


Fig. 3.60: Excerpt from NHC Local Plan 2011 - 2031 Policies Map B, Letchworth Garden City
Source: NHC Local Plan 2011-2031 See: https://www.north-herts.gov.uk/north-herts-local-plan-2011-2031

Fig. 3.61: Fairfield Park, Fairfield, Bedfordshire
Source: Wikimedia Commons

Mills in Stotfold. See Part 5 (Settlement Type and Form) of this report for further analysis of these significant developments. They justifiably raise concerns about coalescence with the LG1 development that will need to be appropriately addressed as part of LG1's strategic masterplan development.

3.90 At closer focus, the main landscape features of LG1 can be seen to have been defined by a synthesis of landform, hydrology, ecology and agricultural practice. The field pattern is defined by mature and well managed hedgerows and more dense shelter belts that drive much of the character and identity of the site (Fig. 3.62, 3.63). This pattern provides variety and articulates views that are accentuated within the north west of the site from areas of higher ground where views are most prominent. There are a small number of deciduous woodland copses and thickets of scrub that generally fall at the intersection of hedgerows and footpaths. Where located at the Grange Estate boundary these provide screening, and are likely to have been planted as part of the estate's development. The western boundary has more intermittent sections of dense woodland and shelterbelts that allow houses and apartments to be more prominent within the surrounding landscape.

Note: LG1's landscape characterisitcs and its historical evolution are further analysed in the Landscape Character and Sensitivity Study report and in the Baseline Heritage report. The urban design and townscape implications of LG1's landscape characteristics will be covered in further detail as part of this report's later section on Landscape and Environmental Character.

Public routes and spaces

3.91 This period has seen a growing awareness of the need to reduce carbon emissions, and to encourage walking and cycling for public health reasons. Responding to these needs, the 13.6 miles Garden City Greenway was created from earlier footpaths in 2003 to commemorate Letchworth Garden City's first centenary. The Greenway also goes through LG1, aligned with historic pathways that follow field boundaries (Fig. 3.64, 3.65).

Fig. 3.62: Mature hedgerows near existing powerline
Source: Peter Neal

Fig. 3.63: Mature shelterbelts on western boundary of LG1
Source: Peter Neal

Fig. 3.64: Greenway path along LG1's Southern boundary
Source: Peter Neal

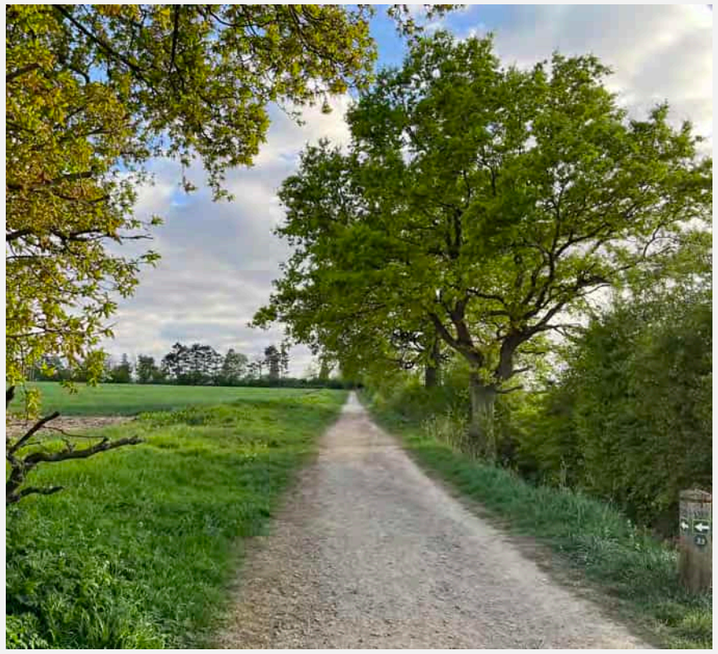


Fig. 3.65: The Garden City Greenway crossing the centre of LG1
Source: Peter Neal

3.92 New small infill housing developments, such as Wissen Drive, Lindsell Avenue, Hartington Place and Maddon Gardens, have been developed with permeable street layouts as far as possible within their sites' constraints.

Land uses

3.93 Letchworth has a history of thriving employment. Today Letchworth provides jobs for about 15,000 people. The range of businesses includes many SMEs, and although there are significant skilled employers such as Weldability, Altro and Auto Glym, there is a disproportionate amount of low skilled jobs. On a wider scale, to continue Letchworth's legacy of a thriving employment sector, LG1 offers opportunities for unlocking opportunities for training, local apprenticeships and jobs as part of the masterplan's delivery.

Plots and buildings

3.94 An increasing realisation of the benefits of plots with clear distinctions between street-orientated fronts and privately-orientated backs is now accompanied by explorations of new parking arrangements with direct street access, for example at Maddon Gardens and Hartington Place. This was informed by LGCHF's guidance on design principles for New Housing Developments, currently being updated.

3.95 Recent developments also demonstrate a variety of architectural approaches (Fig. 3.66 to 3.70). Hartington Place, in particular, illustrates how a contemporary scheme can fit well into the Garden City story.

3.96 Presently, there are 32 statutorily listed buildings within a 1km radius of the LG1 (Fig.3.72). All but 5 of these are located within the 3 previously identified conservation areas. Please refer the Built Heritage Baseline Appraisal for further details regarding heritage designation, setting and historic significance.

Fig. 3.66: Wissen Drive, Letchworth; 2009

Fig. 3.67: Maddon Gardens, Letchworth; 2014

Fig. 3.68: Lindsell Avenue, Letchworth; 2008

Fig. 3.69: Hartington Place, Letchworth; 2009

Fig. 3.70: Norton Way South; 2020

LG1 summary: wider context

3.97 Significant extensions to Fairfield and Stotfold require careful consideration of the relationship with LG1, now adopted in the NHDC's Local Plan 2011-2031 as a Strategic Site for housing delivery.

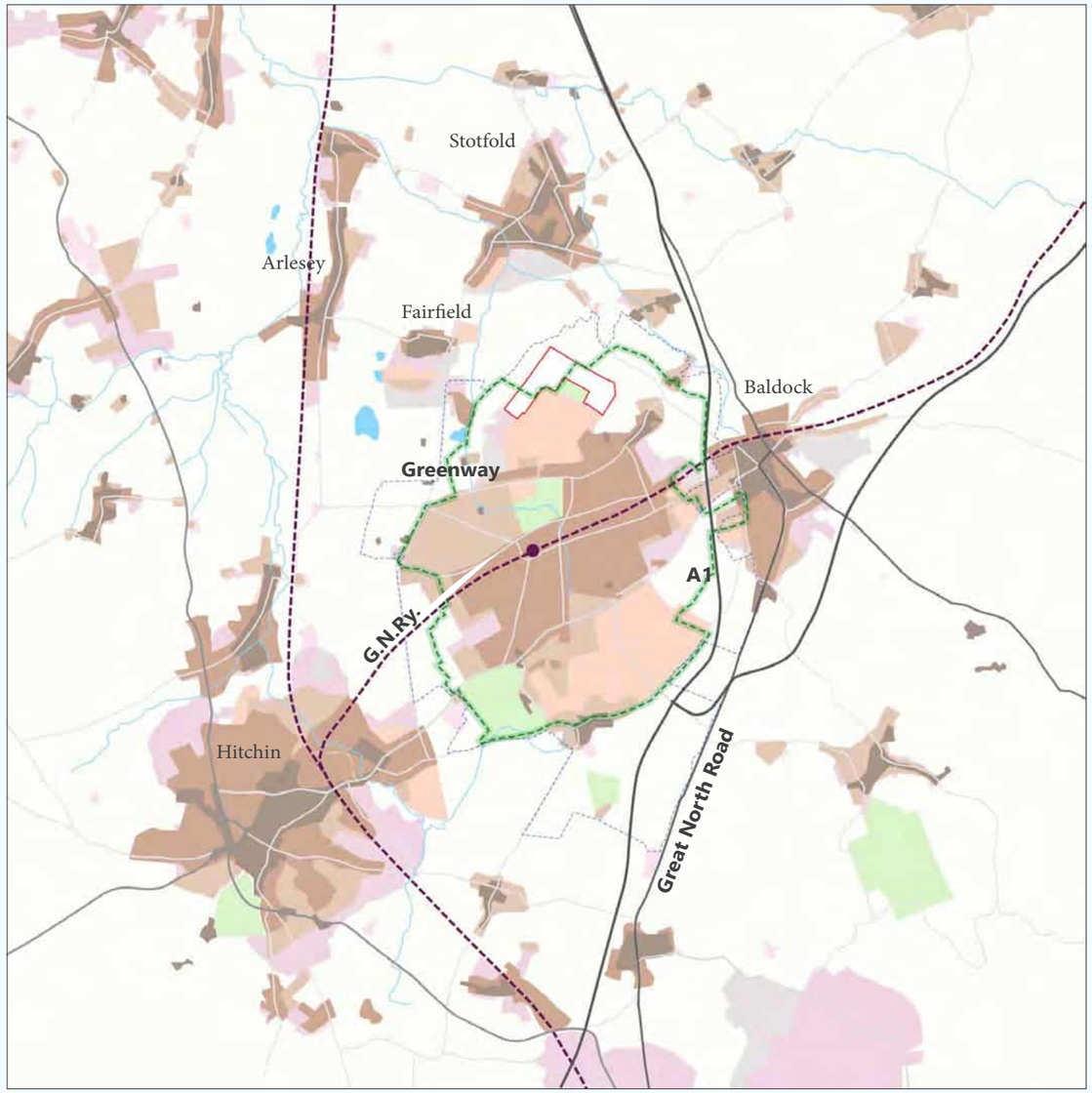


Fig. 3.71: LG1 in relation to the wider context, 2000-present

Key green spaces
1800-1900
1900-1920
1920-1946
1946-1974
1975-2000
1946-1974

LG1 summary: local context

3.98 The Garden City Greenway goes through the site, following historic footways along field boundaries. Key landscape features of LG1 are defined by a synthesis of landform, hydrology, ecology and agricultural practice evolving over time.

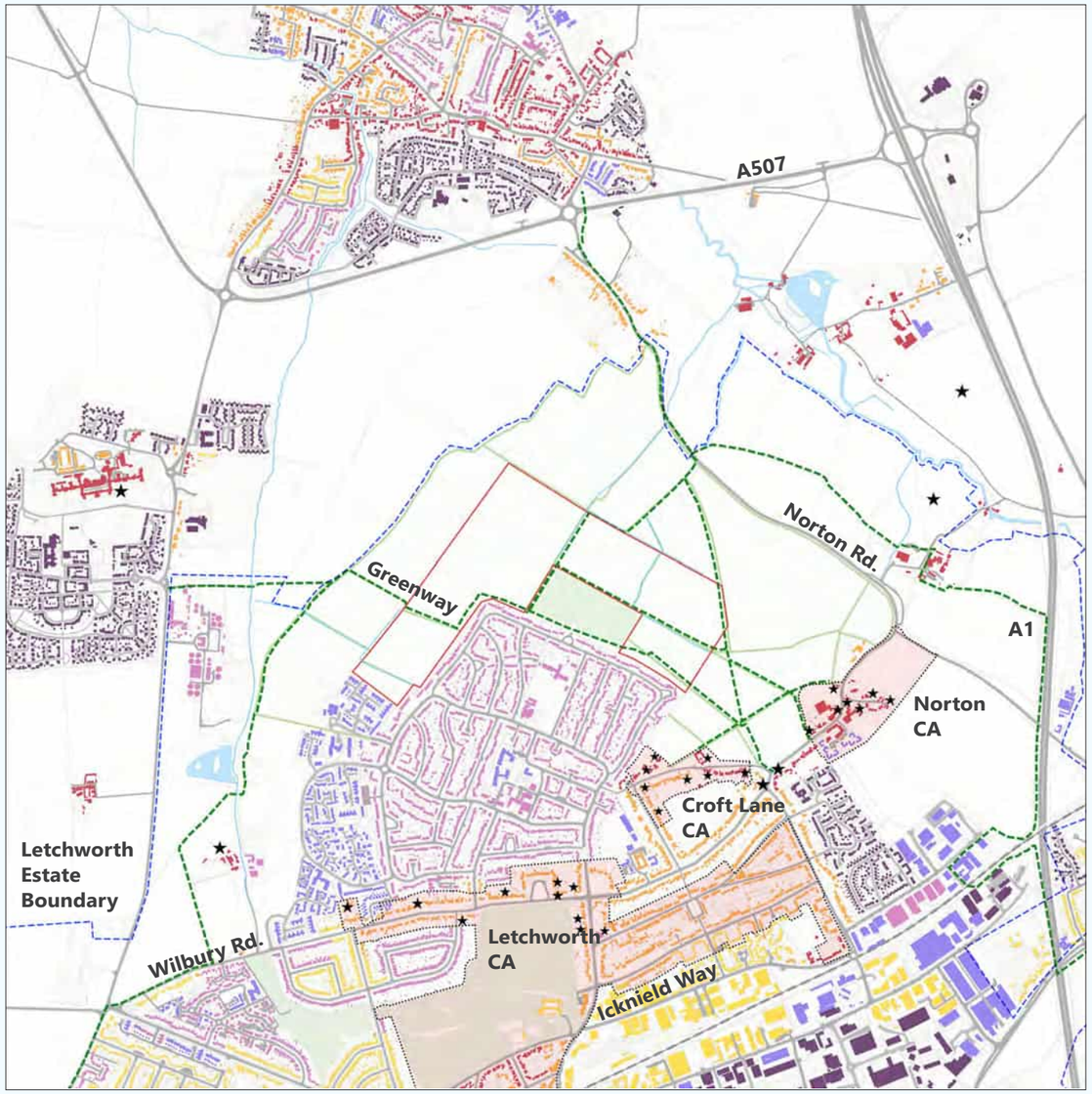


Fig. 3.72: LG1 in relation to the local context, 2000-present

Key green spaces
1800-1900
1900-1920
1920-1946
1946-1974
1974-2000
2000-present
Listed buildings
Conservation area
Footpath
Field boundaries
LG1

Relevant findings for LG1 (2000 - present)

3.99 Within Letchworth, this period focuses on a number of small-scale in-fill developments such as Hartington Place, Maddon Gardens, Wissen Drive and Lindsell Avenue. Hartington Place, in particular, offer lessons on how a contemporary scheme can fit well into the Garden City story (Fig. 3.73) whilst addressing issues related to parking, refuse collection, energy efficiency and lifetime homes.

3.100 Further analysis drawing out relevant urban design and townscape lessons for LG1 will be covered in the later section on 'Built form and architecture'.

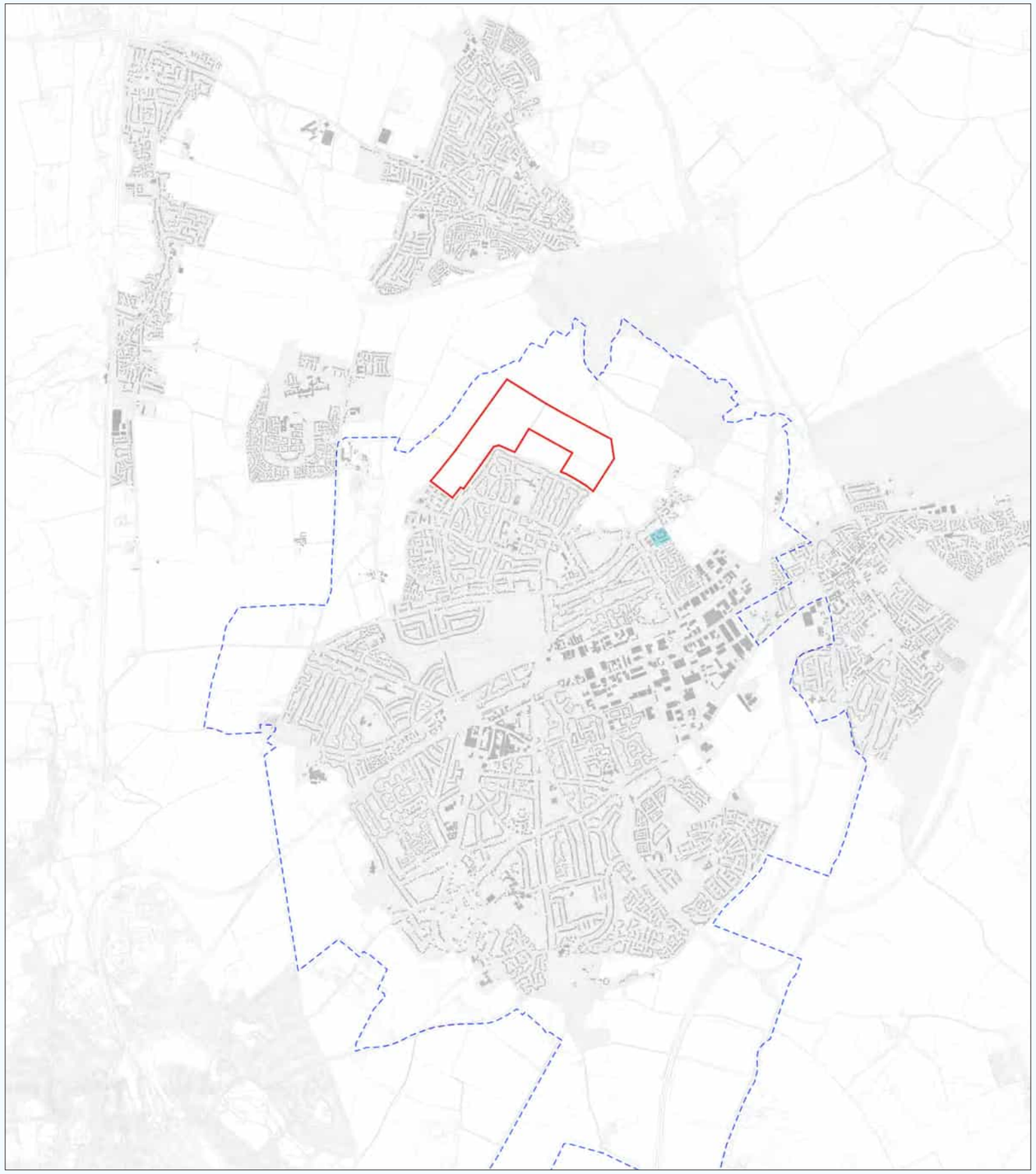


Fig. 3.73: Selected character area from period 2000-present for further study
Source: Based on Ordnance Map data received from LGCHF

Hartington Place

Conclusion

3.101 Drawing from the historical analysis of Letchworth and its surrounding settlements, in conclusion, we summarise the key identified character areas from each time-period that offer lessons for addressing current and emerging issues in ways that best support Letchworth's distinct place identity, to light the way towards creating a future for LG1 (Fig. 3.74) that is rooted in the past without being stuck in the past.

3.102 Further analysis drawing out relevant urban design and townscape lessons for LG1 will be covered in the later section of this report on 'built form and architecture'.

3.103 Note: Amongst a wide range of modern developments in Letchworth such as Cade Close, Kristiansand Way, Madden Gardens, Wissen Drive, Lindsell Avenue and Hartington Place i.e. developments delivered post-1980, Hartington Place stands out as an exemplar in terms of setting a benchmark on a creative reinterpretation of Garden City principles for modern-day living. It is therefore chosen for further analysis and covered in the section of this report on 'built form and architecture'.

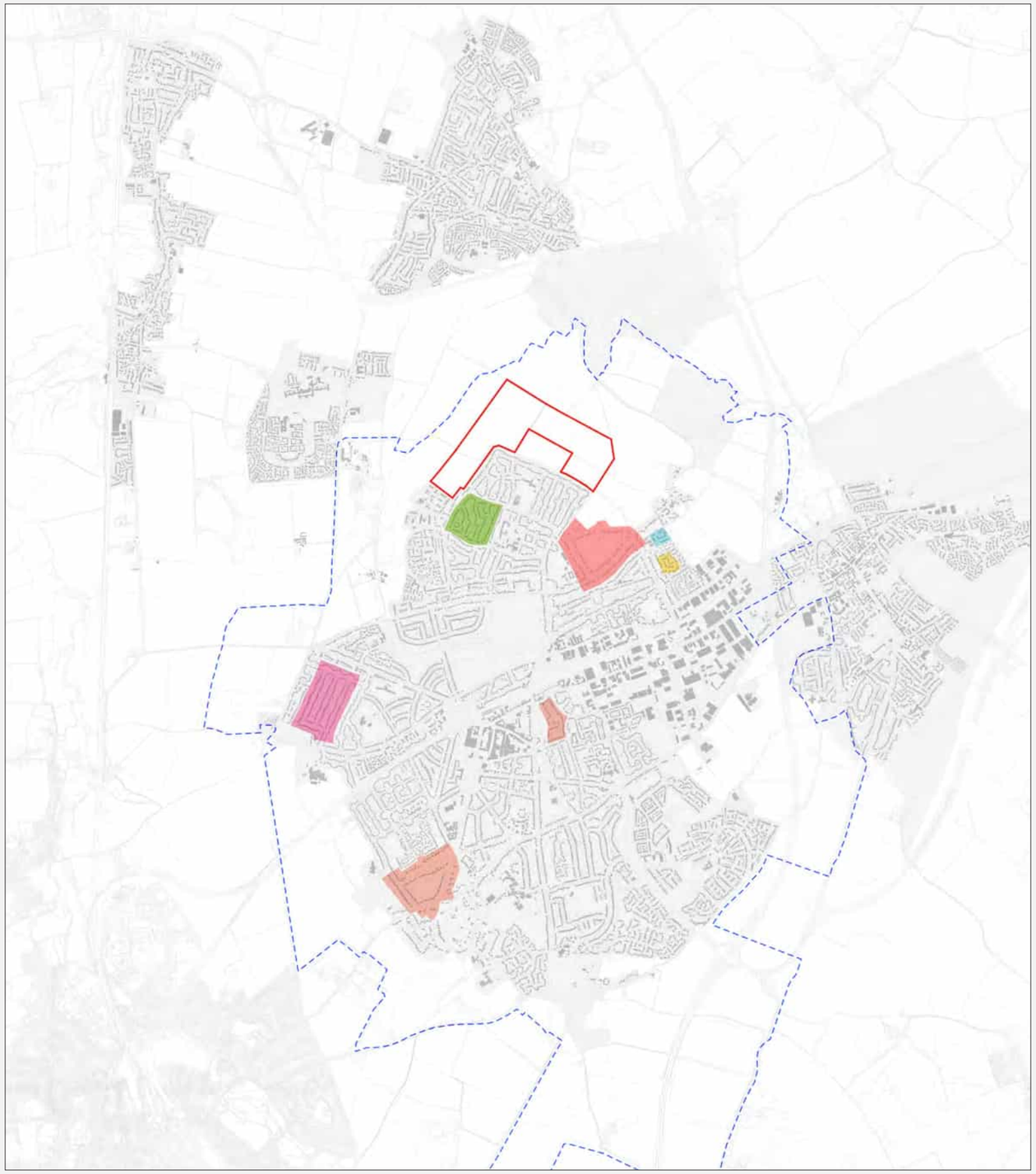


Fig. 3.74: Selected character areas summary for further study
Source: Based on Ordnance Map data received from LGCHF

4

Landscape and environmental character

4. Landscape and environmental character

Introduction

The purpose of this analysis is to draw out the urban design and townscape implications of the local landscape and environmental characteristics to inform LG1's strategic masterplan.

4.1 The purpose of this analysis is to draw out the urban design and townscape implications of the local landscape and environmental characteristics to inform LG1's strategic masterplan.

4.2 It will be based on the analysis and recommendations outlined in the Landscape Character and Sensitivity Study, other relevant baseline assessments, and in accordance with LGCHF's adopted vision, the policies adopted in the NHC Local Plan 2011-2031, including SP9 and the relevant characteristics of well-designed places supported through the National Design Guide.

4.3 To this end, the key objectives of this study are:

- To relate the landscape and green infrastructure (GI) planning context, relevant national design guidance and LGCHF's adopted landscape vision, with LG1's landscape and environmental characteristics and surrounding context (Fig. 4.1, 4.2) as outlined in the Landscape Character and Sensitivity Study and other baseline assessments.
- To use the results to draw out the urban design and townscape implications for a landscape-led approach to strategic masterplanning for LG1.

Methodology

4.4 The methodology of this study is aligned with the scope of study as agreed with NHC and includes site visits and desk-based research to enable the below:

- Review and analysis of LG1's topography and hydrology; geology and soils; landscape features such as ecology, habitat and green open spaces; footpath and rights of way; visibility and viewpoints; local air and noise quality and access to relevant local recreational facilities.

- Review of relevant planning policies, national design guidance and LGCHF's adopted vision that inform landscape and environmental character for LG1's strategic masterplan (refer Part 2 of this report).

- Review of relevant consultant baseline assessments including the Landscape Character and Sensitivity Study, Flood Risk Assessment and Drainage Strategy, Transport & Accessibility Report, Air Quality Constraints Statement, Initial Noise Risk and Impact Assessment, Utilities Assessment, Built Heritage Appraisal Report and Archeological Assessment.

4.5 Note: Since the methodology draws from various relevant baseline studies and assessments, this analysis should be read in conjunction with those reports. These have been referenced appropriately.

Fig. 4.1: Western path across Grange Recreation Ground with a shelterbelt to the north

Fig. 4.2: Mature dense shelterbelt to LG1's western boundary

Strategic GI framework

Strategic landscape character

4.6 The landscape and GI context of the site encompasses a variety of urban and rural qualities. These include public open spaces for recreation, an extensive network of footpaths and a national cycle route, a community orchard, a mosaic of arable fields bounded by established hedgerows and shelter belts, modest river corridors and woodlands and a small number of local nature reserves. There is an established and prominent pattern of settlements to the north, west and east of the site including a number of housing development sites.

4.7 Letchworth and LG1 are located within National Character Area (NCA) Profile 87: East Anglian Chalk (Fig. 4.3)[1]. A high-level description is characterised by 'visually simple and uninterrupted landscape of smooth, rolling chalkland hills with large regular fields enclosed by low hawthorn hedges, with few trees, straight roads and expansive views to the north'. The NCA acknowledges the national significance of Letchworth as the first designed Garden City. It notes that the main conurbations including the settlements of Baldock, Letchworth and Newmarket have the lowest scores for tranquillity[2] which is attributed in part to the busy transport corridors that cross the NCA.

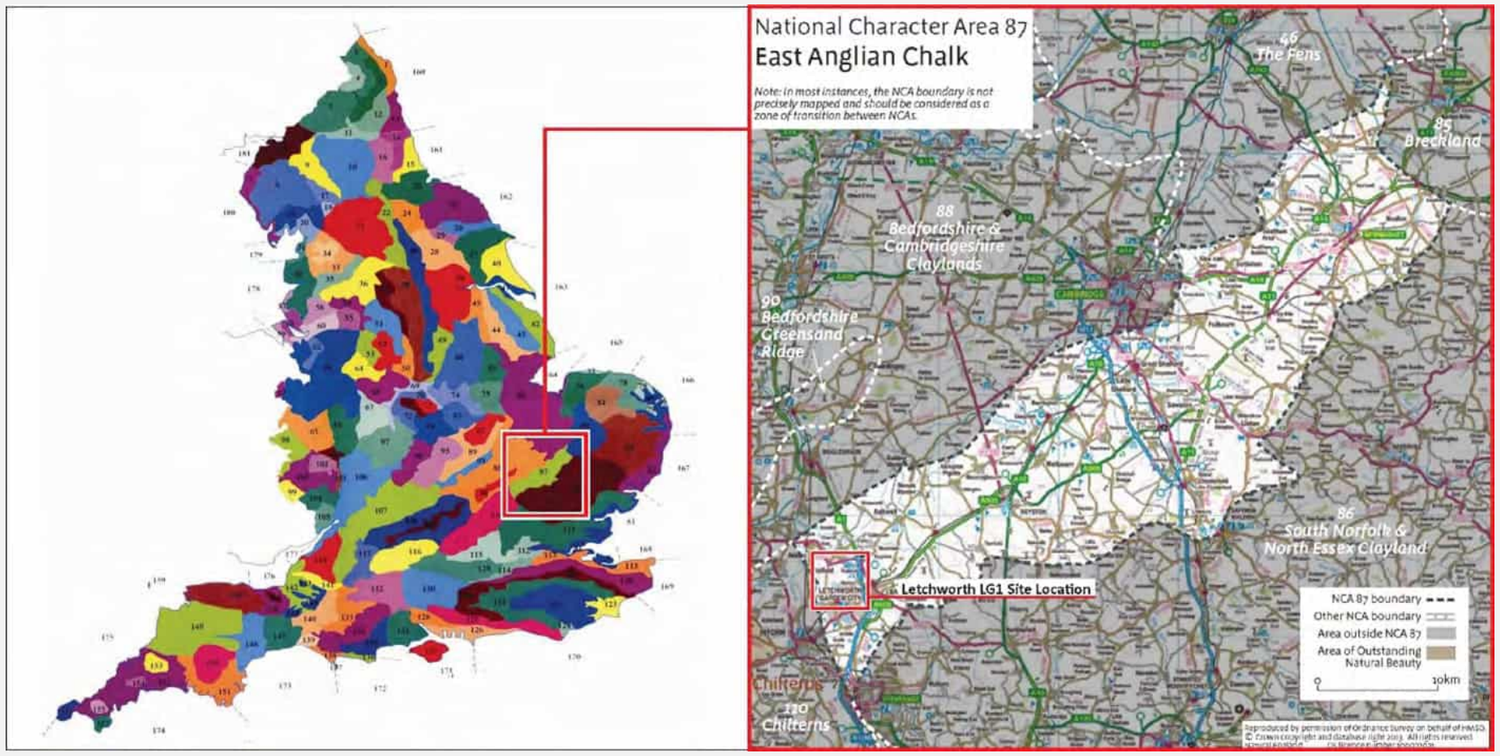


Fig. 4.3: National Landscape Character Area Profiles / 87 East Anglian Chalk
Source: English Nature / Natural England National Character Area Profiles (E529)

Fig. 4.4: North Hertfordshire Landscape Character Area 216 / Arlesey – Great Wymondley
Source: North Hertfordshire and Stevenage Landscape Character Assessment, 2011

References:

1. Natural England (2015) National Character Area profile: 87. East Anglian Chalk. http://publications.naturalengland.org.uk/publication/6417815967891456

2. CPRE(2007) Tranquillity map of England. https://www.cpre.org.uk/wp-content/uploads/2019/11/tranquillity_map_england_regional_boundaries_1.pdf

3. NHC (2011) North Herts Landscape Study (Character, Sensitivity and Capacity). https://www.north-herts.gov.uk/sites/default/files/CG16%20NHerts%20Landscape%20Study%202011%20-%20Part%201.pdf

4.8 The North Herts Landscape Study[3] includes LG1 as part of Area 216 Arlesey - Great Wymondley (Fig. 4.4). Guidelines for managing change within Character Area 216 include the creation of buffer zones between intensive arable production and areas of semi-natural habitat and the creation of links between habitat areas. This includes promoting the use of traditional field hedges and the diversity of hedgerow species and the planting of standard hedgerow trees and encouraging woodland planting, in small copses, around the fringes of sub-urban settlements. For further details please refer to the Landscape Character and Sensitivity Study[4].

Strategic green infrastructure network

4.9 The strategic green infrastructure network within the catchment of LG1 is discussed in further detail in the Landscape Character and Sensitivity Study (Peter Neal/2024). Key features are summarised here (Fig. 4.5):

- The Letchworth Garden City Greenway (Fig. 4.6, see overleaf): 13.6 mile route with the northern section passes through LG1 linking Standalone Farm to the west, Radwell Meadows Country Park to the north and Norton village to the east.

- The Etonbury Green Wheel: a developing environmental initiative to improve access to surrounding green spaces forming a circuit around Arlesey, Stotfold and Fairfield. The southern section of the Green Wheel passes through LG1 connecting Fairfield Park with Radwell and Stotfold.

- A number of non-statutory wildlife sites are located within LG1's wider catchment. Those located within 2km include Norton Common, Radwell Meadows, Ivel Springs and Stotfold Springs (Fig. 4.7, 4.8).

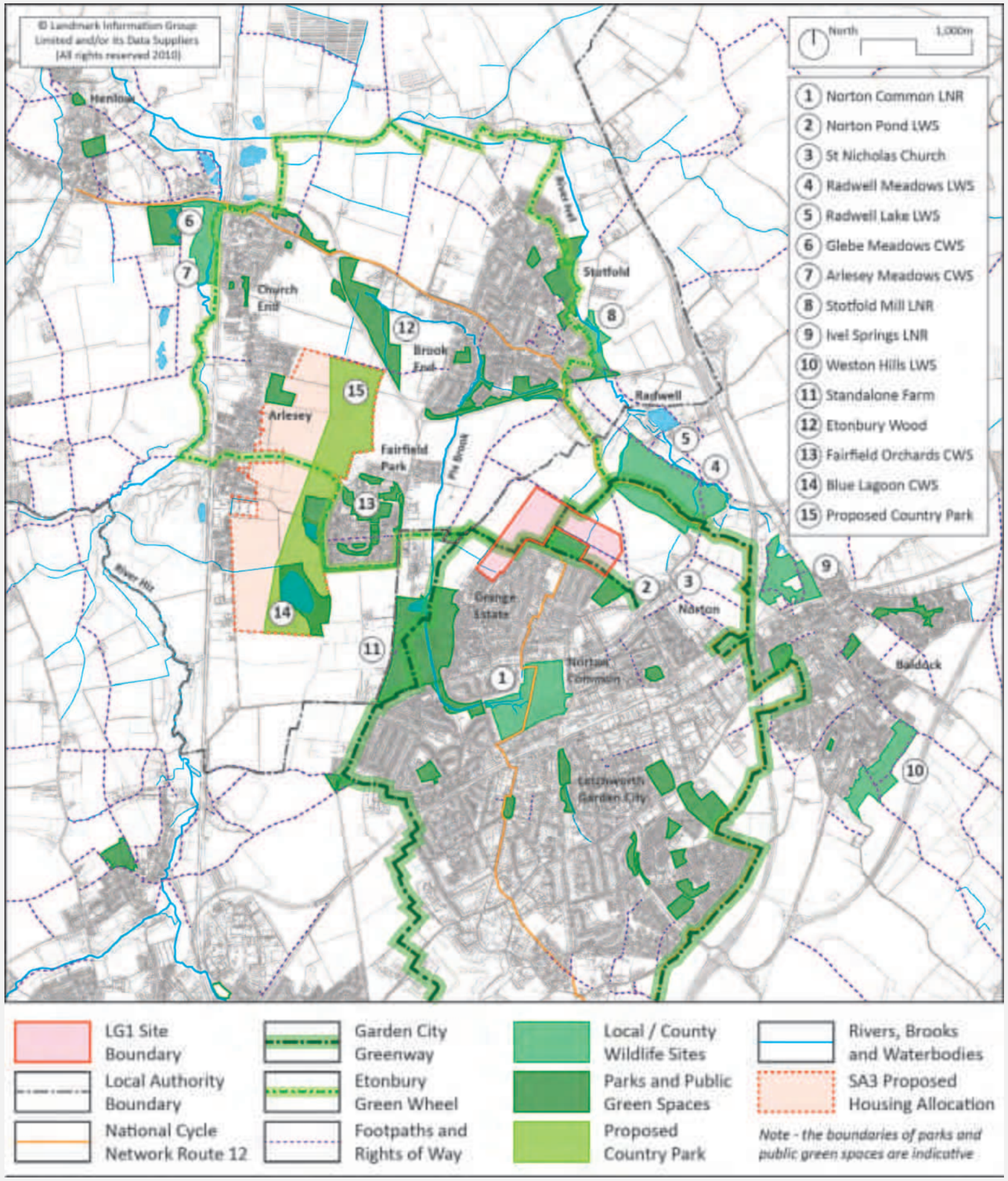


Fig. 4.5: Current strategic green infrastructure network for LG1
Source: Peter Neal/ ERE (2023), Landscape Character and Sensitivity Study

References:

4. Peter Neal/ ERE (2024) Landscape Character and Sensitivity Study.

- There are a variety of public parks and green spaces within the catchment of LG1 that serve the local communities of Letchworth, Baldock, Fairfield Park, Arlesey and Stotfold.

- The Central Bedfordshire Local Plan includes a country park as part of an allocated development East of Arlesey consisting of approximately 2,000 dwellings (Policy SA3). This should include formal sports provision, protected habitat areas and open agricultural and natural green spaces.

- Habitats of ecological value present in and around the site have been identified in the Preliminary Ecological Assessment that includes a set of target notes and species lists (TEP/2023)[5]. The main habitats include plantation and semi-natural broad-leaved woodland, dense/continuous and scattered scrub and poor semi-improved grassland.

LG1's strategic GI includes the drainage and wetland corridors of River Hiz, River Ivel and Pix Brook; recreational routes of the Garden City Greenway, Etonbury Green Wheel, long-distance National Cycle Network, designated sites for recreation and nature conservation; and public parks and green spaces.

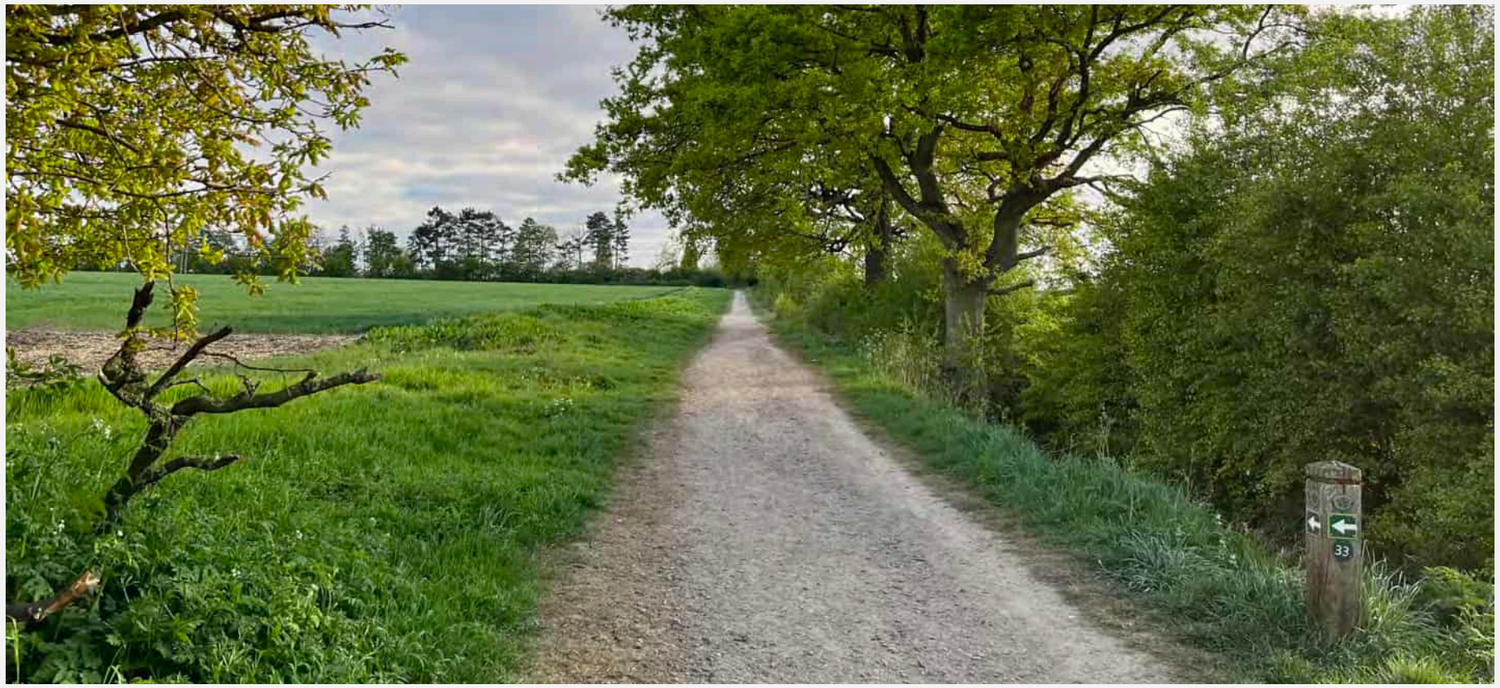


Fig. 4.6: Letchworth Garden City Greenway
Source: Peter Neal

Fig. 4.7: Norton Common
Source: Wikimedia Commons, CC BY-SA 2.0

Fig. 4.8: Radwell Meadows
Source: Wikimedia Commons, CC BY-SA 2.0

References:

5. TEP (2023) Preliminary Ecological Assessment.

LG1 landscape structure

4.10 Drawing together data from the desk study, analysis of the landscape structure of the site and the field survey LG1 has been divided into six site scale Landscape Character Areas (LCA) (Fig. 4.9; 4.10-4.15, see overleaf). Across these LCAs, the landscape structure, environmental character and green infrastructure elements that vary include topography and hydrology; geology and soils; landscape features such as ecology, habitat and green open spaces; footpath and rights of way; visibility and viewpoints; local impact of noise from traffic and access to relevant local recreational facilities.

4.11 These characteristics have been analysed in detail as part of the Landscape Character and Sensitivity Study (Peter Neal/2024) and associated ecological[6], arboricultural[7] and surface flood risk surveys[8]. Certain elements such as footpaths and rights of way, noise and air quality have been covered in detail in other baseline assessments such as the Transport and Accessibility Report[9] and Utilities Assessment[10]. A discussion on the historic alignment of field boundaries is presented in the Archaeological Report[11] and the Built Heritage Baseline Appraisal[12]. Drawing from these documents, the following pages analyses the urban design and townscape implications of these various characteristics.

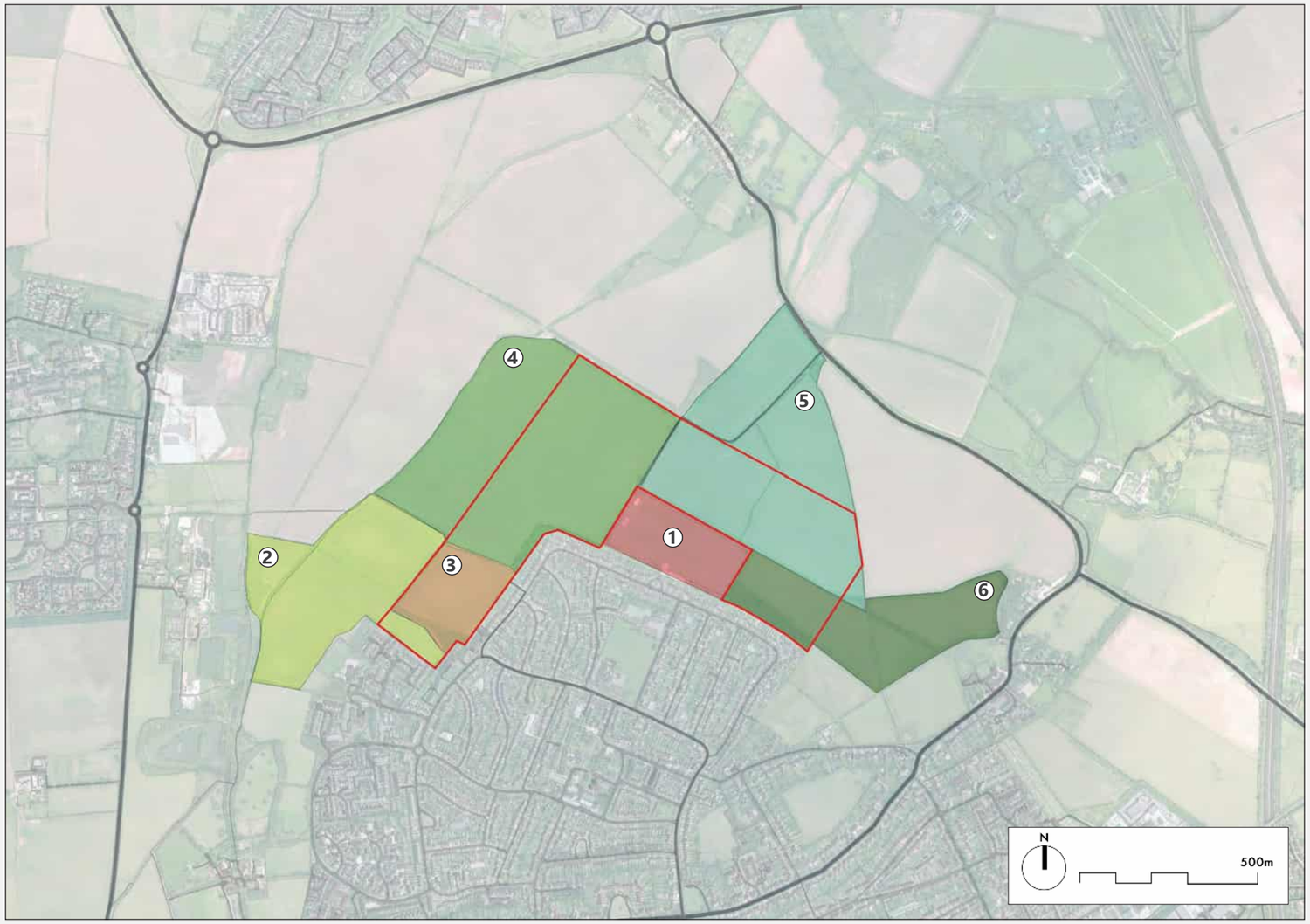


Fig. 4.9: LG1 Local Landscape Character Areas

LG1 Site boundary
Character Area 1
Character Area 2
Character Area 3
Character Area 4
Character Area 5
Character Area 6

References:

6. TEP (2023) Preliminary Ecological Assessment.

7. TEP (2023) Arboricultural Survey and Hedgerow Assessment.

8. WSP (2023) Flood Risk and Surface Water Management Study.

9. Steer (2023) Transport & Accessibility Report.

10. WSP (2023) Utility Statement.

11. Wardall Armstrong (2023) Archaeological Evaluation Report.

12. Turley (2023) Built Heritage Baseline Appraisal.

① Fig. 4.10: LCA 1 - Children's play and fitness equipment at the Grange Recreation Ground.

② Fig. 4.11: LCA 2 - Open view west to Fairfield Park

③ Fig. 4.12: LCA 3 - Field edge adjacent to Grange Estate

④ Fig. 4.13: LCA 4: Powerline across open central area

⑤ Fig. 4.14: LCA 5 - Open fields with shelterbelt to south

⑥ Fig. 4.15: LCA 6 - Greenway path along southern boundary

Topography, hydrology and geology

4.12 LG1 is located on high ground to the north of Letchworth. The gently sloping nature of site's topography provides limited constraint on development and access within site. The site naturally drains as the topography falls gently to the north and to the west through an existing network of ditches that add ecological value but are not visually prominent (Fig. 4.16), aligned with field boundaries towards the river corridors of the Pix Brook and River Ivel. The Pix Brook corridor, west of LG1 provides the most prominent area of drainage (Fig. 4.17).

Fig. 4.16: Existing drainge ditches along field boundaries

4.13 The Flood Risk Assessment found low risk of surface water flooding on LG1. To address any issues, however, (NHC Local Plan/ 2022 - SP15/para i; SP9/para c. vii), the site is divided into three proposed catchments, utilising the existing topography, draining to attenuation basins (Fig. 4.17). Refer to Flood Risk Assessment and Drainage Strategy (WSP/2023 - currently being reviewed by Stantec) for details. The attenuation basins' size will need to be tested as part of design development in next stages.

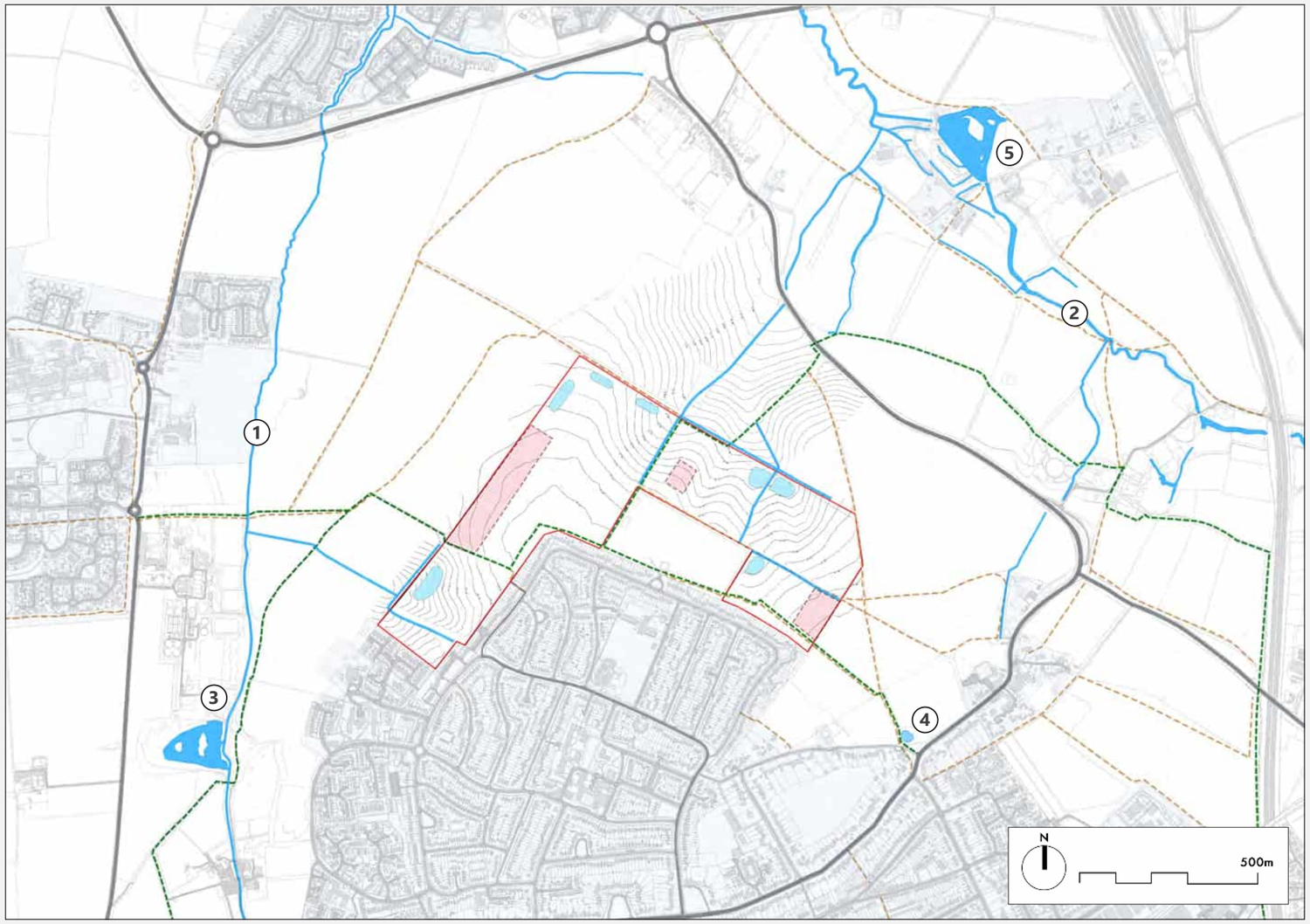


Fig. 4.17: Integration of SUDs within existing drainage pattern and archeological sensitive zones

- LG1 Site boundary
- Ditches, streams, brookes and rivers
- ① Pix Brook
- ③ Standalone Pond
- ④ Norton Pond
- Attenuation basin (indicative only, tbc)
- Archaeologically sensitive zones - no in-situ preservation is required, (Wardall Armstrong/2023).
- 80 Contour and spot heights
- Ponds and waterbodies
- ② River Ivel
- ⑤ Radwell Mill Pond
- Swales (indicative only)
- Footpaths
- Garden City Greenway

Note: The WSP Flood Risk Assessment and Drainage Strategy (2023) is currently being reviewed by Stantec.

4.14 The soils for LG1 are predominantly lime-rich loamy and clayey soils (Fig. 4.18) that may have slightly impeded drainage further reinforcing the need to integrate sustainable drainage within existing drainage pattern. Planning policy also requires that Sustainable Drainage Systems (SuDS) should be designed to drain, retain and recycle water on the site (SP15/para i; SP9/para c. vii). Therefore this should be achieved through a range of features by extending and enhancing existing drainage systems that expand habitat variety, deliver biodiversity net gain and provide additional amenity value.

4.15 To this end, there are opportunities to expose the SuDS to public view for amenity and ecological value, for example, swales aligned with streets where topography allows. There are also potentials for attenuation basins to be integrated as part of a gravity-fed SuDS providing a defensible Green Belt boundary or linear park (SP15/para j) that should be carefully planned within the existing topography; in particular to the north-west of the site where gradients are shallower; providing additional recreational, leisure and amenity value. This green boundary also offers potential to mitigate air and noise pollution influenced by road transport from Norton Road, A1(M) motorway and the A507. Any impact of the identified archaeologically sensitive areas (particularly along LG1's eastern and western periphery - Fig.4.17) on this defensible Green Belt boundary, is yet to be confirmed by the Archeological Baseline Assessment Report.

LG1's topography offers potentials for attenuation to be integrated as part of a SuDS network, providing a defensible Green Belt boundary to the site.

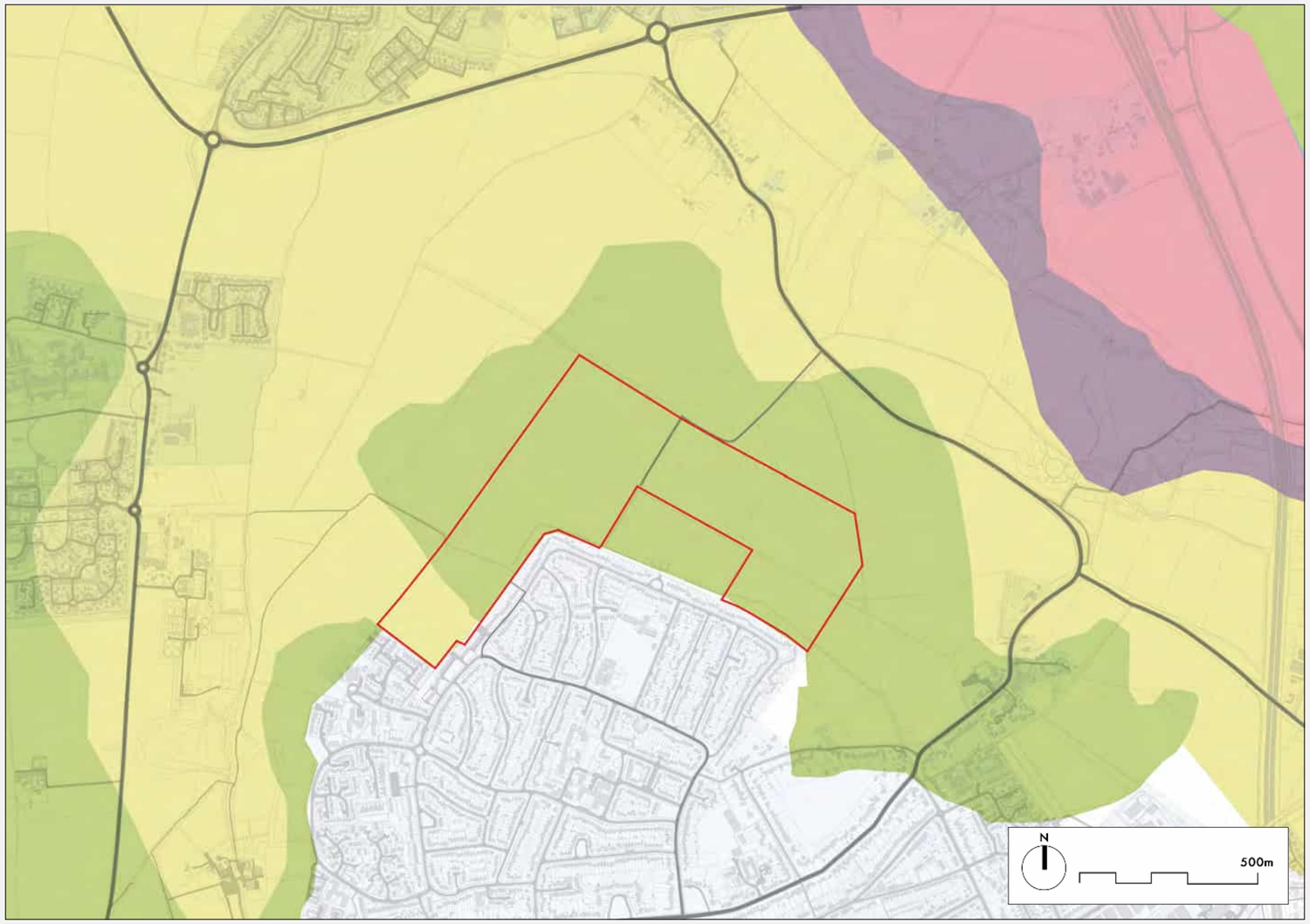


Fig. 4.18: LG1 soils context - slightly impeded drainage due to lime-rich loamy clayey soils reinforce the need to integrate SUDs within existing drainage pattern

Views and visibility

4.16 The main influences on visibility and viewpoints are the topography and location of dense hedgerows, shelterbelts and copses, articulating views that are accentuated within the north-west of the site from areas of higher ground where views are most prominent. Middle-distance and long-distance views from LG1 open up from the west (towards historic spires of Fairfield Hall and Hospital) and north (towards Stotfold, Biggleswade and Topler's Hill, although the majority of structures have limited cultural significance) and from the Garden City Greenway in particular (Fig. 4.19). Refer to the Landscape Character and Sensitivity Study (Peter Neal/2024) for further details.

4.17 Although, today there is intervisibility between the culpae of the Fairfield hospital/spire of the church and western parts of LG1 contributing to LG1's local distinctiveness, it does not contribute to the buildings' overall heritage significance. Refer to the Built Heritage Baseline Appraisal (Turleys/2023) for details.

4.18 The historic church tower of St. Nicholas in Norton is visible to the east framed by mature deciduous trees and vegetation, with reduced visual prominence when the trees are in leaf during the spring and summer months (Fig. 4.19). Due to the historic and functional link between Norton village and LG1, it has the potential to contribute to LG1's local distinctiveness. Refer to Built Heritage Baseline Appraisal (Turleys/2023).

4.19 This reinforces the need for LG1's street and built form to respect and frame views towards locally prominent landmarks, offering opportunities to create distinctive place-based townscapes (SP15/para d; SP9/para c.i). To maximise this potential, the streets must capitalise on the local high points of the site where possible so that street alignments can contribute to accentuating vistas that frame key views. However, maintaining these views would need to be carefully balanced with the role of the landscaped green peripheral boundary to LG1 in reducing

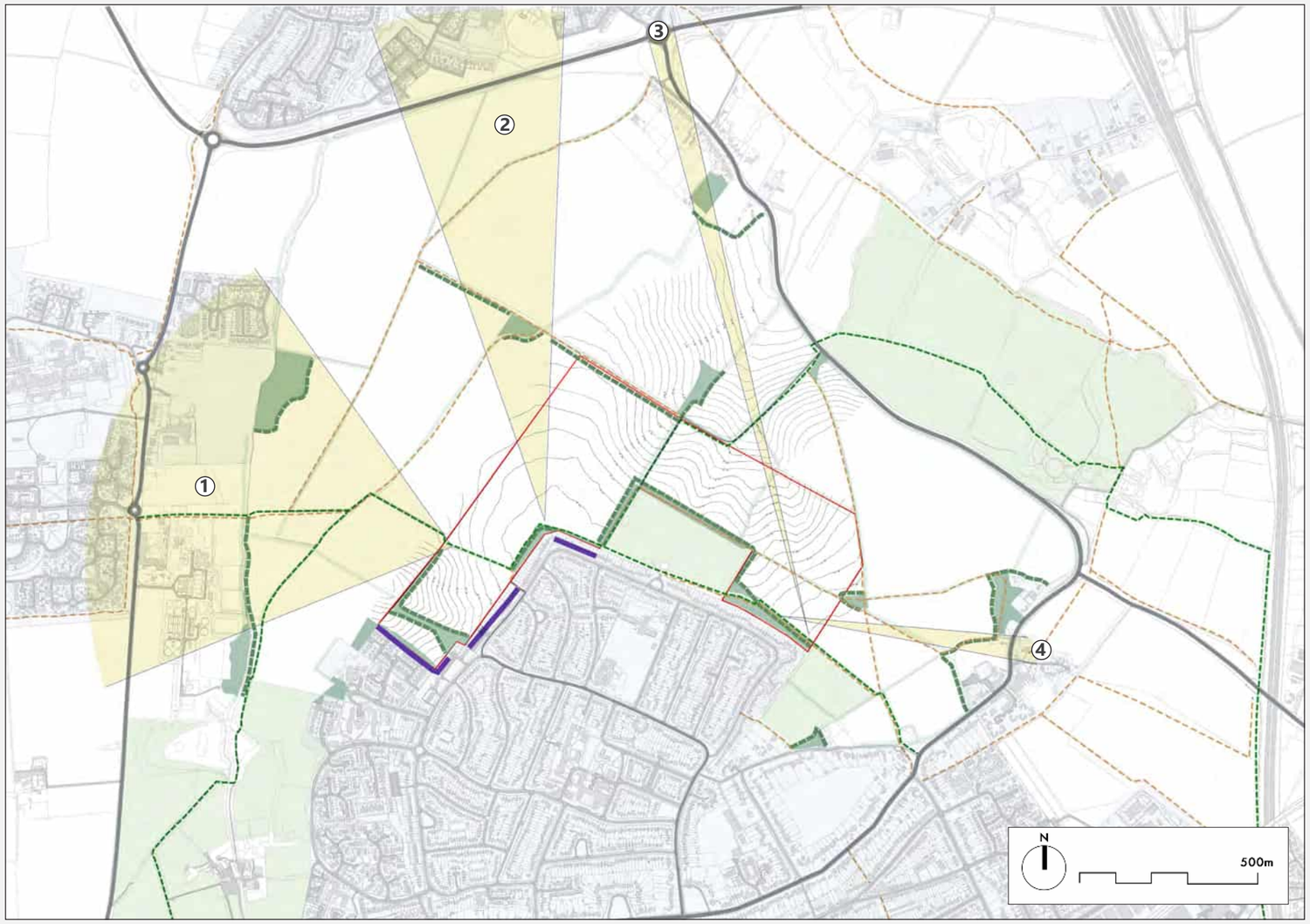


Fig. 4.19: LG1 key views and viewpoints - frame views towards locally prominent landmarks

- LG1 Site boundary
- Strong vegetated boundary
- Viewpoints to prominent surrounding landmarks from local high points
- ① Views towards Fairfield Hall spires and Deacon Hill
- ③ Views towards Topler's Hill water tower
- Garden City Greenway
- Exposed urban edge
- ② Views towards Biggleswade wind farm
- ④ Views towards St. Nicholas church tower in Norton

Note: The highlighted viewpoints focus on the visibility of key surrounding prominent landmarks from the Greenway footpath.

perceived coalescence with Fairfield Park and Stotfold. This should be assessed as part of Landscape Visual Impact Assessment (LVIA) for the site, to be undertaken separately during the masterplanning process.

LG1 masterplan should respect views towards local prominent landmarks, creating distinctive place-based townscapes.

4.20 The most prominent long-distance visual receptors towards LG1 are from the north and north-west (Fig. 4.20), although the rolling topography restricts the viewshed in some locations. Roads and footpaths to the north and west of LG1 provide a limited number of middle-distance visual receptors. The existing network of mature hedgerows, shelterbelts and woodlands within and adjacent to LG1 significantly restrict views towards LG1.

4.21 This reinforces the importance of the existing hedgerows, shelterbelts, woodland copses and mature trees in screening the LG1 development. The topography also has a direct influence on intervisibility, particularly for middle distance views towards the north west and western boundary of LG1. For further details regarding a description of each viewpoint, its landscape value and visual sensitivity, please refer to the Landscape Character and Sensitivity Study (Peter Neal/2024).

LG1's existing hedgerows, shelterbelts, woodland copses and mature trees are key in restricting views towards LG1, although landform and topography also directly influence intervisibility.

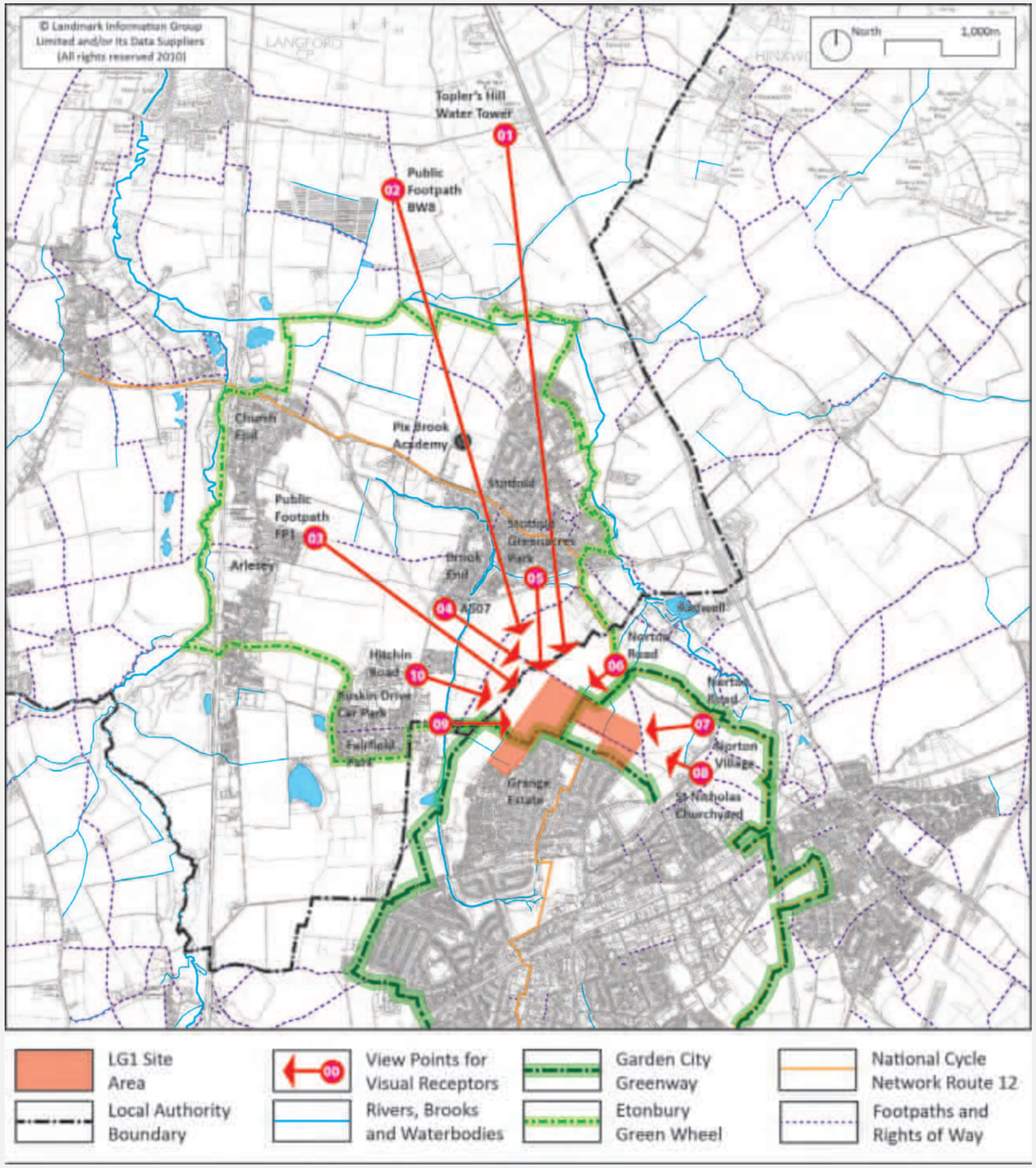


Fig. 4.20: Key Visual Receptors towards LG1
Source: Peter Neal/ ERE (2023), Landscape Character and Sensitivity Study

Footpaths, rights of way and acess to recreational facilities

4.22 LG1 is well served by local and long-distance footpaths and rights of way (Steer/2023). The Garden City Greenway provides the main structure for the footpath network crossing the west, central and eastern sections of LG1. It is an important recreational resource for the Grange Estate, Letchworth and adjacent communities. Whilst primarily a walking, running and cycling route, it also doubles up as a green corridor and ecological asset with its mature hedgerows, shelterbelts and set-aside conservation margins of adjoining fields.

4.23 Aligned with LGCHF's vision for LG1 and local planning policies (SP9/para c.ii, iii, v & viii; SP15/para b) the masterplan should seek to protect and enhance the Greenway's environmental and recreational attributes as a linear park, in particular where the Greenway and the Etonbury Green Wheel overlap within LG1. Active frontage from surrounding buildings would offer safe opportunities for greater dwell time and associated activities with 'eyes on the Greenway' (Fig. 4.21). To maintain the rural quality of the existing Greenway, an additional section of the Greenway beyond the north-west boundary of LG1 and adjacent to the historic alignment of the Stortfold Parish Boundary is proposed (SP15/para k).

The street and block layout of LG1 should protect and enhance the Greenway's environmental attributes as a linear park with active frontage, providing safe opportunities for greater dwell time and associated activities.

4.24 The existing network of Public Rights of Way (PRoWs) provide access to a variety of public parks, green

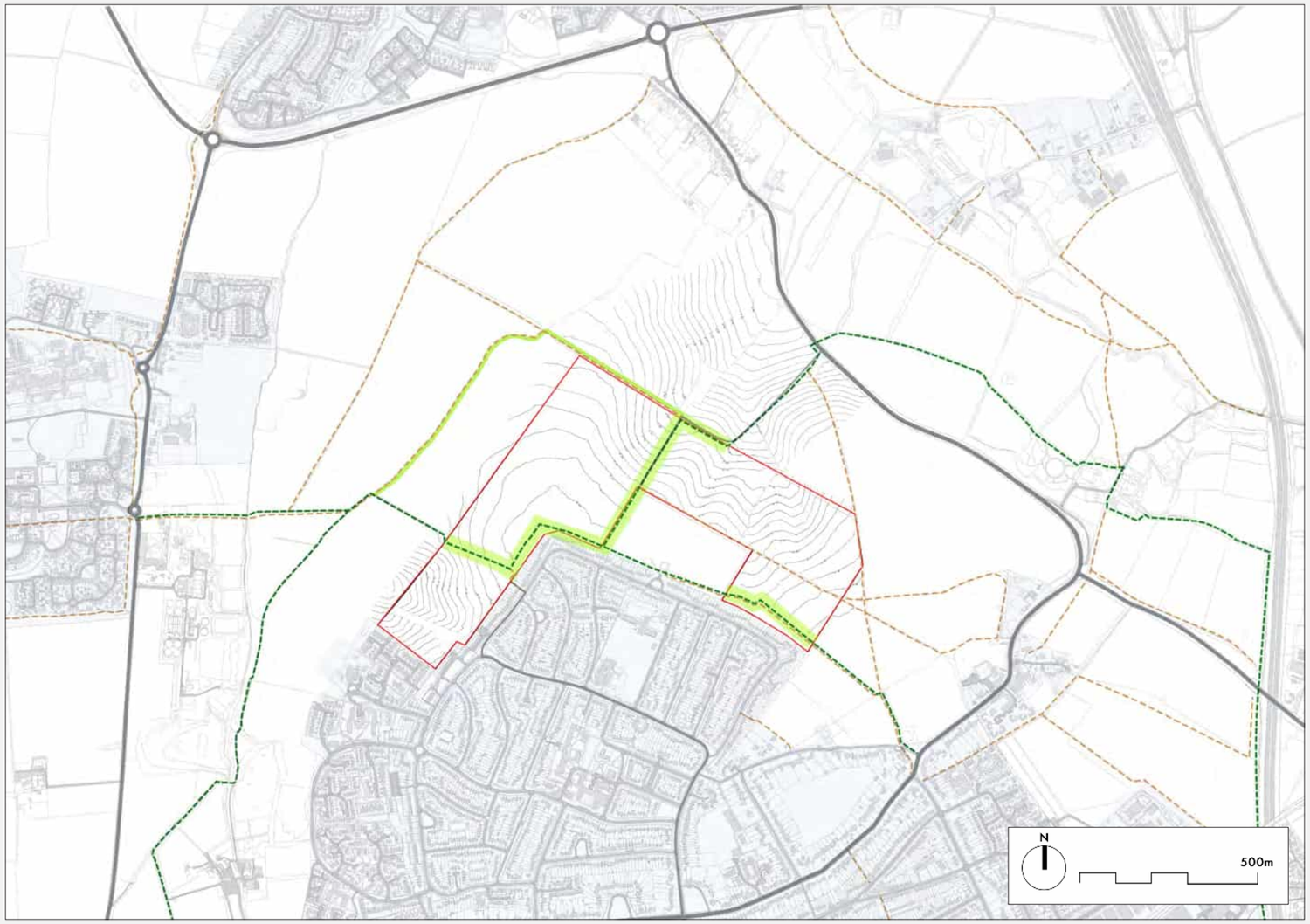


Fig. 4.21: LG1 footpath and cycle network - protect and enhance the Garden City Greenway

LG1 Site boundary

Footpath

Garden City Greenway

Potential Greenway extension along Stotfold Parish Boundary

Potential to enhance the Greenway as a linear park

spaces and recreational destinations within the catchment of LG1 that serve the local communities of Letchworth, Baldock, Fairfield Park, Arlesey and Stotfold. Refer to Transport & Accessibility Report (Steer/2023) for details.

4.25 At a strategic scale, LG1's masterplan should offer potentials for improving connections with the existing and planned walking and cycling routes (SP9/para c.ii, iii & v; SP15/para b), including the National Cycle Network (NCN) Route 12 (crossing the centre of LG1 connecting Letchworth with Stotfold); the Etonbury Green Wheel for longer distance recreational networks towards Radwell village, Stotfold, Fairfield Park; and the proposed new country park that is expected to form part of the allocated housing development of Arlesey.

4.26 Within the local catchment, recreation facilities include Standalone Farm, Norton Grange Orchard, Norton Pond and the Grange Recreation Ground. Immediately adjacent to LG1, the Recreation Ground is a popular and well-used public green space for active and passive recreation including play areas, football pitches and regular 5K Park Run that links into the surrounding footpath network. Aligned with policy (SP9/para c.viii), the landscape and public realm design as part of LG1's strategic masterplan offers opportunities to enhance not only its landscape and environmental attributes but also expand the current provision of recreational facilities, particularly for children and young adults, by incorporating additional play areas that improve social interaction and promote active lifestyles (Fig. 4.22).

LG1 masterplan should enhance the Grange Recreation Ground's environmental attributes, expand its current recreational offer and improve access to other recreational amenities.

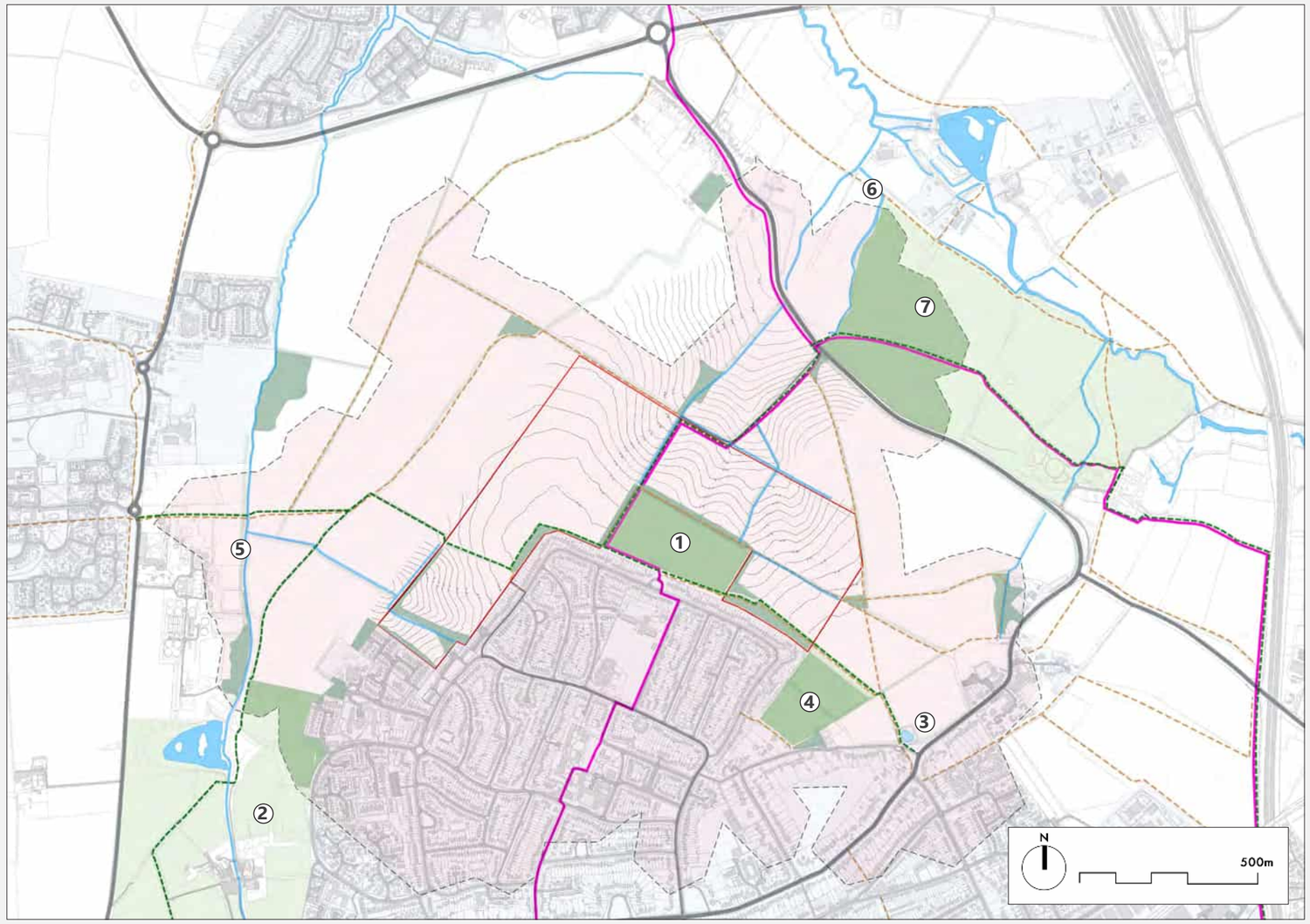


Fig. 4.22: LG1's recreational amenities with the walking catchment - Expand recreational facilities and resources

LG1 Site boundary

National Cycle Network Route 12

Garden City Greenway

10-minute walking isochrone (taken from the Transport & Accessibility Report undertaken by Steer/2022)

① Grange Recreation Ground
② Standalone Farm
③ Norton Pond
④ Norton Grange Orchard
⑤ Pix Brook
⑥ River Ivel
⑦ Radwell Meadows

Ecology and habitat

4.27 Central to LG1's current ecology and habitat are the historic field patterns that are defined by mature and well-managed hedgerows and more dense shelter belts, driving much of the character and identity of the site.

4.28 Mature hedgerows generally run alongside the footways providing a partial sense of enclosure, seasonal and wildlife interest. This is enhanced by conservation strips along field boundaries. As promoted in LGCHF's vision and planning policy (SP9/para c.vi; SP15/para e), protecting and managing the existing hedgerows will provide significant environmental and amenity resources within LG1, further enhanced where hedgerows and drainage ditches are combined. To maintain and protect the existing hedgerow structure, contributing to a net gain of hedgerows, vehicular access and infrastructure crossing points through them must be limited to a minimum. At a finer grain, to avoid this resulting in cul-de-sac dominated street layouts that discourage circulation for walking and cycling, light-touch bridges through 'holes in the hedgerows' offer the potential for a permeable street layout in ways that will minimise disruption of hedgerows' ecological functions (Fig. 4.23) (SP15/para a). Streets alignments should also enable easy maintenance access. This will require further scrutiny in technical detail in the next stages of masterplan development.

Minimal vehicular access points through hedgerows together with light-touch pedestrian-only bridges through 'holes in the hedgerows' offer potentials for a permeable street network in ways that will minimise disruption of the its ecological functions.

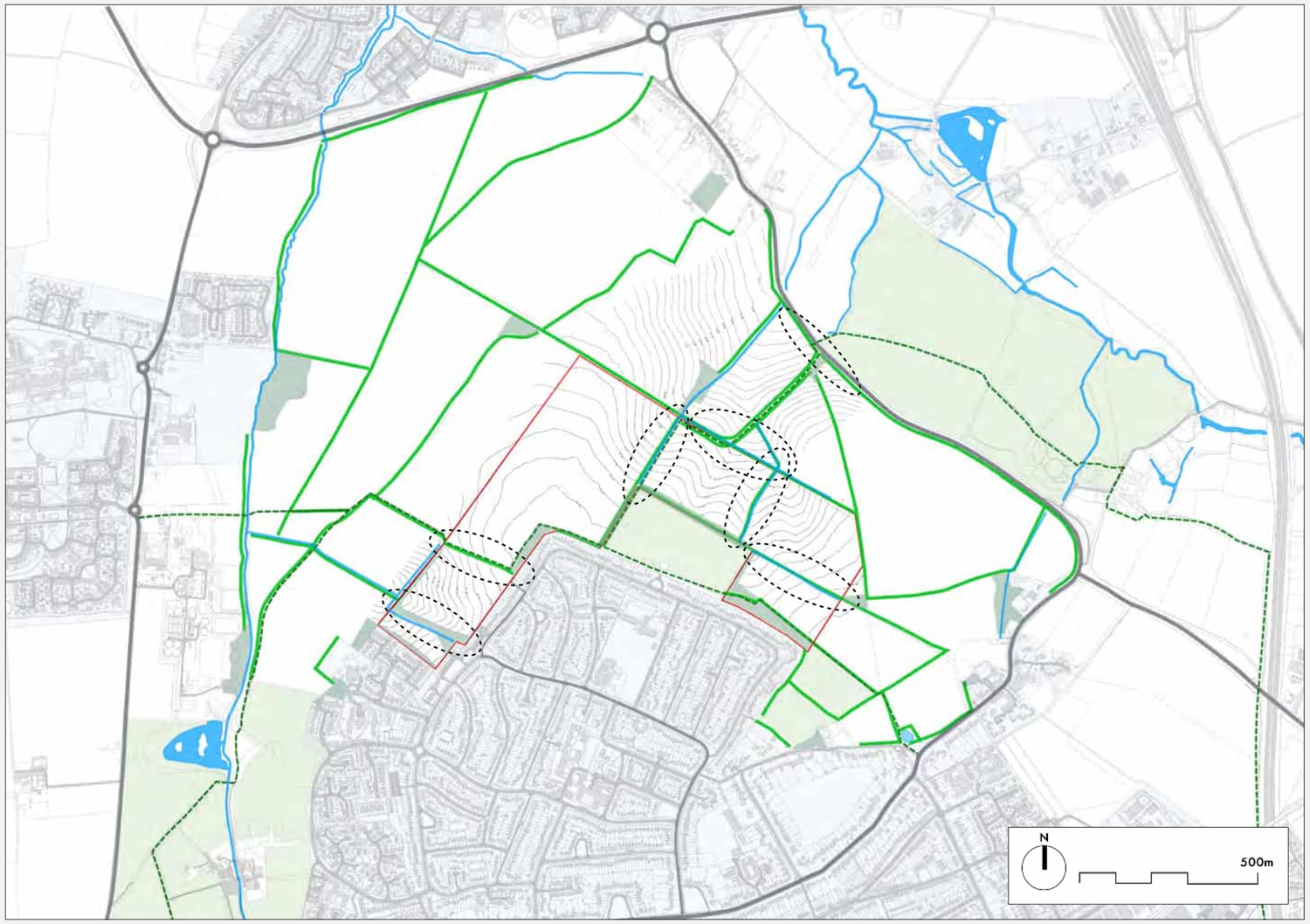


Fig. 4.23: LG1 ecology and habitat - protect and enhance the hedgerows

LG1 Site boundary

Existing hedgerow field boundaries

Careful scrutiny on new access points required

Woodland and shelterbelts

Drainage ditches

4.29 The historic plans indicate that the traditional pattern of field boundaries generally remained intact through the first half of the 20th Century and much of this pattern continues to remain the same to the present day. Some of the field boundaries that fall within LG1 are predominately marked by mature hedgerows with some incorporating drainage ditches and mature trees. Some field boundaries to the north and west also include an irregular pattern of woodland copses and shelter belts.

4.30 An audit of the hedgerows, shelterbelts and woodlands within LG1 is included in the Landscape Character and Sensitivity Study (Fig. 4.24). The ecological and historical characteristics and qualities are assessed in further detail in the Hedgerow Assessment Report (TEP/2023), the Preliminary Ecological Assessment (TEP/2023), Archaeological Assessment (Wardall Armstrong/2023) and the Built Heritage Baseline Appraisal (Turleys/2023). Important hedgerows are also protected by the Hedgerow Regulations 1997[13].

4.31 Cumulatively, this provides a means to value hedgerows by taking account of a variety of historical and environmental characteristics including maturity and structure which affects their functional value. A table collating the heritage and ecological appraisals of the field boundaries and hedgerows is included in the Landscape Character and Sensitivity Study (Peter Neal/2024). Based on the current and ongoing assessment, Hedgerows H03, H04, H05, H07, H11, H15 and H16 are considered important with regard to the Hedgerow Regulation 1997.

4.32 Further technical scrutiny regarding location of vehicular and pedestrian access points through hedgerows would need to take this assessment into account.

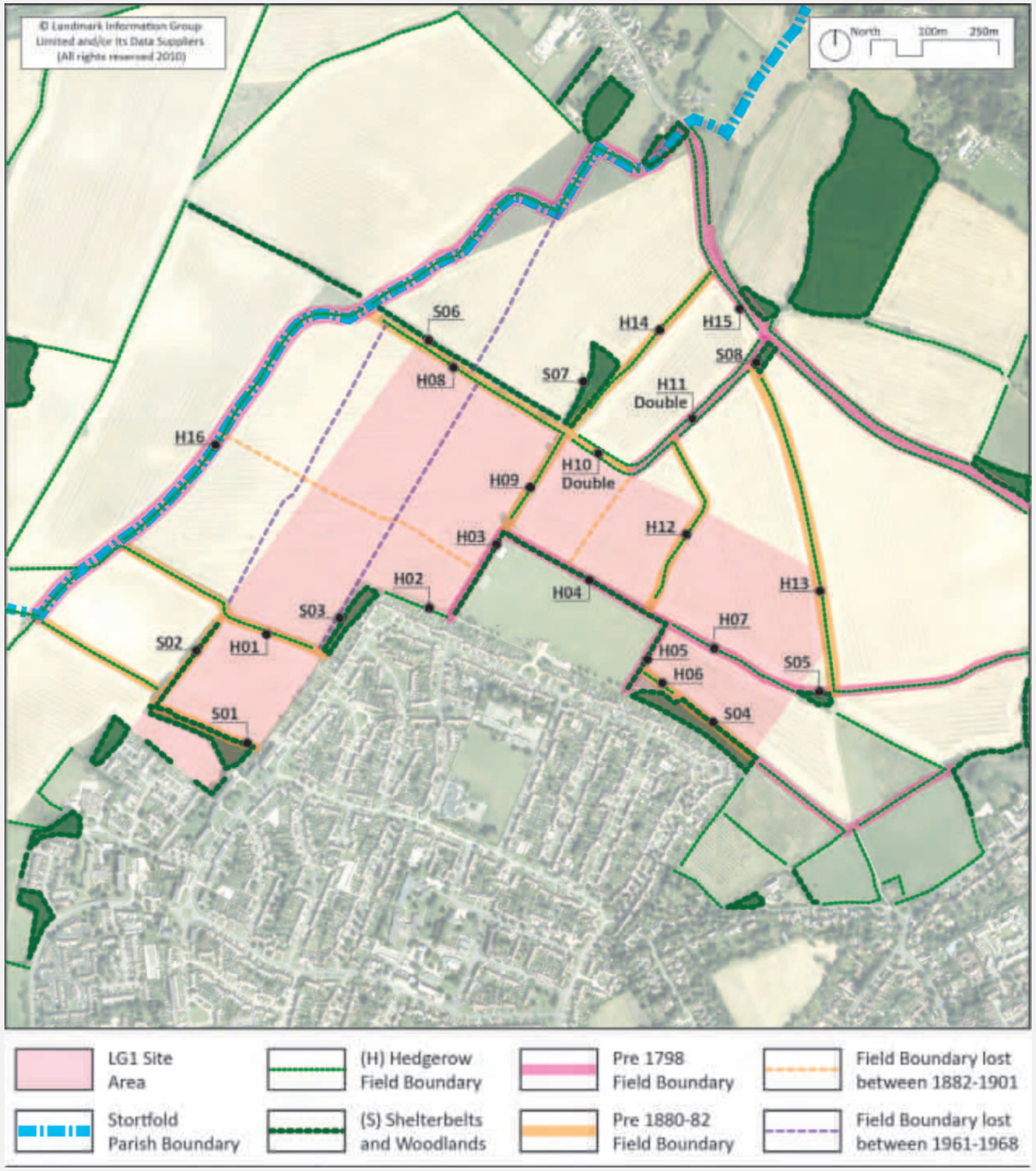


Fig. 4.24: Audit of Hedgerows and Shelterbelts
Source: Peter Neal/2024, Landscape Character and Sensitivity Study.

References:

13. The Hedgerow Regulations 1997 (SI 1997/1167) https://www.legislation.gov.uk/uksi/1997/1160/

4.33 A small number of deciduous woodland copses and thickets of scrub that generally fall at the intersection of hedgerows and footpaths, act as shelterbelts for LG1. Where located along the northern and western boundaries of Grange Estate, they provide areas of dense screening to the adjacent housing. Having matured over time, they also offer ecological value. Therefore, LG1 masterplan should enable the retention and strengthening of these landscape buffers (SP9/para c.vi) particularly along the Western boundary of the Grange Estate where the existing housing development is more prominent (Fig. 4.25).

4.34 Existing landscape buffers can also be strengthened around the site's outer peripheral boundaries, creating a long-term, defensible Green Belt boundary, particularly to the north-west and east (SP15, para j). This offers potential to mitigate air and noise pollution influenced by surrounding road transport such as Norton Road, A1(M) motorway, A507, and from traffic using the local roads. Refer to the Air Quality Constraints Assessment[14] and Initial Site Noise Risk and Impact Assessment[15] for details. The landscape treatment of this new Green Belt boundary might be constrained in some areas due to limitations imposed by the site's archeology and the existing utilities pipelines (Fig. 4.25). Refer to the Archaeology Assessment (Wardall Armstrong/2023) and Utilities Statement (WSP/2023) for details.

4.35 The future layout and block structure must also be designed to allow for access to ensure future management and maintenance of these boundary landscapes.

LG1's urban structure should strengthen existing landscape buffers, and support the creation of a new long-term peripheral defensible Green Belt boundary.

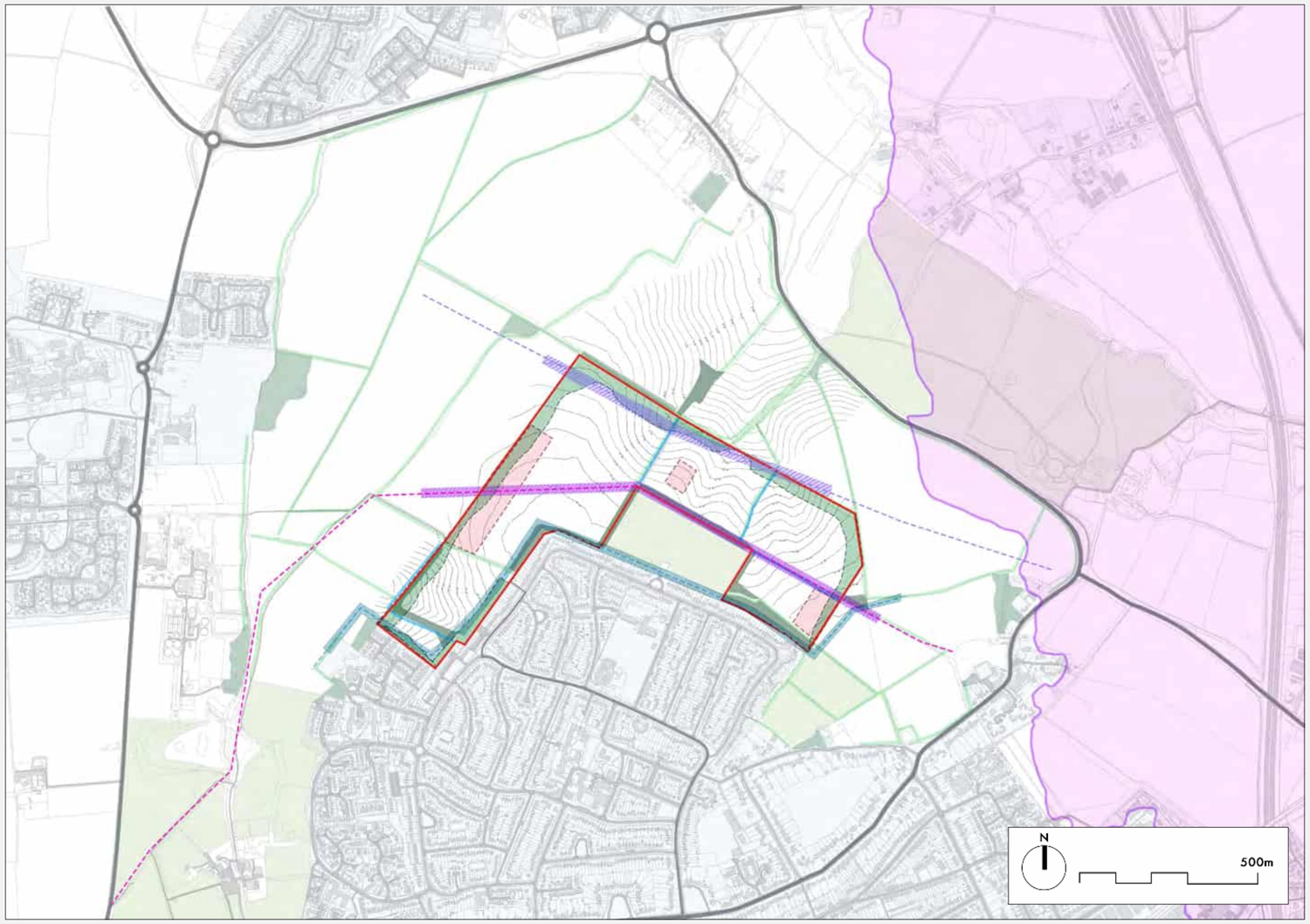


Fig. 4.25: LG1 ecology and habitat - strengthen existing landscape buffers

- LG1 Site boundary
- Potential for new vegetated buffers
- Overhead powerline
- Gas pipeline
- Noise impact
- Existing vegetated buffers: woodlands and shelter belts
- Archaeologically sensitive zones (indicative only, impact on development tbc)
- Overhead powerline exclusion zone
- Gas pipeline exclusion zone
- Drainage ditches

Note: The potential new vegetated buffers focus on the woodlands and shelter belts along and within the boundaries of LG1. The archaeologically sensitive zones are not significant to require in-situ preservation. UK Power have confirmed that the overhead powerline can be buried, and Cadent have confirmed the feasibility of re-locating the gas pipeline; both subject to additional cost, if desireable, as part of the development.

References:

14. WSP (2022) Air Quality Constraints Assessment.

15. WSP (2022) Initial Site Noise Risk and Impact Assessment

4.36 LG1 also has a small number of distinctive and prominent mature trees that are located within existing hedgerows. The northern boundary has the most densely wooded edge, including an irregular line of distinctive mature trees (Fig. 4.26). These are identified in the Arboriculture Survey (TEP/2023), although they are not afforded the protection of either Conservation status or a Tree Protection Order.

4.37 Following LGCHF's adopted vision and planning policy (SP15/para e), LG1's masterplan must wherever possible protect and manage existing mature trees of prominent character and stature (Fig. 4.27). Future streets and built form offer potential to frame and accentuate such trees as features within the urban townscape.

LG1's street and built form must wherever possible not only retain and protect, but also frame and accentuate distinctive trees of prominent character and stature.

Fig. 4.26: Mature oaks along northern boundary

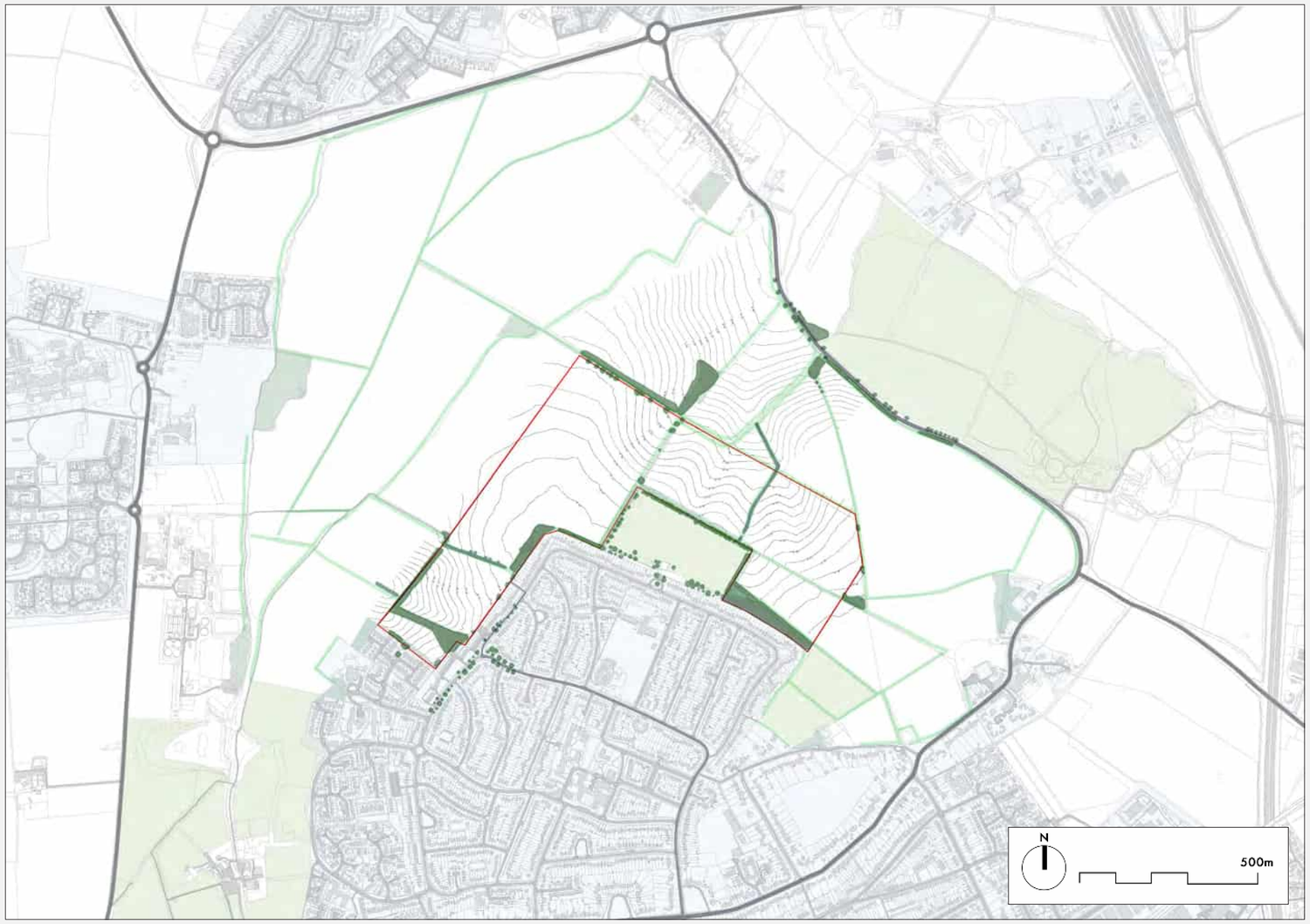


Fig. 4.27: LG1 ecology and habitat - protect and manage existing trees

LG1 Site boundary

Existing mature trees

Note: The tree data is taken from the Arboriculture Survey (TEP/August 2023)
The status of each tree from Category A-C is described in the tree survey.

4.38 Taken together, LG1's green infrastructure should seek to strengthen ecological networks and increase habitat diversity (SP9/para c.vi; SP15/para e & j), by maintaining and extending connectivity with hedgerows, street trees, shelterbelts and woodland copses (Fig. 4.28); in particular with Pix Brook's strong vegetated corridor, the adjacent Grange Estate and to north of LG1 towards Radwell Meadows. This would enable the creation of local nature recovery networks connected into the wider countryside whilst mitigating air and noise pollution.

4.39 Swales, wetlands and areas of open water forming part of the SuDS (SP9/para c. vii; SP15/para i) integrated within LG1's streets and peripheral landscape buffer offers potential for strengthening the diversity of habitats. This can be further enhanced by the provision of grassland and wildflower meadows integrated within the peripheral Green Belt boundary, reflecting the prevailing National and North Hertfordshire landscape character profiles and contributing to a distinctive place-based landscape character. LGCHF's commitment regarding significant additional tree-planting on LG1 with a minimum of 2000 new trees would also substantially contribute to this.

4.40 To maximise impact over time, this would need to be supplemented by a programme of landscape and environmental improvements to the Grange estate to assist with the integration between existing and new areas.

LG1's green and blue networks should enable the creation of local nature recovery networks connected into the wider surroundings, contributing to a distinctive place-based character.

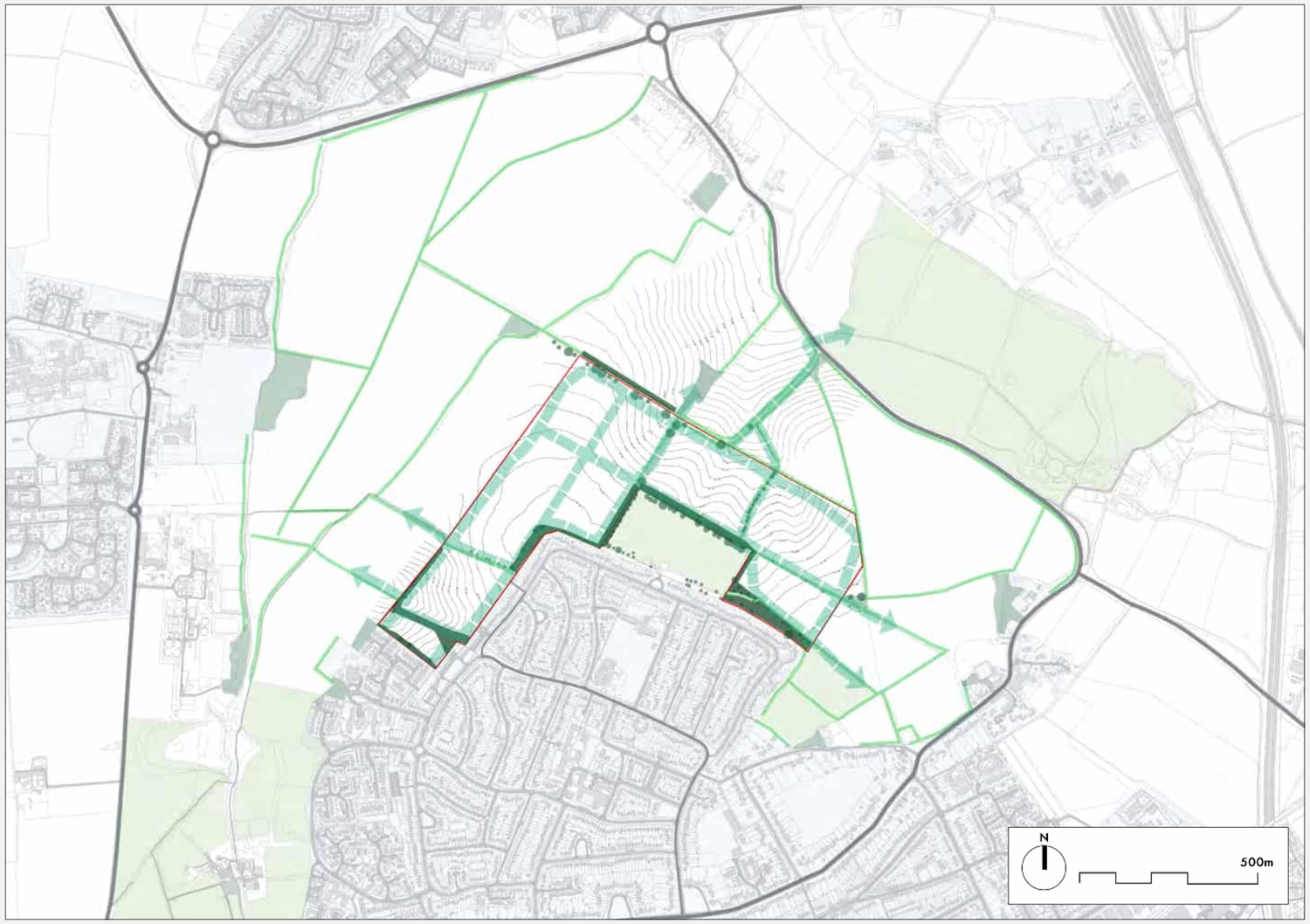


Fig. 4.28: LG1 ecology and habitat - Strengthen ecological networks and increase habitat diversity

LG1 Site boundary

Existing hedgerow field boundaries

Key green and blue links to strengthen ecological networks

Existing trees

Existing vegetated buffers: woodlands and shelter belts

Conclusion

4.41 In conclusion, the urban design and townscape implications of LG1's local landscape and environmental characteristics are summarised below. This should be read in conjunction with the LG1 Landscape Recommendations and Framework Plan included in the Landscape Character and Sensitivity Study (p.52-56):

- **Implication 1:** LG1's topography offers potentials for swales, attenuation and detention basins to be integrated as part a gravity-fed SuDS network, providing a defensible Green Belt boundary to the site and creating landscape-integrated streets.

- **Implication 2:** LG1's streets, public open spaces and buildings should respect and frame views towards locally prominent landmarks, creating distinctive place-based townscapes.

- **Implication 3:** The layout of LG1 should protect and enhance the Greenway's environmental attributes as a linear park with active frontage, in particular where the Letchworth Greenway and the Etonbury Green Wheel overlap within LG1, providing opportunities for greater dwell activities.

- **Implication 4:** To maintain the rural quality of the existing Greenway, LG1's network of footpaths and pathways should provide an additional section of the Greenway beyond the north-west boundary of LG1 and adjacent to the historic alignment of the Stotfold Parish Boundary.

- **Implication 5:** LG1 masterplan should enhance the Grange Recreation Ground's environmental attributes, expand its current recreational offer and improve access to other recreational amenities.

- **Implication 6:** LG1's street layout should minimise vehicular access points through hedgerows. Light-touch pedestrian-only bridges through 'holes in the hedgerows' offer potentials for a permeable street network that minimises disruption to the hedgerows' ecological functions. The local streets alignments should also enable easy maintenance and management of the hedgerows.

- **Implication 7:** LG1's street and block structure should enable the retention and strengthening of existing landscape buffers; whilst allowing access to ensure future management of these boundary landscapes.

- **Implication 8:** LG1's street and built form must wherever possible allow for the retention and protection of distinctive trees of prominent character and stature.

- **Implication 9:** LG1's green and blue networks should contribute towards a net gain of hedgerows and integration of LGCHF's commitment of 2000 new trees on LG1. It should enable the creation of local nature recovery networks connected into the wider surroundings, contributing to a distinctive place-based character.

4.42 Cumulatively, the urban design and townscape implications of LG1's landscape and environmental characteristics set a foundation for a modern interpretation of the original Garden City principles as part of the strategic masterplan development.

4.43 They work towards achieving the target of atleast 10% biodiversity net gain on the site, through a comprehensive, productive and climate-resilient green infrastructure framework with structural planting, a hierarchy of formal and informal open spaces and habitats that create a sense of place, but also, respond positively to the features of the site itself and to its surrounding context as part of a cohesive and integrated planned approach.

Cumulatively, the urban design and townscape implications of LG1's landscape and environmental characteristics set a foundation for a modern interpretation of the original Garden City principles as part of the strategic masterplan development.

5

Settlement type and form

5. Settlement type and form

Introduction

The purpose of this analysis is to draw out the urban design and townscape implications of the local settlement type and form characteristics to inform LG1's strategic masterplan.

5.1 The purpose of this analysis is to draw out the urban design and townscape implications of the local settlement type and form to inform LG1's strategic masterplan; using evidence from the green infrastructure, public space morphologies and built forms resulting from recent and ongoing developments in LG1's immediate and wider context (Fig 5.1, 5.2).

5.2 It will be based on the analysis and recommendations outlined in other relevant baseline assessments undertaken as part of this stage of works; and in accordance with LGCHF's adopted vision, local plan policies and the relevant characteristics of well-designed places supported through the National Design Guide.

5.3 To this end, the key objectives of this section are:

- To undertake a morphological assessment of the urban structure and form of surrounding settlements including Stotfold, Fairfield, Arlesey, Baldock and Letchworth. The assessment will focus on seeking both positive and negative lessons regarding countryside integration, facilitating multimodal access to uses and facilities, and achieving legible and active street scenes.

- To use the results to draw out the urban design and townscape implications for LG1's urban structure and form.

Methodology

5.4 The methodology of this study is aligned with the scope of study as agreed with NHDC and includes site visits and desk-based research to enable the below:

- Morphological assessment of the urban structure and form of surrounding settlements including Stotfold, Fairfield, Arlesey, Baldock and Letchworth.

- Review of relevant planning policies, national design guidance and LGCHF's adopted vision that inform the urban structure and form for LG1's strategic masterplan (refer Part 2 of this report).

- Review of relevant consultant baseline assessments including the Landscape Character and Sensitivity Study, Transport & Accessibility Report, Air Quality Constraints Statement, Initial Noise Risk and Impact Assessment, Utilities Assessment, Built Heritage Appraisal Report, Archeological Assessment, and Retail & Housing Needs Assessments.

5.5 Note: Since the methodology draws from various relevant baseline studies and assessments, this analysis should be read in conjunction with those reports. These have been referenced appropriately.

Fig. 5.1: Open views west to Fairfield Park

Fig. 5.2: LG1 field edge adjacent to Grange Estate

Surrounding settlements to LG1

5.6 The wider context of LG1 includes an established and prominent pattern of settlements, borne from the alignment of historic routes with the underlying landscape, and further shaped over time by the delivery of infrastructure such as the A1(M) and A507. This includes the settlements of Stotfold, Fairfield and Arlesey located within Central Bedfordshire; and Baldock and Letchworth (including the village of Norton) within North Hertfordshire (Fig. 5.3).

5.7 The urban morphology of these surrounding settlements vary from being linear to radial settlements, encompassing a variety of urban and rural qualities. A number of new housing development sites will further shape their urban form, structure and townscape character over time.

5.8 Further analysis on each of the surrounding settlements' urban structure and form, is outlined in the following sections, focusing on three key aspects that will be relevant for the strategic masterplanning of LG1; namely, countryside integration, multimodal access to uses and facilities, and legible and active street scenes.

Surrounding settlements to LG1 encompass a variety of urban and rural qualities, with a number of new housing development sites in the pipeline that will further shape the urban form, structure and townscape character of LG1's wider context.

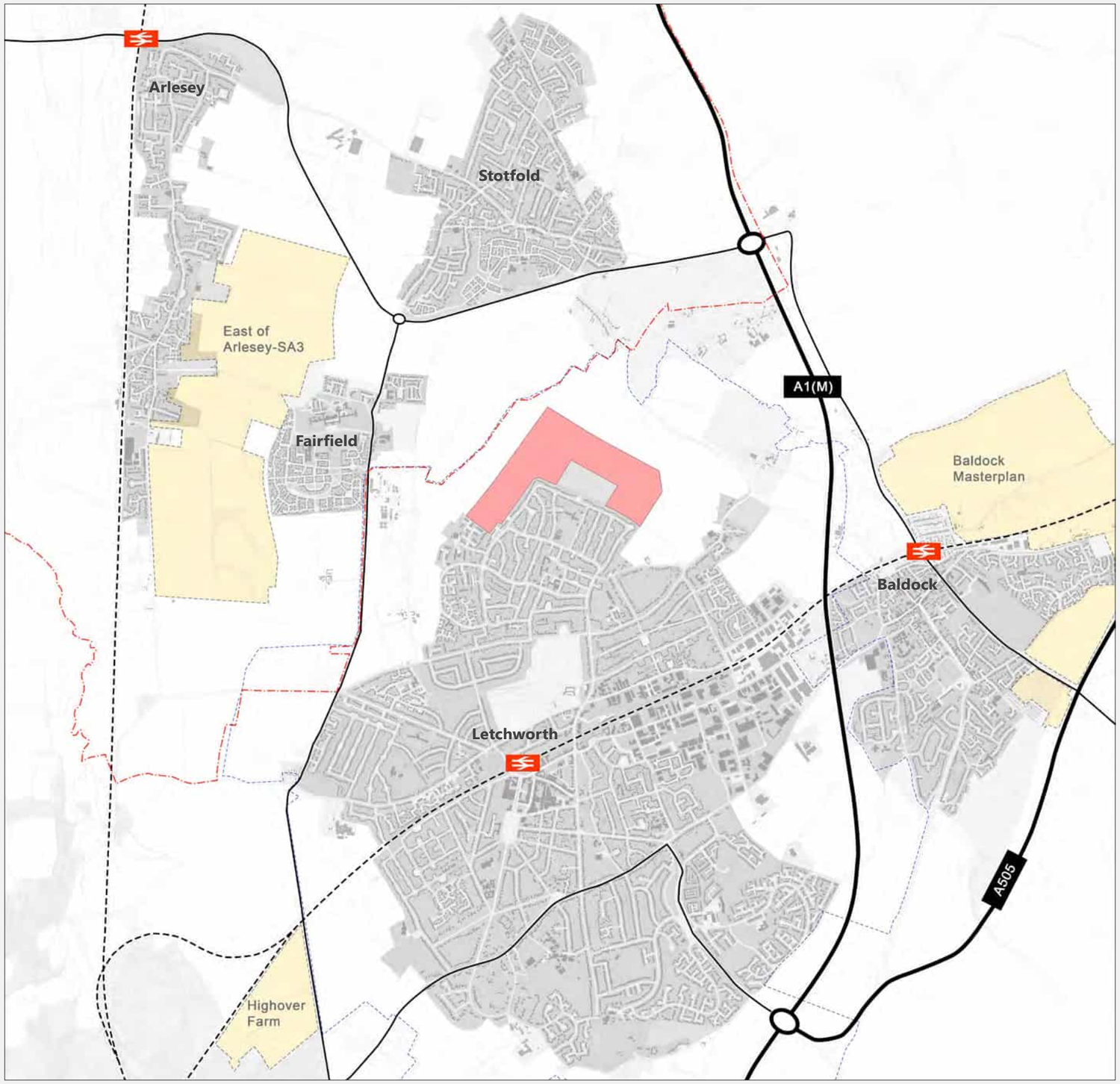


Fig. 5.3: Surrounding settlements to LG1 - present day urban structure and form

Stotfold

5.9 The Central Bedfordshire town of Stotfold, historically an agricultural village, has a population of 8572 with a density of 5110/km2, and lies close to the Hertfordshire border[1]. Stotfold's key geographical feature is the River Ivel, which flows to its east. A smaller watercourse, the Pix Brook, flows through the western part of the town[2].

Countryside integration

5.10 Stotfold's perimeter is currently surrounded by farmland and other green open spaces. There are good walking links to the countryside, especially to the East (Fig. 5.4). Stotfold's conservation group, Teasel[2], have promoted various walks in and around Stotfold, but several pedestrian links to the countryside run unsurveilled between back gardens, seeming unsafe particularly after dark (Fig. 5.5, 5.6). However, new development extensions have a more positive interface with the fronts of buildings facing the countryside (Fig. 5.7). Overall, the local community increasingly fears coalescence with other nearby settlements[3].

5.11 The Stotfold Community Plan[3] suggests that regular flooding from the River Ivel, and particularly from Pix Brook, present major issues; though the Pix Brook bioswale serves as a remediation system to absorb and slow runoff flowing further north. It also identifies the need to mitigate downstream flooding risks from the emerging sites, which may impact quality of countryside access,[4] and would need to be addressed as part of the development process.

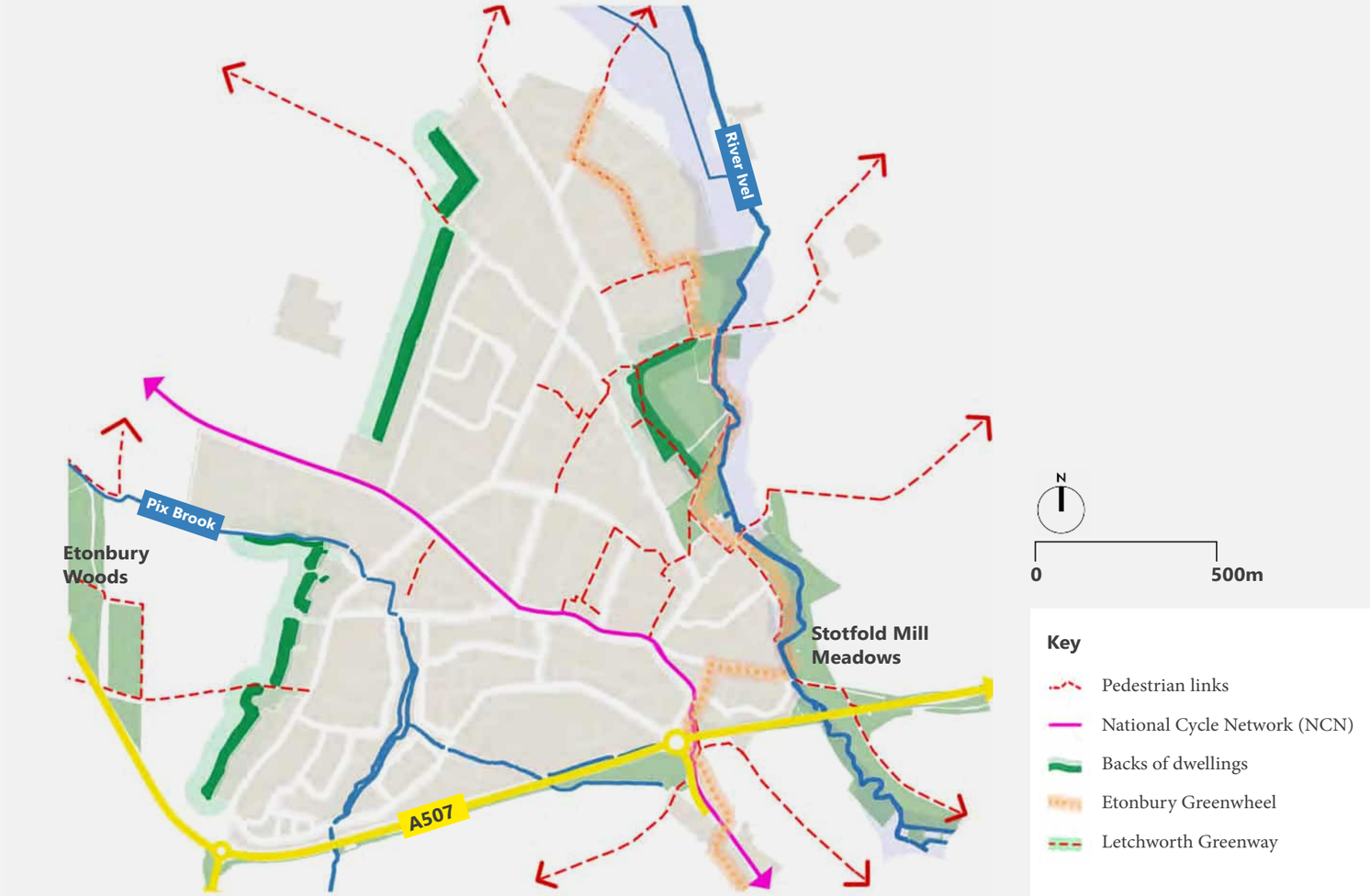


Fig. 5.4: Stotfold's countryside interface and integration

Fig. 5.5: Narrows footpaths to countryside with inactive edges

Fig. 5.6: Backs of building facing the countryside

Fig. 5.7: Fronts of buildings facing countryside

References:

1. https://www.citypopulation.de/en/uk/eastofengland/central_bedfordshire/E34003657__stotfold/ [accessed 15.09.22]

2. http://www.stotfoldtowncouncil.gov.uk/_UserFiles/Files/Town%20Plan/Stotfold%20Town%20Plan%202009.pdf [accessed 15.09.22]

3, 4. https://www.centralbedfordshire.gov.uk/stotfold-community-plan-pt2_tcm3-24031.pdf [accessed 15.09.22]

Multimodal access to uses and facilities

5.12 A bus route connects Stotfold to neighbouring towns and villages. Most community amenities, commercial, retail and public green open spaces within Stotfold are located along the main streets with bus stops facilitating accessibility (Fig. 5.8, 5.9, 5.10). But, the lack of an evening service reduces both employment and leisure opportunities. A more regular and accessible bus service, particularly with links to train stations, hospitals and centres of employment, would be required to address this situation[5].

5.13 Strategic cycling infrastructure such as the National Cycle Route (NCN12) currently connects Stotfold to Arlesey train station, Letchworth and Baldock via Norton. The Etonbury Green Wheel expands this system; further improving the opportunities for long-distance walking and cycling.

5.14 At the neighbourhood scale, the earlier areas of Stotfold were developed with large blocks, and with many cul-de-sacs. These force pedestrians and cyclists to follow indirect routes; reducing the multimodal accessibility of Stotfold's limited range of communal facilities, and further encouraging car dependency. More recent developments, however, have smaller block sizes, with better-connected street layouts that support multimodal movement by offering far better support for pedestrian and cycle access.

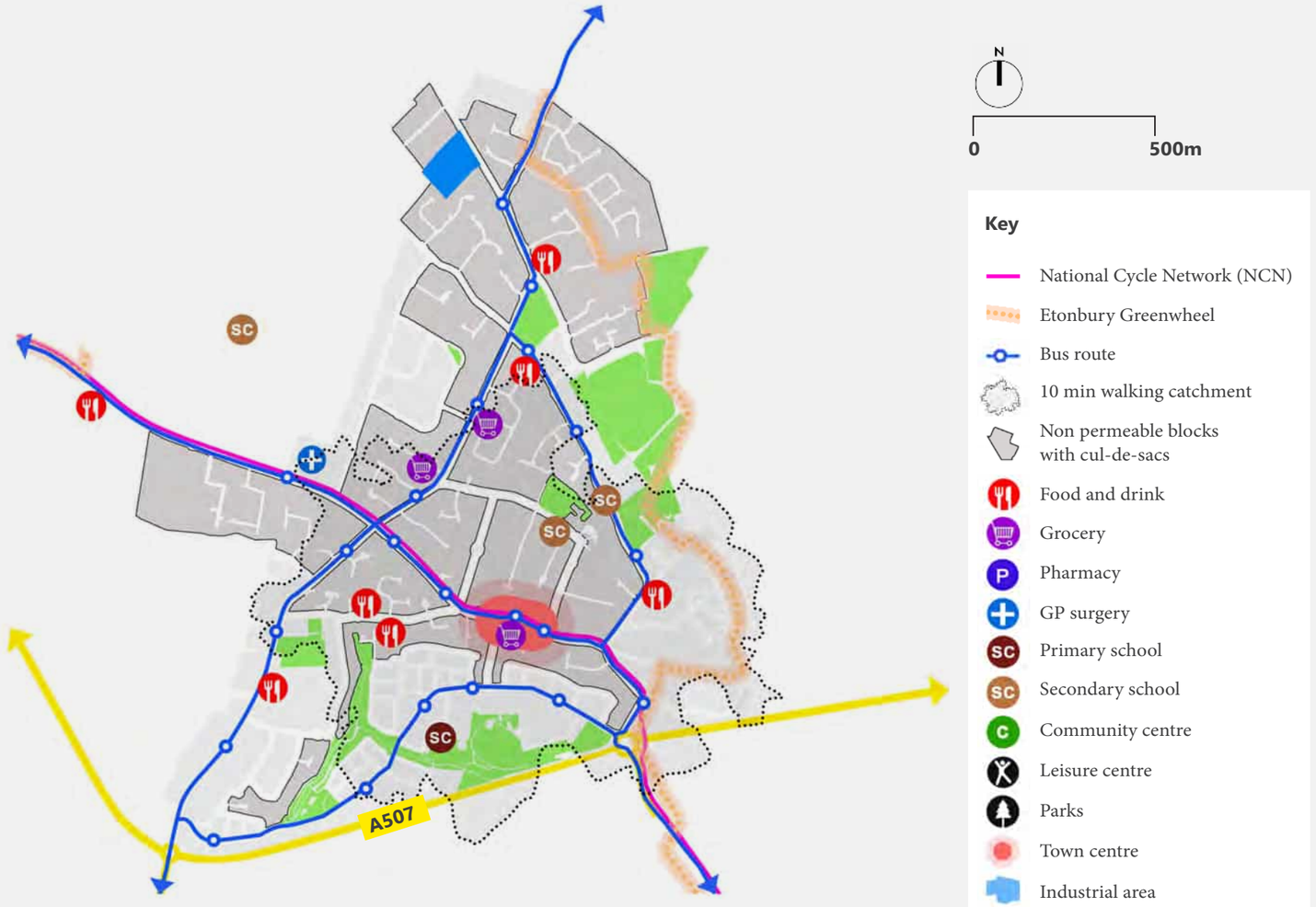


Fig. 5.8: Stotfold's multimodal access to uses and facilities

Fig. 5.9: Community facilities located along main streets

Fig. 5.10: Bus stops in close proximity to town centre amenities

References:

5. https://www.centralbedfordshire.gov.uk/stotfold-community-plan-pt2_tcm3-24031.pdf [accessed 15.09.22]

Legible and active street scene

5.15 A number of long straight streets create opportunities for townscape vistas, whilst pubs and other amenities at key nodes form potential landmarks, which contribute to legibility (Fig. 5.11).

5.16 Major public open spaces are mostly fronted by the active edges of buildings (Fig. 5.12), potentially making them safe and attractive to use. This potential, however, is all-too-often dissipated through detailed layout and design. Parking yards in front of the shops and amenities along the High Street obscure their entrances, whilst the Co-op, for example, needs to "front" the High Street: currently it looks always closed[6] (Fig. 5.13).

5.17 Although civic amenities are not always located on prominent nodal and/or landmark locations, there are examples where key civic buildings have been placed to terminate key street vistas e.g. Stotfold Town Council - Greenacre Centre (Fig. 5.14). However, it is arguable whether the building's architecture could further have enhanced the landmark potential of the location.

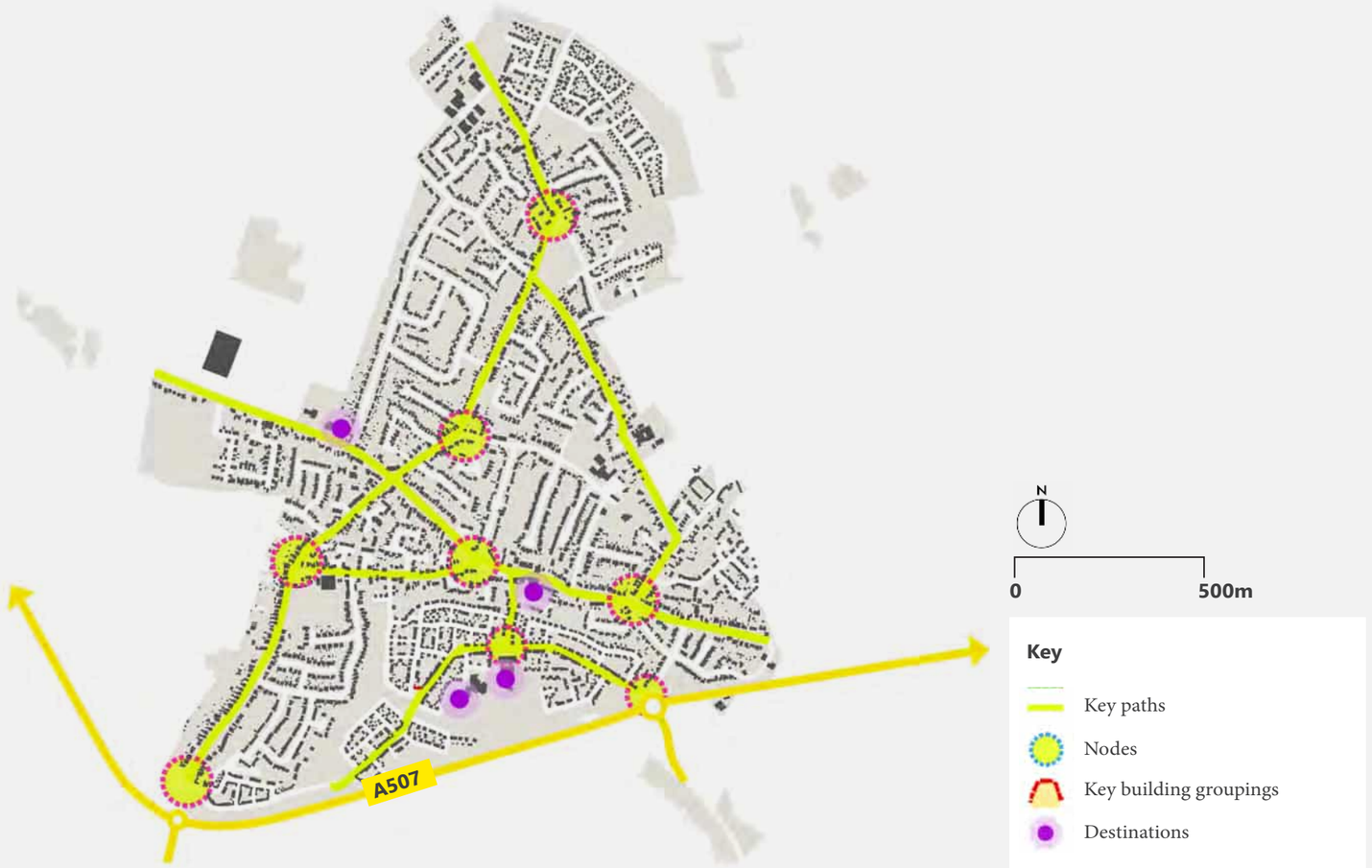


Fig. 5.11: Stotfold's legibility analysis

Fig. 5.12: The Green Play Park activated with buildings fronts

Fig. 5.13: Local co-op store with dead frontage to the street

Fig. 5.14: Key civic buildings such the Stotfold Council - Greenacre Centre terminates a street vista

References:

6. https://www.centralbedfordshire.gov.uk/stotfold-community-plan-pt2_tcm3-24031.pdf [accessed 15.09.22]

Fairfield

5.18 The Central Bedfordshire village of Fairfield has a current population of 4140, with a density of 1558/km2. Fairfield has been developed around the historic core of the grade 2 listed Fairfield Park hospital, converted to residential use with additional housing, employment, shops, primary school and community facilities in the 2000s[7], and now supplemented by the more recent developments of Fairfield Gardens and Fairfield Meadows.

Countryside integration

5.19 Fairfield is separated from neighbouring settlements by farmland, and by two large lakes created from historic quarries. A system of attenuation ponds bordering Pix Brook provides opportunities for biodiversity net gain, and helps to create a clear perceptual boundary between Fairfield and Letchworth.

5.20 Similarly, a dense belt of vegetation around the Fairfield Park development helps to prevent any perception of coalescence with nearby settlements (Fig. 5.15). Existing footpaths from the countryside connect directly into well-surveilled streets within Fairfield itself (Fig. 5.16, 5.17).

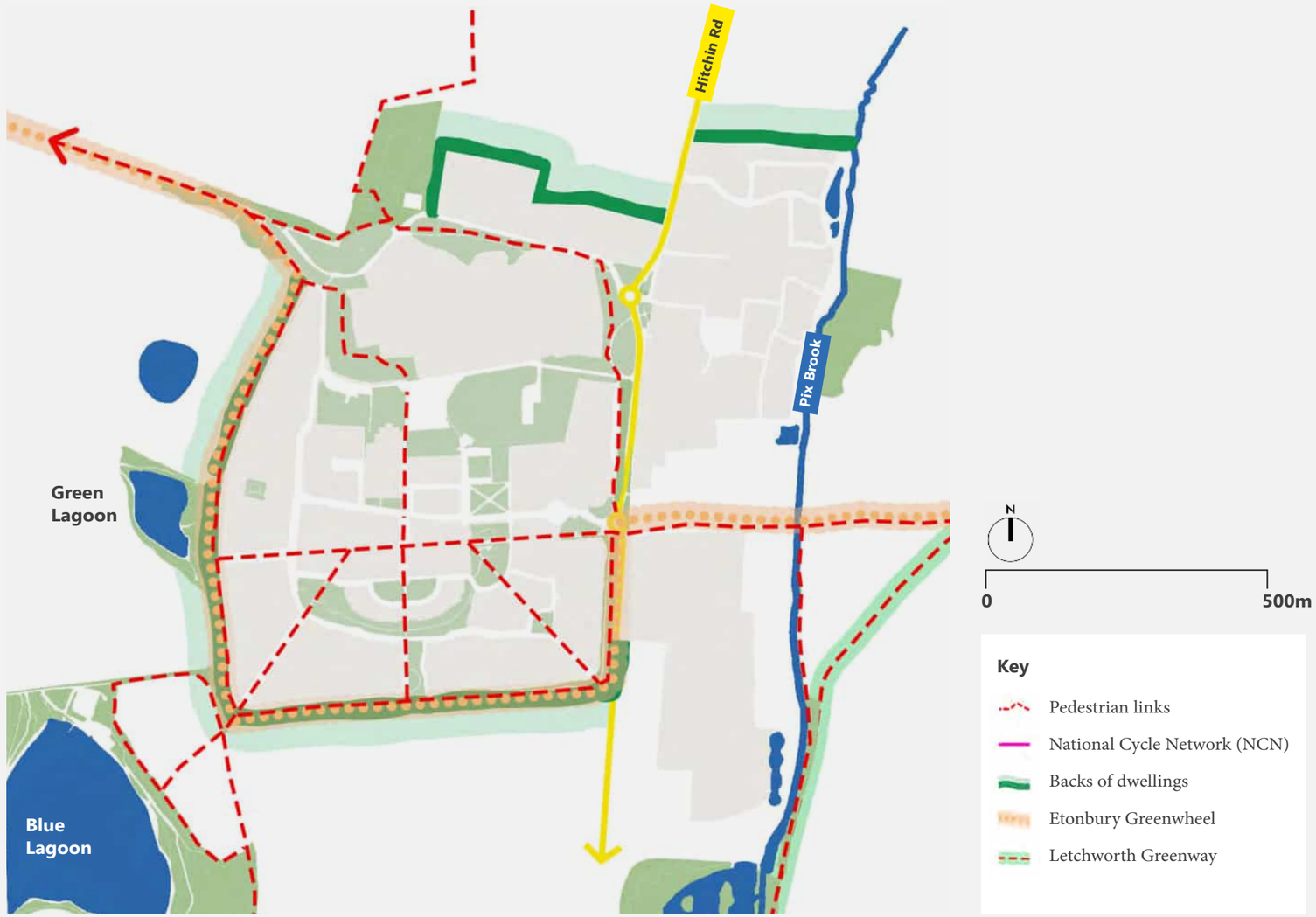


Fig. 5.15: Fairfield's countryside interface and integration

Fig. 5.16: Windows to habitable rooms and porches provide natural surveillance on pathways that give access to the countryside

Fig. 5.17: Countryside edge pepper potted with building entrances

References:

7. https://www.udg.org.uk/directory/projects/fairfield-park-bedfordshire [accessed 18.09.22]

Multimodal access to uses and facilities

5.21 Buses connect Fairfield to Arlesey train station via Stotfold, and to Letchworth train station, but lack of evening service creates car dependency for people seeking opportunities beyond those available within Fairfield itself. The Etonbury Green Wheel runs along the periphery of Fairfield Park and connects Fairfield to Letchworth, Stotfold and Arlesey, providing enhanced longer-range opportunities for cyclists and pedestrians.

5.22 At the neighbourhood scale, Fairfield has a highly-connected system of streets and circulation spaces, including key routes that are designed as car-free streets. Cumulatively, this supports multimodal access to the local centre and neighbourhood amenities (Fig. 5.18, 5.19). Particularly within the Fairfield Park area, well-surveilled public open spaces are distributed within easy walking distances (Fig. 5.20), with several segregated cycling and walking routes (Fig. 5.21)[8].

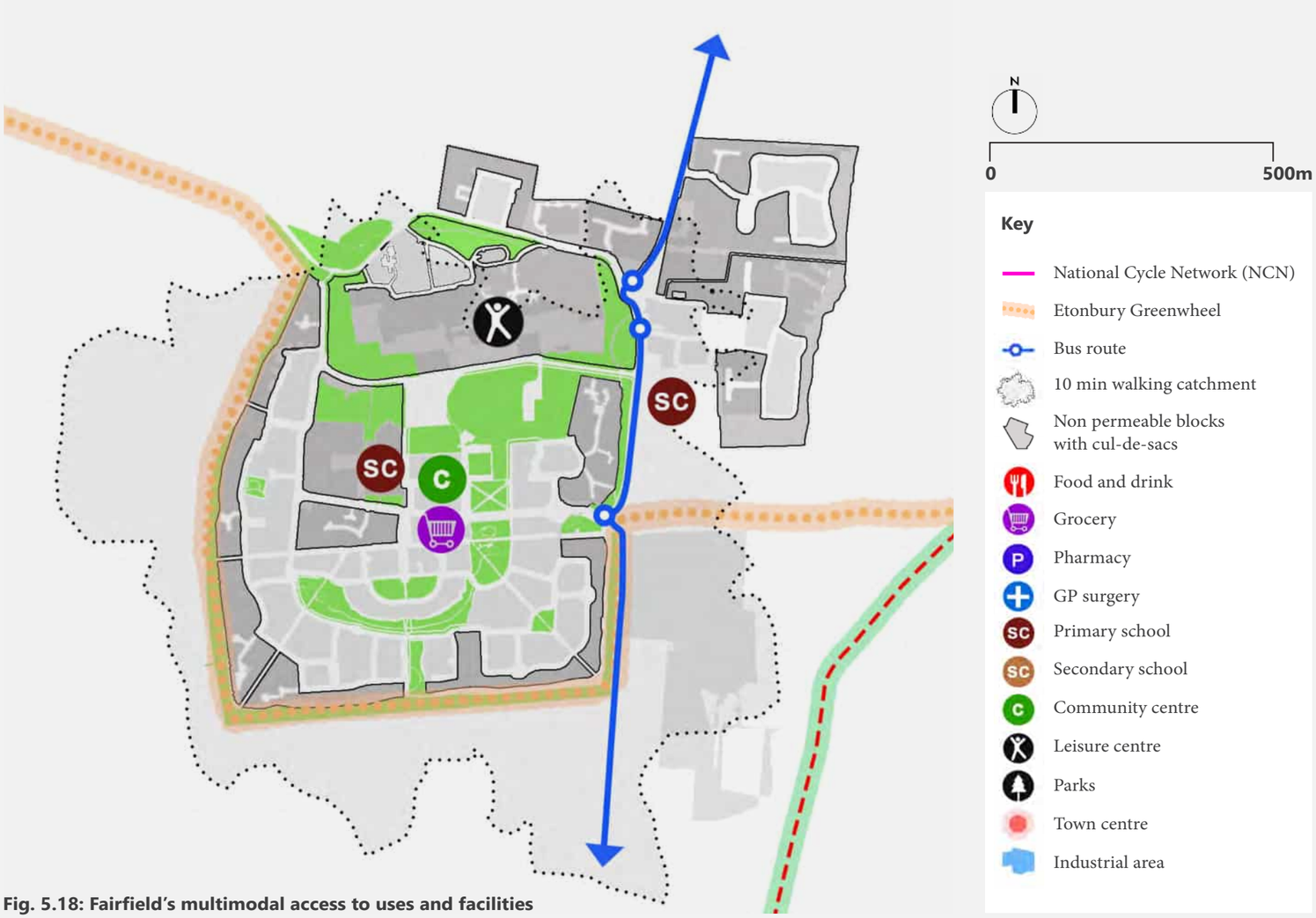


Fig. 5.18: Fairfield's multimodal access to uses and facilities

Fig. 5.19: Car-free streets fronted by residential entrances

Fig. 5.20: Play spaces activated by building fronts

Fig. 5.21: Segregated cycle paths

References:

8. https://www.fairfield-park.com/downloads/Fairfield_Park_Urban_Design_Strategy.pdf, Section 3: Strategy [accessed 18.09.22]

Legible and active street scene

5.23 The streets in Fairfield Park are relatively straight; increasing legibility for pedestrians and cyclists to access parks and other communal facilities (Fig. 5.22). More recent developments, to the East of Hitchin Road, have smaller blocks with more closely-spaced streets. This increases overall permeability for pedestrians and cyclists, but because the streets themselves have relatively complex alignments, with shorter sight-lines, legibility is reduced (Fig. 5.23).

5.24 Fairfield Park was the subject of a detailed Design Code[9], guiding all aspects of the development to create districts and streets with identifiably different atmospheres. These can be seen throughout the development from the formal avenue approach to the southern crescent to the enclosure of the urban parkland. Long sight lines create opportunities for vistas and landmarks, while groups of buildings frame key public open spaces such as important junctions (Fig. 5.24).

5.25 At closer focus, street activity is fostered by buildings with active frontages, with limited setbacks from the street edge. More negatively, the majority of Fairfield Park's development blocks have rear court parking: although this frees the streets from parking clutter and despite conscious design that enables some degree of natural surveillance to these parking courts (Fig. 5.25), the convenience of access from parking court to homes discourages the use of front doors and reduces street activity.

Fig. 5.22: Fairfield's legibility analysis

Fig. 5.23: Curvilinear streets with short sight lines and non-contiguous built edge

Fig. 5.24: Formal boulevard with a landmark structure terminating the vista

Fig. 5.25: Rear parking court with intervisibility

References:

9. https://www.fairfield-park.com/downloads/Fairfield_Park_Urban_Design_Strategy.pdf; Section 4: Design Code [accessed 18.09.22]

Arlesey

5.26 Arlesey is a historic market town in Bedfordshire, which had a population of 6157 and a density of 4561/ Km2 in 2020. Informally linear in layout, Arlesey stretches for about three miles north-south within the valley of the river Hiz. The development of 950 new homes at Arlesey Cross, to the East on a new Arlesey Relief Road, would create a link between Arlesey and the A5079[10].

Countryside integration

5.27 Because of Arlesey's long narrow plan, everywhere within the town is currently near to the countryside (Fig. 5.26). At a closer focus, however, this potential for countryside integration in most cases is largely frustrated in practice, because pedestrian and cycle paths into the countryside run behind the backs of private gardens, with a consequent lack of natural surveillance that gives them an unsafe atmosphere (Fig. 5.27).

5.28 However, there are a few cases, particularly in more recent housing developments where housing is designed with fronts onto the countryside creating safer edge streets at the urban rural interface (Fig. 5.28). In some cases, pathways leading to the countryside are directly linked to the main street network making them legible (Fig. 5.29).

5.29 Concept plans for the Arlesey Cross development proposed at Arlesey Cross with peripheral green buffers, supported by green infrastructure, is proposed to contribute to mitigating any sense of coalescence between the individual identities of Arlesey, Fairfield and Stotfold[11]. Evidence from public consultation, however, suggests widespread public scepticism.

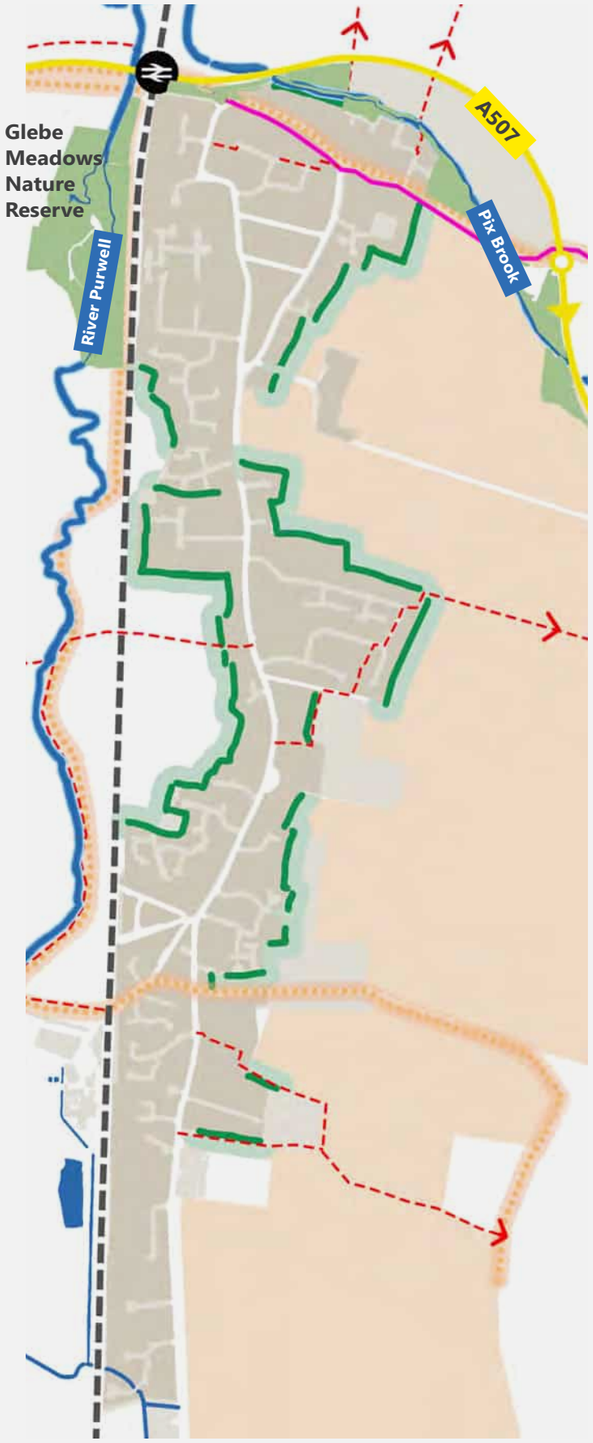


Fig. 5.26: Arlesey's countryside interface

Fig. 5.27: Countryside footpath running along backs of dwellings

Fig. 5.28: Building front countryside at Cala Homes, Arlesey Grange; a recent development

Fig. 5.29: Countryside pathways as an extension to the street network

References:

10. https://arlesey-tc.gov.uk/ [accessed 21.09.22]

11. https://www.centralbedfordshire.gov.uk/migrated_images/the-masterplan_tcm3-13004.pdf [accessed 21.09.22]

Multimodal access to uses and facilities

5.30 The train station provides regular services to London and Peterborough, compensating for Arlesey's own limited employment opportunities; but its location at the far north end of the town maximises walking distances overall. A bus route connects the station with adjacent settlements; however, its frequency, together with the lack of an evening service, is insufficient to overcome car dependency.

5.31 Strategic cycle and walking links[12], including NCN12 and the Etonbury Green Wheel, connect to nearby towns and villages, providing active travel focused movement and recreational routes.

5.32 Within Arlesey itself, a series of cul de sacs link into Hitchin Road, High Street and House Lane, which together form the town's spatial backbone, offering the sole north - south movement route for vehicles, cyclists and pedestrians. Such a layout has the tendency to concentrate all modes of traffic to the maximum extent onto the main linear route; compromising the quality of the walking and cycling experience, and in turn, encouraging car dependency even for shorter trips (Fig. 5.30).

5.33 This is worsened by the concentration of civic amenities centrally on this movement spine, far from the northern and southern ends of the settlement. Public recreation grounds are tucked in, hidden from view, and accessed by long vehicular dominant streets and pathways that feel unsafe for walking and cycling due to the lack of natural surveillance from adjacent buildings (Fig. 5.31). However, there are also some positive examples of well-surveilled local green open spaces surrounded by building fronts (Fig. 5.32).

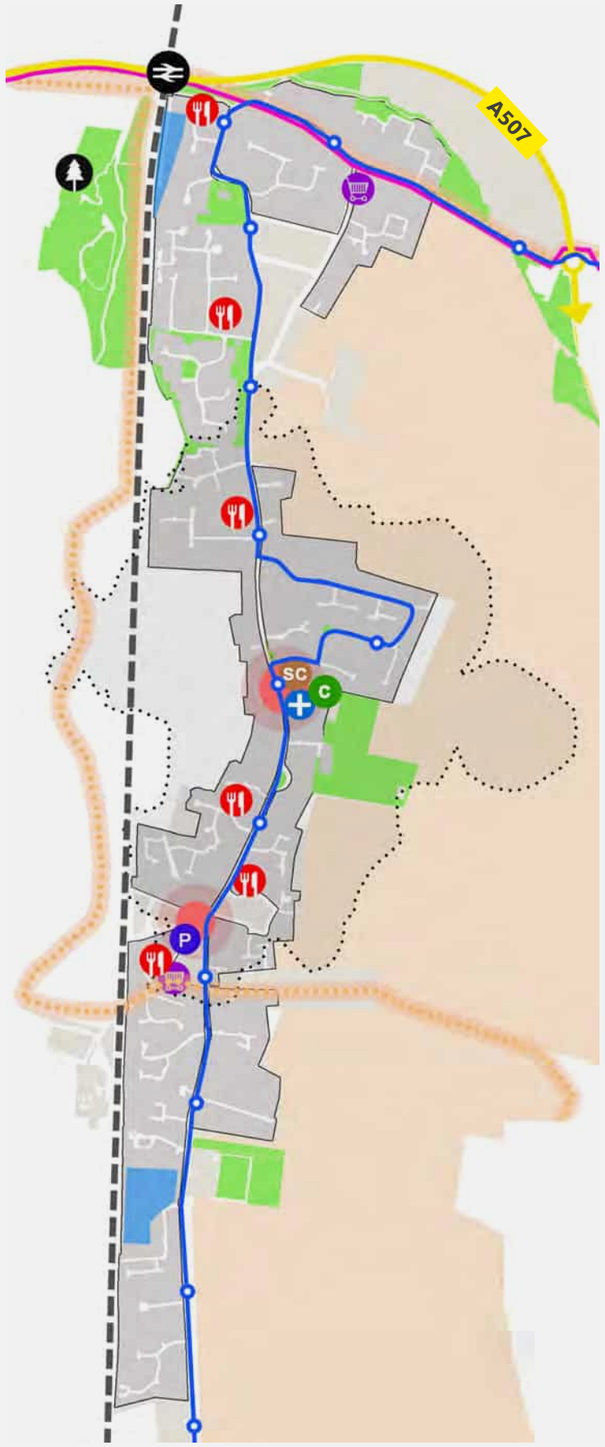


Fig. 5.30: Arlesey's multimodal access to uses and facilities

Fig. 5.31: Local recreation ground hidden from the main street, with an access route that is dominated by car parking

Fig. 5.32: Local green open space along Chase Hill Road activated by building fronts

References:

12. https://www.centralbedfordshire.gov.uk/pre-submission-local-plan-compressed-v2_tcm3-27081.pdf [accessed 18.09.22]

Legible and active street scene

5.34 Only a few community facilities and civic buildings such as pharmacy, Church are located at key nodal points within the street (Fig. 5.33). St Peter's Church, built over 900 years ago by the monks of Waltham Abbey, achieves this landmark potential very well; but other key facilities, including the doctor's surgery, library, nursery, youth club, school and town council offices, are buried within a low-key building in the town centre which offers few signs of life to the street: both street life and landmark potential are lost (Fig. 5.34).

5.35 The 6 storeyed apartment block of Hampden House (Fig. 5.35), on the other hand, acts as a powerfully incongruous landmark by standing out from its context of terraced and detached dwellings in terms of virtually all the visual characteristics that most people notice: height, mass, skyline, vertical and horizontal rhythms, colour, materials, windows and doors. A landmark of no particular social relevance, which just confuses the street scene. In contrast, we also see positive examples of historic buildings terminating street vistas, celebrating local history and contributing to the legibility of the local area (Fig. 5.36).

Fig. 5.33: Arlesey's legibility analysis

Fig. 5.34: Local Civic Centre is setback from the street edge, with planting obscuring its building entrance

Fig. 5.35: Hampdon House as an incongruous landmark

Fig. 5.36: Building with character as a vista

Baldock

5.36 Baldock is a market town in North Hertfordshire, at the foot of the Weston Hills, with a population of 10,543 and a density of 4,486 /Km2 in 2020. Laid out in the 12th century, the town expanded from the 16th century around the intersection of the Great North Road and Icknield Way to provide rest stops for travellers. Despite significant modern residential development, Baldock retains much of its traditional character, with many listed historic buildings[13].

Countryside integration

5.37 Though surrounded by farmland and other green open spaces, Baldock is separated from Letchworth Garden City to the west only by a narrow wedge of open space through which runs the A1(M). Elsewhere, however, Baldock has good footpath links to the surrounding countryside, and to two local nature reserves - Ivel Springs and the Weston Hills - that provide both recreation opportunities and biodiversity conservation benefits (Fig. 5.37).

5.38 The majority of Baldock's countryside edge, however, is bounded by the backs of dwellings. This restricts public opportunities for countryside views and access, whilst limiting the integration of countryside footpaths with Baldock's overall street layout, because the footpaths' connections within the town run unsurveilled behind back gardens, creating an unsafe atmosphere, particularly after dark (Fig. 5.38).

5.39 However, there are instances where building front onto the countryside creating an active interface, such as along Weston Way (Fig. 5.39)

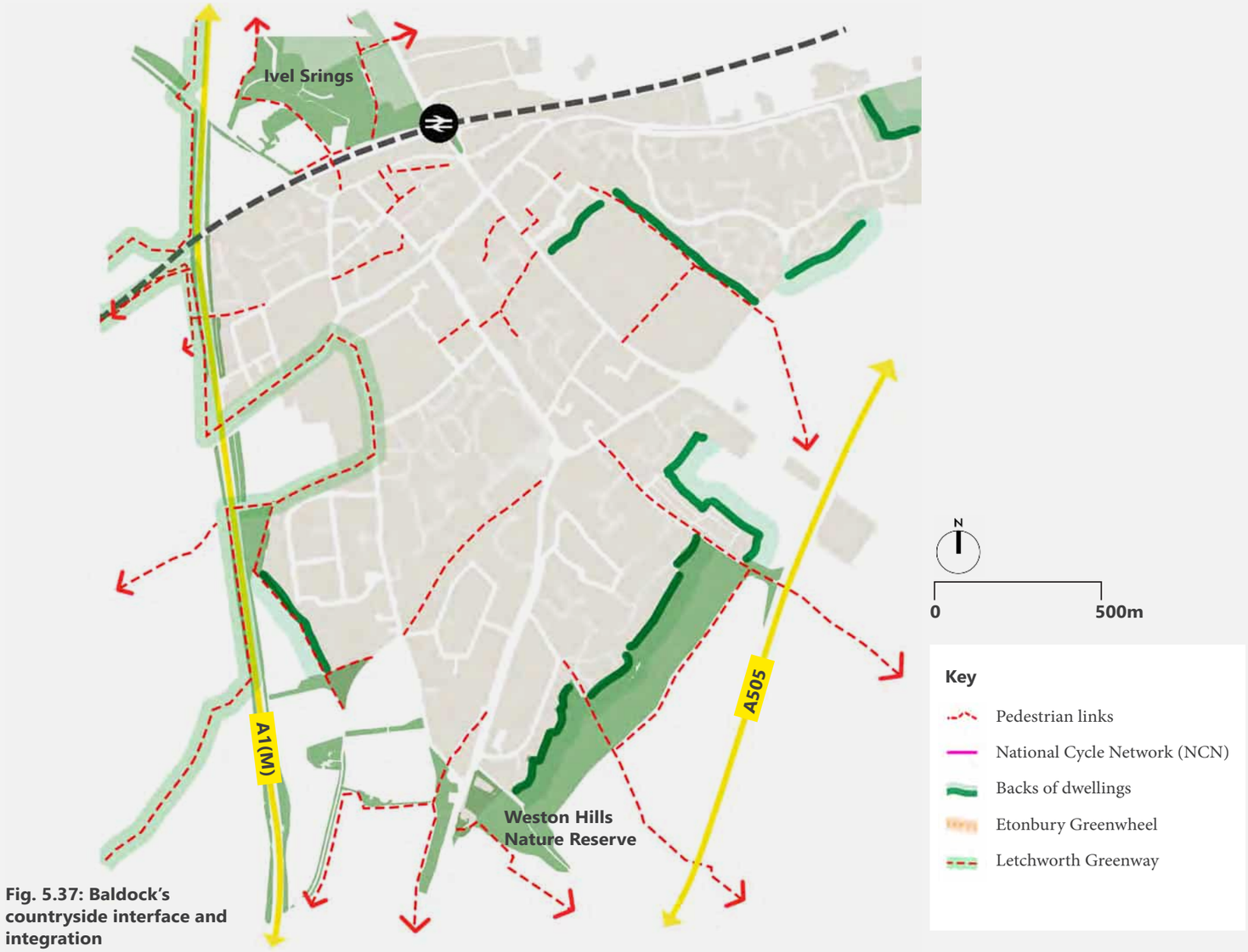


Fig. 5.37: Baldock's countryside interface and integration

Fig. 5.38: Countryside path along backs

Fig. 5.39 Fronts facing countryside along Weston Way

References:

13. https://www.north-herts.gov.uk/sites/northherts-cms/files/BBC%20NP%20-%20%20Neighbourhood%20plan%20submission%20draft.pdf p-4 [accessed 24.09.22]

Multimodal access to uses and facilities

5.40 Baldock train station connects with the employment and amenity opportunities of London and other larger towns. Though the nearest bus stop is only 1minute's walk away, potentially supporting modal interchange, the visual connection is hidden. Bus routes are accessible within 5 minutes of most locations within the town, linking to many surrounding towns: multimodal movement however, is limited by infrequency of services; generating car-dependency. For cyclists and pedestrians, Letchworth's Greenway and NCN12 offer multimodal links across the A1 barrier (Fig. 5.40).

5.41 The historic core of Baldock predominantly has a joined-up permeable street network, but this is in stark contrast to the street layout patterns of recent developments that are dominated by cul-de-sacs making walking and cycling routes more circuitous[14]. This, in turn, limits multimodal accessibility to the historic town centre from recently developed neighbourhoods encouraging car dependency that is exacerbated by the narrow street widths of the historic town centre, which consequently feel car dominated (Fig. 5.41). Although recent developments incorporate segregated pedestrian and cycling links aimed to create more direct connections following the Radburn layout principles; however, in practice, they largely remain unsurveilled and are not easily legible from the main street network, running along the backs of houses making them unsafe, particularly after dark (Fig. 5.42).

5.42 At a closer focus, we find instances where multimodal movement is constrained by discontinuous footpaths that can only be accessed using steps (Fig. 5.43), inadequate pavement widths and/or absent footpaths.

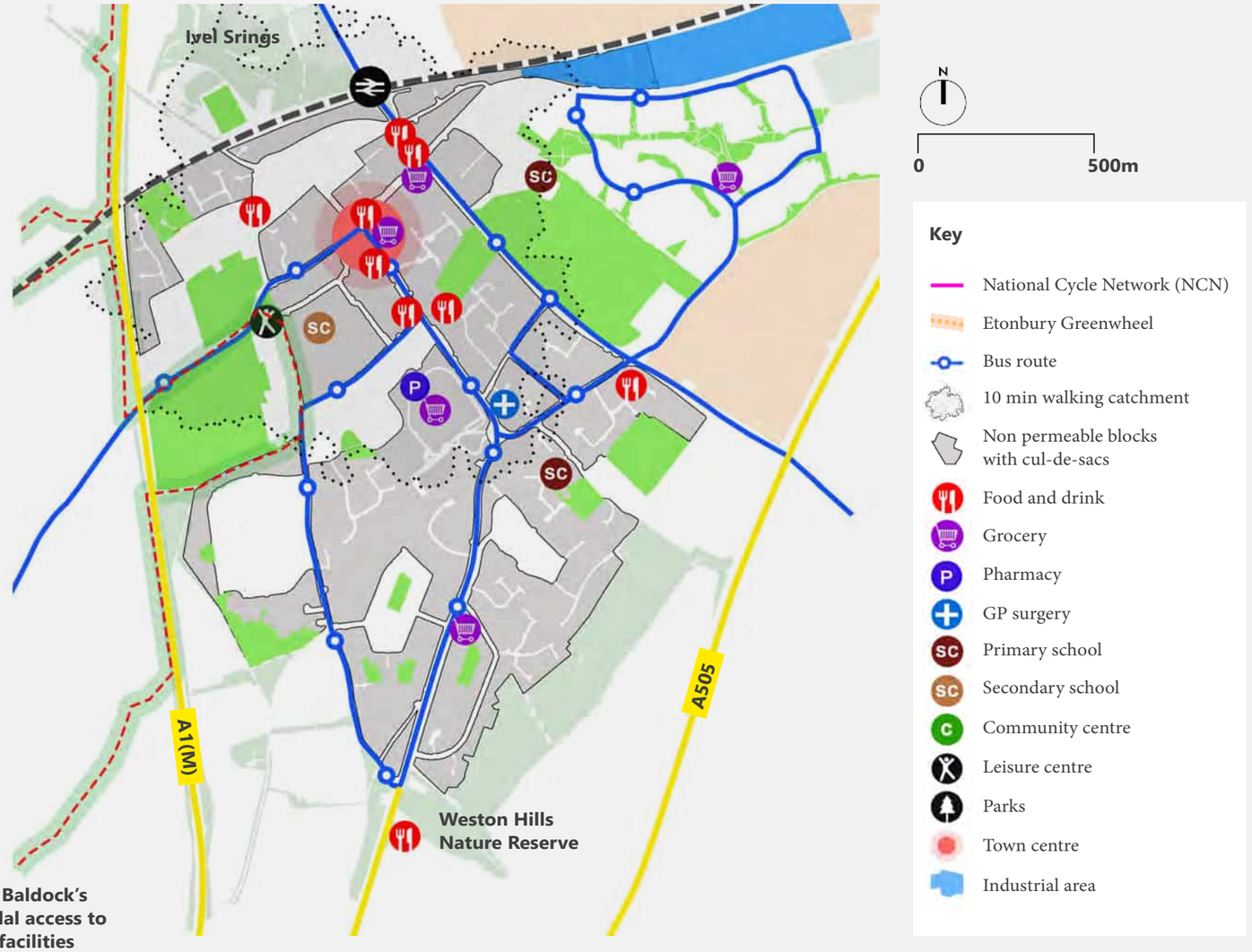


Fig. 5.40: Baldock's multimodal access to uses and facilities

Fig. 5.41 Car dominated historic core

Fig. 5.42 Unsurveilled walking and cycling links along backs of houses

Fig. 5.43: Stepped pavements limiting multimodal access

References:

14. https://www.north-herts.gov.uk/sites/northherts-cms/files/Baldock%20Urban%20Design%20Assessment%20Sep%202007%20part%201.pdf [accessed 24.09.22]

Legible and active street scene

5.43 Baldock's historic core is highly legible (Fig. 5.44). Straight streets, creating long vistas, typically focus on distinctive landmark buildings: the steeple of St Mary's Church, for example, forms an important landmark at a focal intersection (Fig. 5.45). At a closer focus, the terraced buildings of the historic core create strong active street edges, making the pedestrian experience lively and safe. High Street, however, is dominated by car parking, partly obscuring building fronts and entrances, and overpowering the impact of trees which are set far back from carriageway (Fig. 5.46).

5.44 More modern developments, however, largely abandon this highly legible approach[15]. Large blocks subdivided by curving cul de sacs mean that pedestrians and cyclists face long illegible routes (Fig. 5.47); whilst public parks - important because Baldock is short of public and amenity space - are hidden within residential blocks, unsurveilled behind the backs of private gardens.

5.45 Baldock's most recent Eastern extensions have blocks that are too small to have active fronts of buildings on all sides, so the pedestrian links run unsurveilled at the backs of gardens, offering unsafe walking and cycling experiences. Some modern residential streets, such as Nightingale Way, have pavements lined with street trees on green verges. Set back behind the pavement line, however, the trees fail to generate a sense of human-scale enclosure.

Fig. 5.44: Baldock's legibility analysis

Fig. 5.45: Straight streets with long vistas typically focus on distinctive buildings

Fig. 5.46: Historic core visually dominated with car parking

Fig. 5.47: Curving cul-de-sacs contribute to illegible routes

References:

15. https://www.north-herts.gov.uk/sites/northherts-cms/files/Baldock%20Urban%20Design%20Assessment%20Sep%202007%20part%201.pdf [accessed 24.09.22]

Letchworth

5.46 Letchworth is a town in North Hertfordshire, with a population of 34,308 and density of 3,510/km2 in 2020. The development of the modern town as the world's first Garden City began in 1903, incorporating the three far earlier settlements of Norton, Old Letchworth and Willian: Norton's early twelfth century church of St Nicholas remains as Letchworth's oldest historic landmark. Letchworth today supports large business areas providing jobs in a variety of sectors[16].

Countryside integration

5.47 Historical records indicate flooding along Pix Brook; although this is restricted to isolated locations that do not impact LG1(WSP/ 2023). An expansion of Pix Brook's flood storage facility is proposed as a mitigation measure in the 2008 SFRA for North Hertfordshire. Aligned with policy guidance, proposals for LG1 should therefore not contribute to exacerbating existing flood risks through use of sustainable urban drainage solutions (WSP/ 2023).

5.48 Letchworth's expansion should keep the town's identity clearly distinct from adjacent settlements. This is partly a matter of distance, but it also has implications for the nature of the urban-countryside interface (Fig. 5.48). Where the town backs onto the countryside, footpaths can only be integrated by running them behind back gardens, creating an unsafe atmosphere through lack of natural human surveillance. In contrast, where the town fronts onto the countryside, for example, in Norton's Croft Lane or along Wilbury Road (Fig. 5.49, 5.50) countryside paths can run directly into a street system which is well-surveilled by building fronts. This type of active countryside interface is best-attuned with the importance Raymond Unwin gave to creating a clear city edge.

5.49 Integration of this urban rural interface with existing strategic infrastructure such as the Letchworth Greenway (Fig. 5.51) and Etonbury Green Wheel enables strong connections into the countryside.

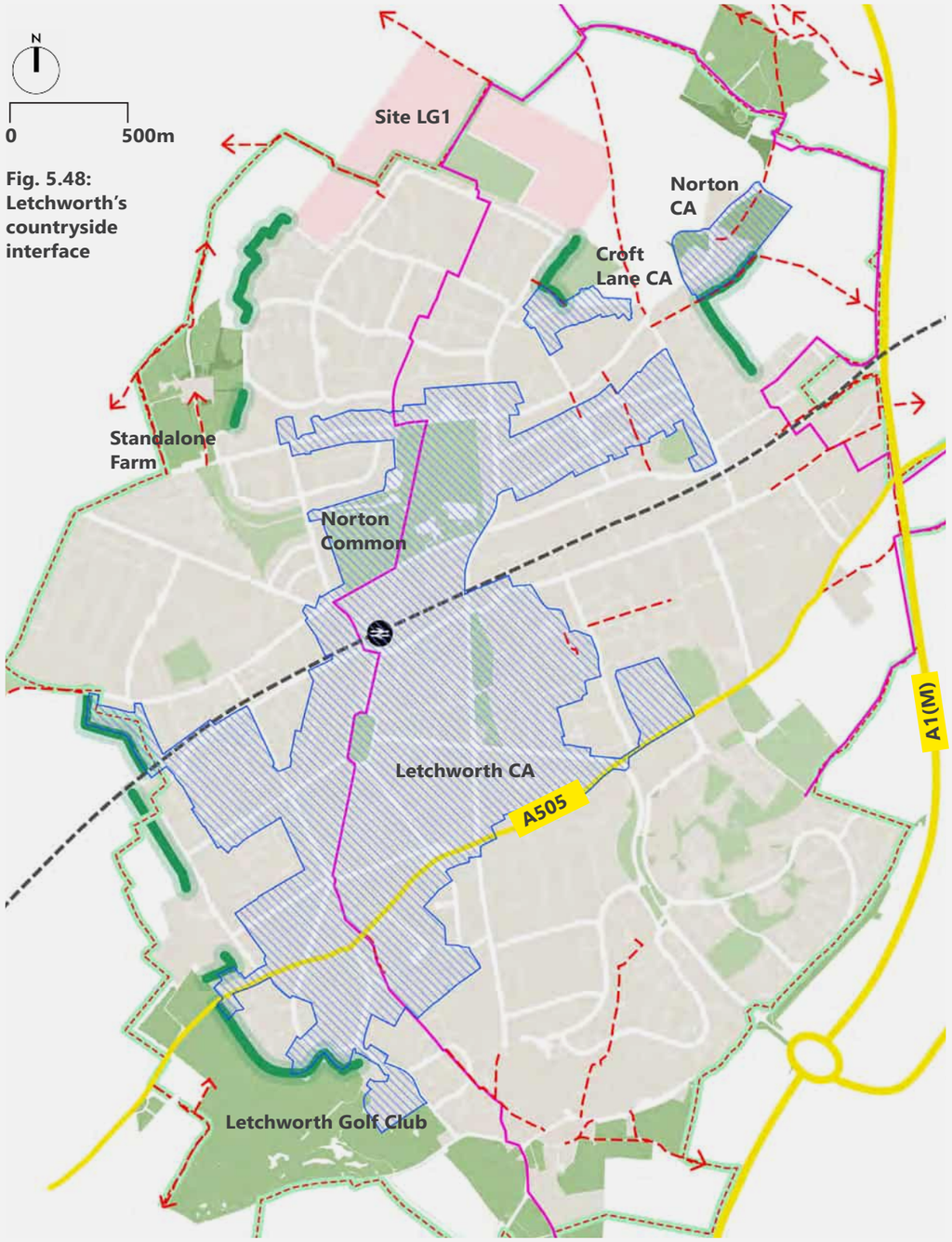


Fig. 5.48: Letchworth's countryside interface

Fig. 5.49: Rural edge character along Croft Lane in the Village of Norton

Fig. 5.50: Rural edge along Wilbury Road with building fronts facing countryside

Fig. 5.51: Letchworth's Greenway providing access to the countryside

Multimodal access to uses and facilities

5.50 Letchworth Garden City train station provides easy access to London and to other centres of work and entertainment. Supporting longer-distance as well as local cycle trips, the north-south National Cycle Network routes run through the centre of Letchworth. In addition, both Letchworth Greenway and the Etonbury Green Wheel give access to the wider countryside and nature reserves[17] (Fig. 5.52).

5.51 Bus routes are accessible within 5 minutes walking catchments linking to many surrounding towns: however, its usage is limited by the infrequency of services in the evening and over weekends; supporting car-dependency. Recent studies have also shown that Covid has had an adverse impact on the usage of public transport in Letchworth. It is imperative to explore alternative shared mobility options such as demand-responsive public transport, car clubs and bike hire that can support sustainable multimodal movement in Letchworth. For details refer to the Transport & Accessibility Report[18].

5.52 At a closer focus, it is particularly important for local centres and routes leading to it to foster multimodal movement. Whilst the main town centre with its shared surface supports pedestrian priority and multimodal access to amenities (Fig. 5.53), the local centre at Grange Estate and adjacent key routes is in need of infrastructure improvement to enable the same (Fig. 5.54). For further details refer to the Transport & Accessibility Report (Steer/2022).

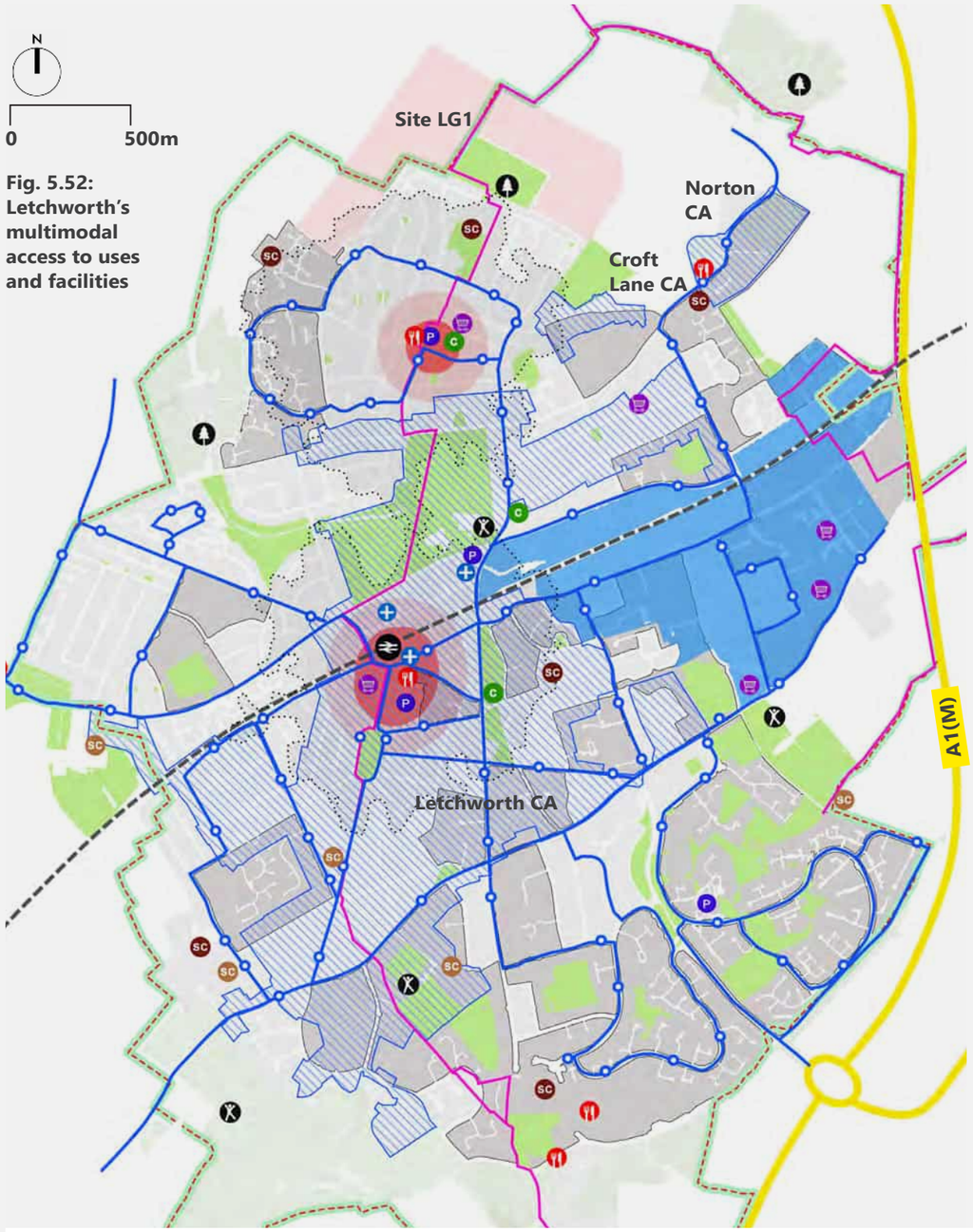


Fig. 5.52: Letchworth's multimodal access to uses and facilities

Fig. 5.53: Shared surfacing supports pedestrian priority and multimodal access to amenities at the Main Town Centre

Fig. 5.54: Local centre at Grange Estate in need of public realm improvements

References:

16, 17. https://democracy.north-herts.gov.uk/documents/s5182/Appendix%20Transport%20Evidence%20from%20NCGTP%20Evidence%20Pack.pdf [accessed 27.09.22]

18. Steer (2022) Transport & Accessibility Report.

5.53 Lastly, presence of secure communal spaces within residential blocks is a unique feature of Letchworth. Its origins can be traced back to the original Garden City principles. A recent audit by LGCHF of such spaces owned by them demonstrates that some are presently used as resident-only landscaped amenity space, playing fields and/or allotments (Fig. 5.55-5.57). However, in other cases they have been assigned 'garden licences' and amalgamated into the back gardens of the surrounding plots.

Fig. 5.55 (top and bottom): Open space within the block along Croft Lane, Cashio Lane and Norton Road is used as playing fields, operated by NHDC with no formal public access.

Fig. 5.56 (top, middle and bottom): Communal allotments within the block along Rushby Mead, Ridge Road, Ridge Avenue, Birds Hill and HillShott successfully being used, particularly post-Covid.

Fig. 5.57 (top and bottom): Secure resident-only communal amenity space within the block along Sollershott West, Broadway, Highfield and Hitchin Road.

Legible and active street scene

5.54 Most historic areas within Letchworth have well-connected street networks[19] that support walking and cycling (Fig. 5.58). In contrast, areas from the 1960s, such as Jackman's estate, have large blocks with cul-de-sacs; forcing pedestrian and cycle detours, and encouraging car-dependency even for short trips. Since around the 2000s, however, developments have rediscovered the advantages of better-connected street layouts with smaller block sizes that foster street activity and active travel[16].

5.55 Within this overall system, legibility is enhanced at both settlement-wide and neighbourhood scales by designing significant paths as vistas that focus on distinctive communal facilities. At the settlement scale, for example, the vista of Broadway focuses on the railway station, and connects in the other direction to Broadway Gardens. At the more local scale, Hillshott focuses on the distinctively-designed landmark of Hillshott Infant School and Nursery co-located with other uses as part of a larger residential urban block (Fig. 5.59).

5.56 At a closer focus, the legibility of the whole is enhanced by giving particular streets individual identities through different building lines, setbacks and groupings (Fig. 5.60) - what Raymond Unwin called 'street pictures' - and by variations in the types of street trees. The trees themselves are typically placed near the edge of the street's carriageway, making a clear separation between the pedestrian scale of the pavement and the vehicular scale of the carriageway. From the driver's perspective, this also narrows the carriageway's apparent width; encouraging slower driving and making cycling safer (Fig. 5.61).

Fig. 5.58: Letchworth's legibility analysis

Fig. 5.59: Hillshott vista terminated by a distinctive landmark public building

Fig. 5.60: Residential grouping at Westholm with building fronting to green open space

Fig. 5.61: Boulevard at Willian Way, the landscape gives it a distinctive character

References:

19. https://www.north-herts.gov.uk/sites/default/files/Letchworth%20Urban%20Design%20Assessment%20complete%20061107.pdf [accessed 27.09.22]

LG1 urban structure and form

5.57 The review of Stotfold, Fairfield, Arlesey, Baldock and Letchworth itself, seek positive and negative lessons in regards to supporting countryside integration, facilitating multimodal access, and achieving legible and active street scenes. In conclusion, we now focus on the common lessons from these studies, to draw out urban design and townscape implications for LG1, to help guide the strategic masterplanning process aligned with the national and local planning policy context and LGCHF's adopted vision and core principles.

Countryside integration

5.58 In terms of countryside integration, we have drawn out lessons, particularly in relation to supporting the human experience of nature. It is important that the development of LG1 should not exacerbate the stresses related to flood risk issues, in terms of both the volume and quality of effluent discharge (NPPF/para 167; NDG/p.28; WSP/ 2023). The masterplan should therefore seek to be as water-efficient as possible. It should incorporate a sustainable system of surface-water management (Fig. 5.62), whilst the foul drainage system should be designed to facilitate grey water recycling, as much as possible (SP15/para i; SP9/para c.vi & vii); in ways that contributes to a unique sense of place (SP9/ para c.i). This should be supported by interventions, for example, retaining 50% of the front setback zone of new homes as soft-scaped areas and/or green and blue roofs that further support rainwater harvesting and infiltration.

5.59 In terms of overall human experience, our studies suggest widespread concerns that the distinctive identity of each settlement might be lost through coalescence with its neighbours. To prevent this, LG1's masterplan should be designed to deter further expansion of Letchworth particularly towards Stotfold and Fairfield (Fig. 5.63) using a long-term, defensible Green Belt boundary (SP15/ para j). Because of the relative permanence of the water system, there is potential to achieve this by using LG1's

LG1's green infrastructure should seek to mitigate risks of downstream flooding, coalescence and enable positive countryside integration.

Fig. 5.62: LG1's sustainable surface-water drainage and linking up with the wider hydrological system

Key

- Water attenuation basin (tbc)
- Direction of natural runoff

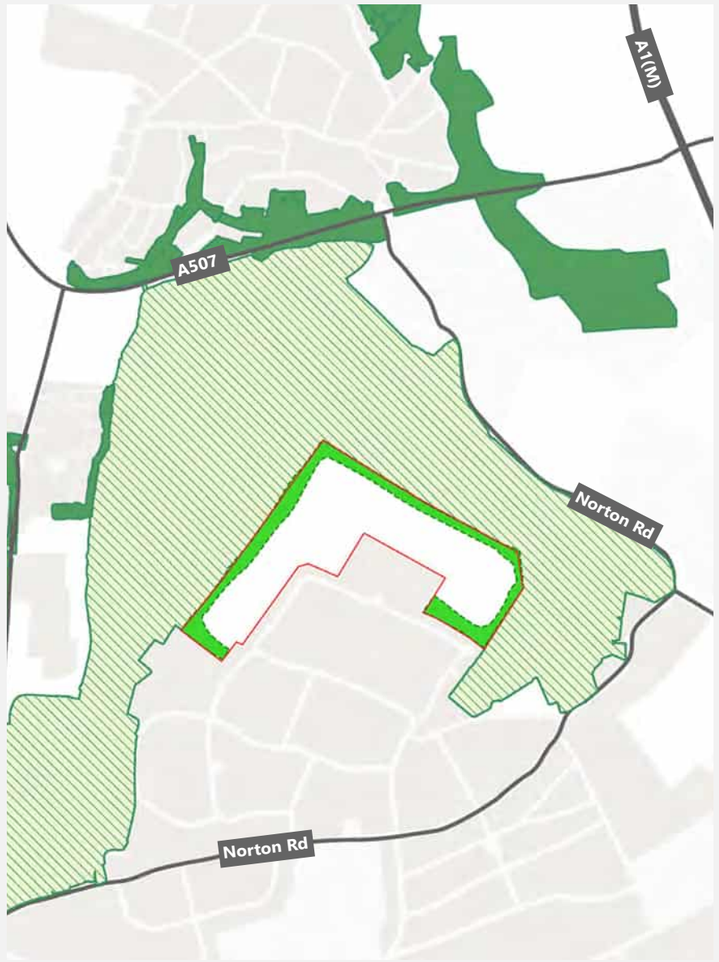


Fig. 5.63: Mitigating the risk of coalescence through an landscape peripheral buffer along LG1's northern boundary

Key

- Potential country park
- Peripheral green buffer

N

0 500m

contours to create a peripheral landscaped buffer with attenuation ponds along the site's northern and western boundaries. For details refer to the Landscape Character and Sensitivity Study[20] and Flood Risk and Surface Water Management report[21]. If possible, to further maximise its permanence, the attenuation pond system could be stocked with protected amphibian species; effectively creating a linear site of Special Scientific Interest as an obvious barrier to further expansion. This would form not only a valuable recreational asset linked with the Greenway, but also contribute towards biodiversity net gain and possibilities for outdoor learning in nature, highlighted in the recent community engagement[22].

5.60 To support human interaction with nature, however, this strong urban edge should also seek to be permeable to countryside access and present an active edge to it, whilst accentuating key views (SP15/para d; SP9/para c. i) particularly towards Norton village, Fairfield and Stotfold. Please refer to the Landscape Character and Sensitivity Study (Peter Neal/2023) and Built Heritage Appraisal report[23] for details.

5.61 Our studies show the importance of linking existing pedestrian rights of way from the countryside directly into a well-surveilled street system (Fig. 5.64). To achieve this at LG1, we can learn from the nearby example of the Croft Lane Conservation Area and other positive examples from the surrounding settlements.

5.62 LG1's existing hedgerows, opportunities for new tree-lined streets and significant addition to tree planting are key to establishing landscape networks within LG1 that support human green experience and wildlife recovery networks into the countryside. To facilitate a net gain of hedgerows (SP15/para e, SP9/para c. vi), LG1's vehicular links should pierce the hedgerows as infrequently as possible. Openings for pedestrians and cyclists are less damaging, but should still be surgically designed to minimise disruption to wildlife. Street alignment should enable easy maintenance of the hedgerows (SP9/para c.ix).

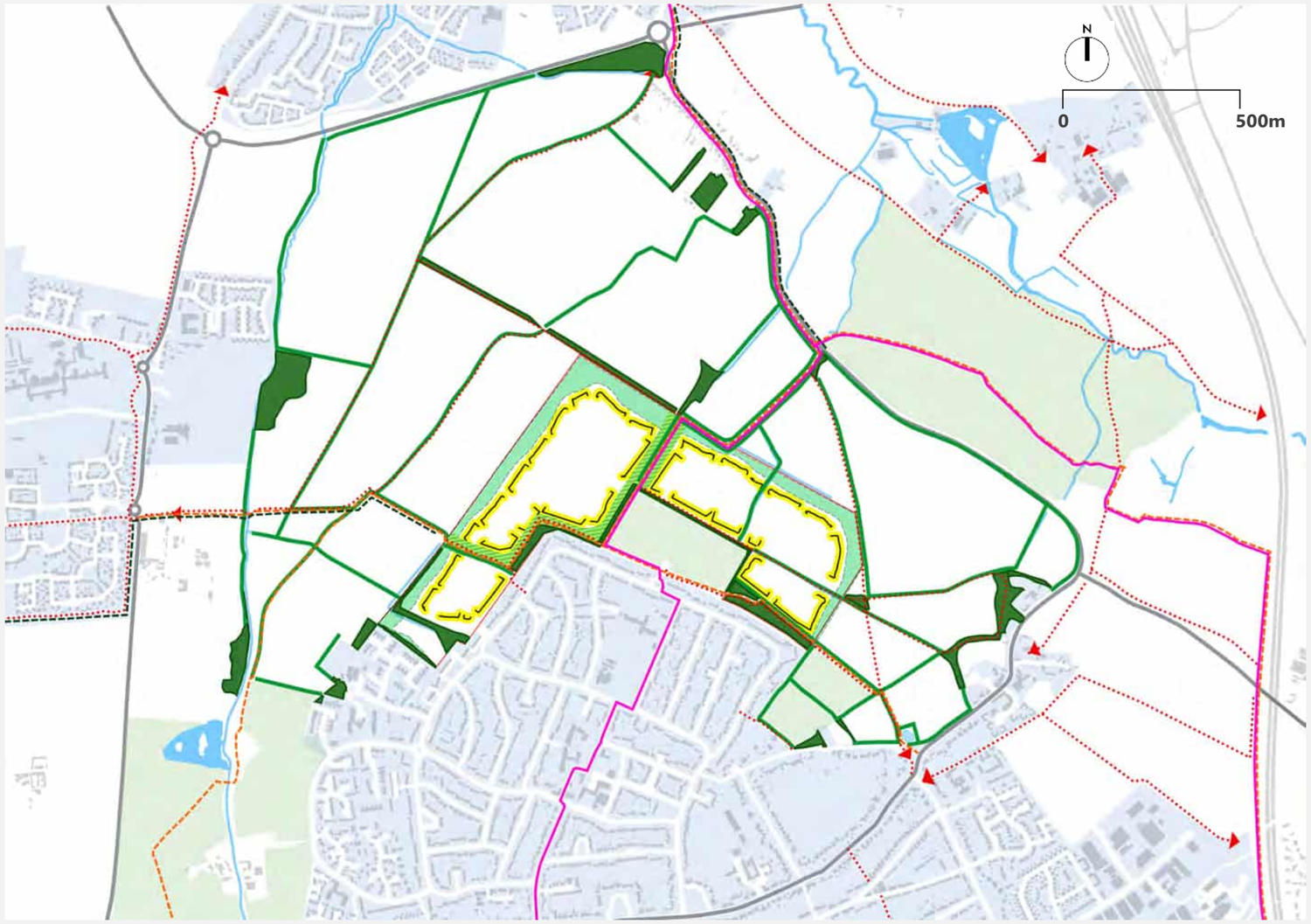


Fig. 5.64: Using LG1's built form and well-surveilled streets for a positive interface with the countryside

References:

20. Peter Neal/ ERE (2024) Landscape Character and Sensitivity Study.

21. WSP (2023) Flood Risk and Surface Water Management Study.

22. Kanda (2022) Survey 1 & 2 Feedback Update

23. Turley (2023) Built Heritage Baseline Appraisal.

Multimodal access to uses and facilities

5.63 Aligned with LGCHF's adopted vision, longer-distance countryside walking and cycling can be supported (SP9/para c.ii & iii; SP15/para b); through a new linear park system formed by the Letchworth Greenway and the Etonbury Green Wheel, which intersect at LG1 (Fig. 5.65). To maximise this support, the LG1 masterplan should provide this system with easy access to the development's local centre including neighbourhood-level retail (SP9/para c. iv; SP15/para c & f) and sustainable mobility hub. For details on the sustainable mobility hub, please refer to the Transport & Accessibility Report (Steer/ 2023).

5.64 To further support potentials for multimodal movement (SP9/para c.ii; SP15/para b), convenient links with public transport and other shared travel modes such as car club and bike hire is also required. Local amenities and public transport should be a short walking distance from new houses. Demand responsive public transport potentially offers a more flexible alternative to traditional bus service, and will need to be tested for viability. For further discussion on demand responsive public transport, please refer to the Transport & Accessibility Report (Steer/ 2023).

5.65 To support walking and cycling within LG1 and into Letchworth as a whole, the LG1 masterplan will need a highly-connected local street system (SP9/para c. iii) with appropriate measures that prevent rat-running of vehicles. Blocks should be small enough to minimise the need for pedestrian and cycling detours, but large enough to accommodate perimeter development that maintains

LG1's urban structure and form should facilitate sustainable multimodal travel and prevent rat-running of vehicles.

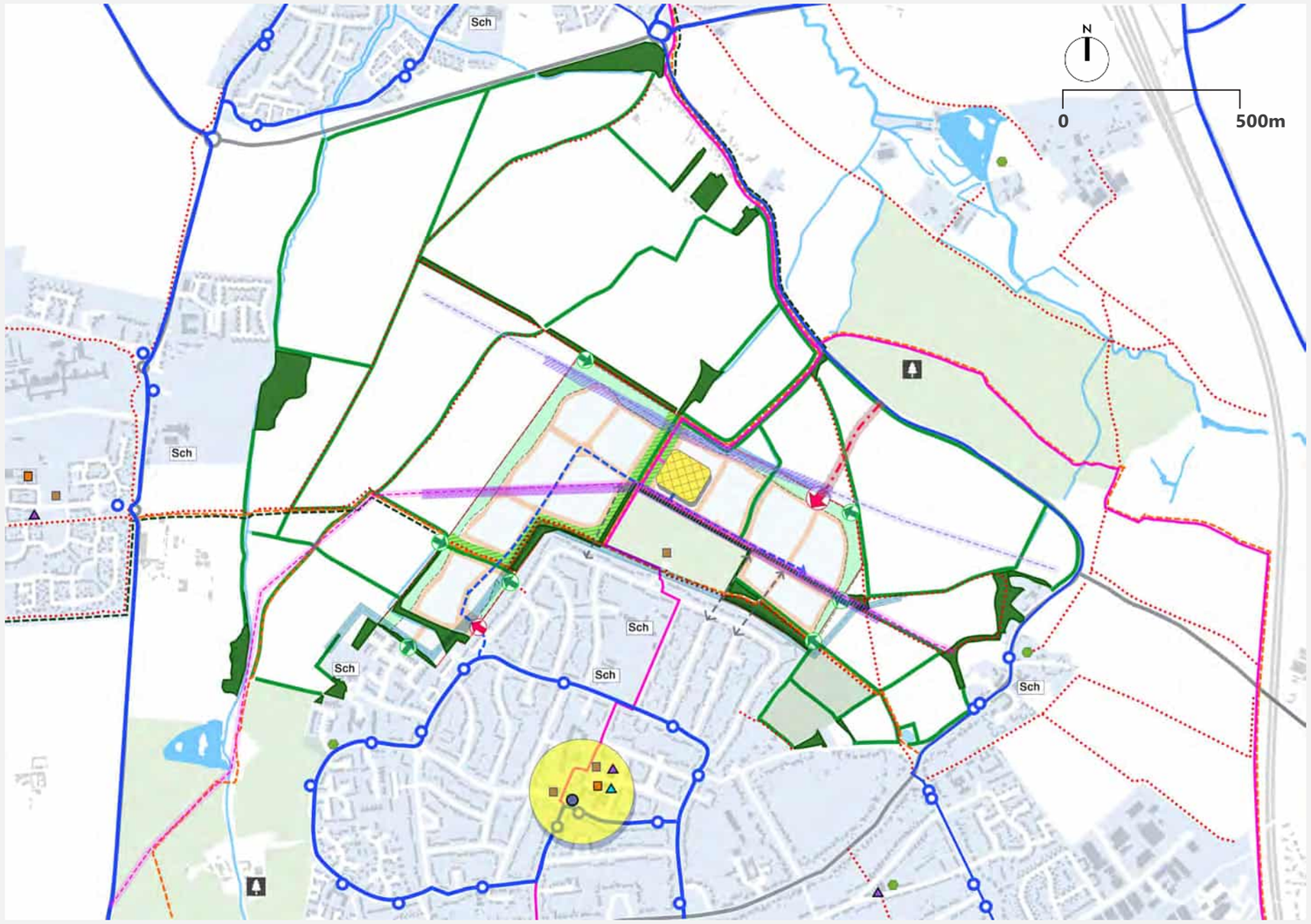


Fig. 5.65: LG1's local street system and potentials for multimodal access to facilities

active fronts between all properties and the surrounding system of streets and other public spaces. To maximise impact over time, it is important for the proposed LG1 street alignment considers and responds to the existing street and pathway connections with Grange Estate (Fig. 5.65).

5.66 Key local streets such as Sparhawke, Western Way and NCN 12 that link the wider Grange Estate with LG1 could benefit from a range of infrastructure improvements to facilitate multimodal movement, as analysed in the Accessibility Audit (Steer/2023, p.55-85) using the Transport for London (TfL) 10 Healthy Streets Indicators Framework (Fig.5.66). An integrated approach to a Sustainable Travel Plan with Settle, taking into account their redevelopment plans for the Pelican Way site and sites along Western Way would be critical to improving multimodal access for the Grange residents.

Key local streets that link the wider Grange Estate with LG1 could benefit from a range of infrastructure improvements to facilitate multimodal movement.

5.67 Lastly, LG1's street and block structure is likely to be impacted by the constraints posed by the existing utilities infrastructure such as the gas pipeline and the overhead powerline (Fig. 5.65). The re-location of the gas pipeline was confirmed to be feasible by Cadent, but would be subject of an additional cost as part of the development. UK Power also confirmed that the overhead powerline on the site can be buried as part of the development, subject to additional cost if desirable as part of the development. Please refer to the Utilities Statement (WSP/2023) for further details.

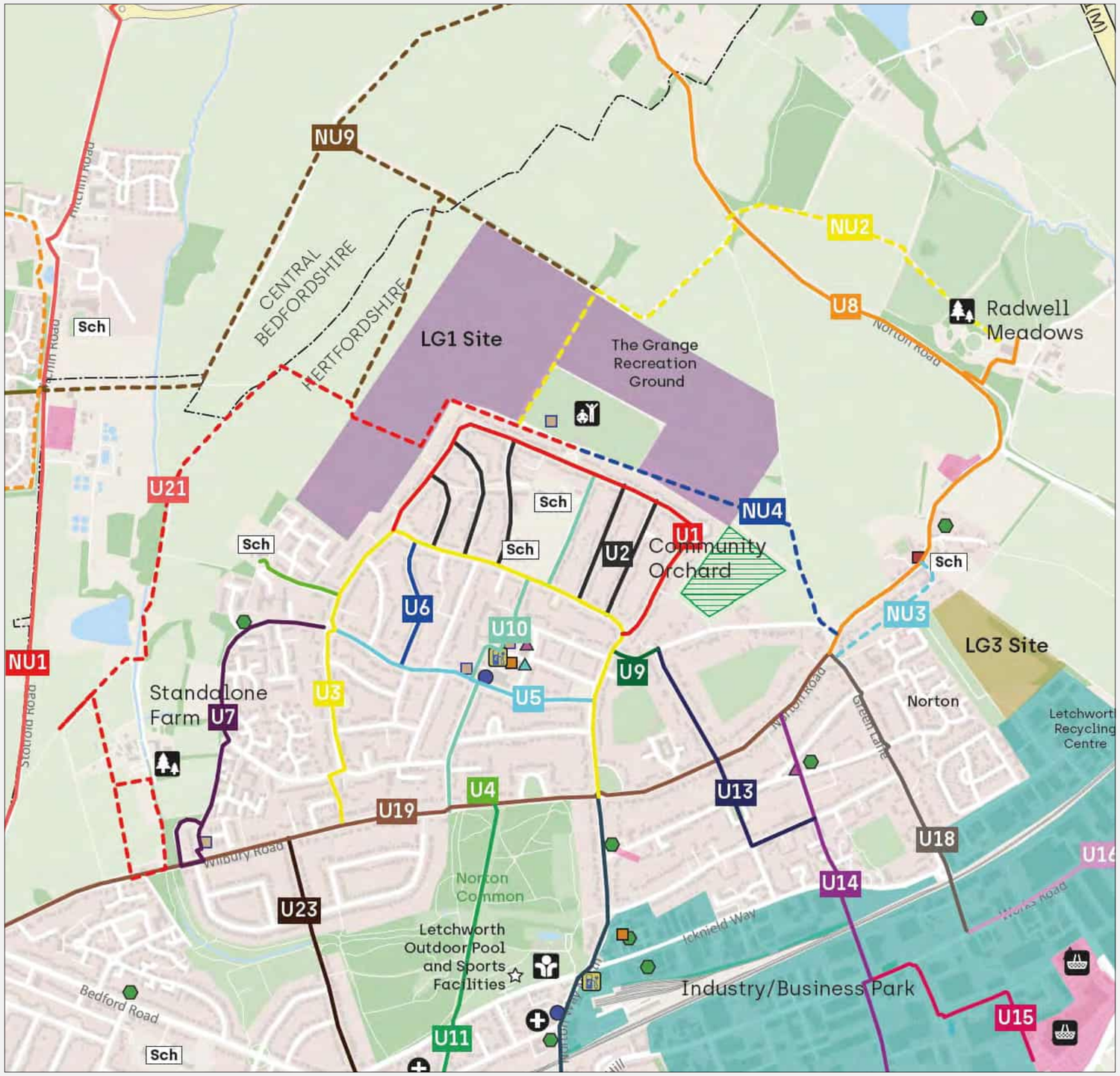


Fig. 5.66: Selected local streets for an accessibility audit within Grange Estate.
Source: An extract from the Transport & Accessibility Report (Steer/2023)

Legible and active street scene

5.68 For legibility at the largest scale, LG1's masterplan has to provide a memorable gateway to Letchworth from Norton Road. To achieve this in a way that supports Letchworth's own unique identity (NHC/2022, Appendix 5, p.315), we can draw from Barry Parker's concept of Parkways. Examples include Letchworth Gate (closest to Parker's concept in Letchworth) and the Princess Parkway in Wythenshawe before the motorway was widened[24]. The link from Western Way to LG1, on the other hand, should be designed to minimise any sense of exclusion from the Grange Estate: as far as possible, the masterplan should seek a legible yet seamless transition between them through built form and landscape (Fig. 5.67).

5.69 Within LG1 itself, high-quality public spaces and the layout of public facilities (SP9/para c.viii) should work together to maximise legibility overall in relation to the site's local heritage assets such as the St.Nicholas Church tower in Norton, and respecting long-distance views and sight lines of Fairfield and Stotfold (SP15/para d; SP9/para c. i) (Fig. 5.67).

5.70 Aligned with policy (SP9/para c.viii), our studies of surrounding settlements suggest that to support legibility and safety, the public outdoor spaces such as parks and recreation grounds should be integrated as directly as possible with the street system, rather than being hidden illegibly round the backs of buildings, where they also lack natural surveillance. Neighbourhood-level retail (SP15/para f) and community facilities should be located along the most connected local streets to maximise accessibility. For quantum of retail that can be supported as part of LG1's masterplan, please refer to the Retail Needs Assessment by Lichfields[25].

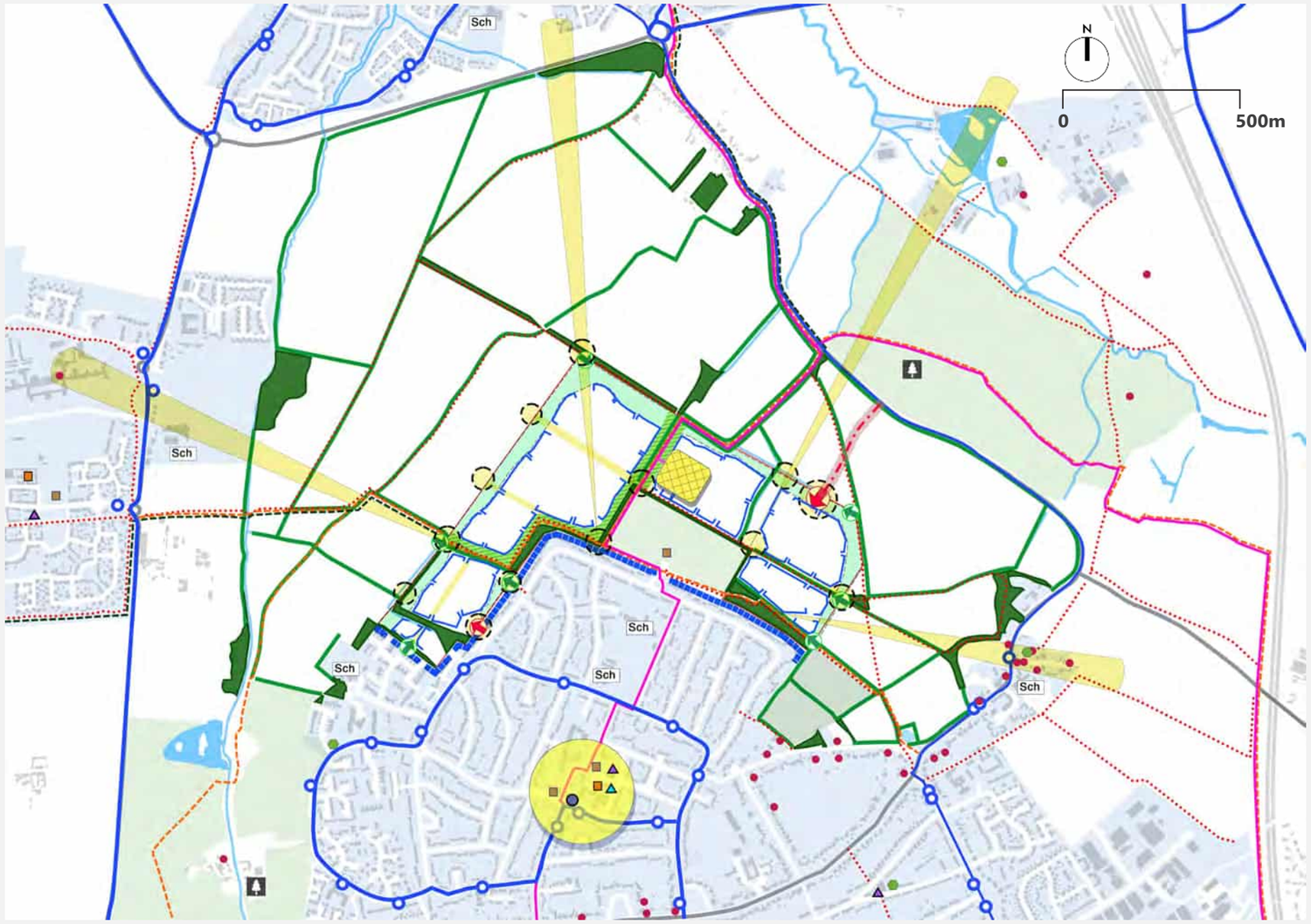


Fig. 5.67: LG1's local street system and built form to maximise legibility and active street scenes

LG1's urban form should foster legibility in relation to local heritage assets and views.

References:

24. Victoria Axell (2018) Barry Parker 1867-1947, Architecture of Harmony, Sunlight and Equality. LGCHF. See Chapter 1.

25. Lichfields (2023) Retail Needs Assessment.

5.71 Learning from Letchworth, uses such as the school (SP15/para c) and sustainable mobility hub that are likely to have a larger plot and/or building footprint should be co-located with other uses and integrated as part of the local neighbourhood centre in ways that maximises convivial and active streets. Locating the school as an integrated part of LG1's masterplan would also need to take into account any locational constraints posed by Initial Noise Risk and Impact Assessment.[26]

5.72 The relationship between street layout and communally-relevant buildings is also important in legibility terms (NDG, p.15). Where possible, for example, longer vistas along key local streets should focus on significant communal facilities such as the school, sustainable transport hub or shops. Our study of recent developments in Fairfield Park suggests that streets should avoid arbitrary curves, in order to allow clear sight lines between the decision points of street intersections, enabling easy access to neighbourhood amenities.

5.73 There is also an opportunity to explore the viability of private communal spaces within residential and/or mix-use blocks. Studies show a range of examples in Letchworth where secure communal spaces are presently used for a diverse range of uses (see, p.87); opening up opportunities for allotments and local food production, outdoor learning and sports, unsupervised children's play and socialisation.

5.74 At a closer focus, LG1's buildings should also be designed to maximise legibility (NDG, p.15). Community facilities such as the school and the shops, for example, should be foregrounded as landmarks of appropriate relative significance, whilst the decision points of street intersections should be given memorability through corner buildings designed as minor landmarks. Our study of Arlesey, however, sounds a warning note: legibility is destroyed rather than enhanced by making landmarks out of facilities that have no real public relevance.

5.75 Aligned with policy (SP9/para c. viii), to maintain an active street scene with the sense of safety that comes from natural surveillance of public space, all buildings - whether landmarks or background in character - should be designed to present active fronts to public space. This is particularly important along LG1's southern boundary where backs of the Grange Estate plots front onto the site (Fig. 5.68).

5.76 At the closest focus of all, the LG1 masterplan should distinguish the particular identities of its individual streets through design codes that define building elements and tree species. To support the pedestrians and cyclists on whom an active street scene ultimately depends, our studies suggest that trees should be located as closely as possible to the edge of the carriageway, in order to reduce driving speeds by minimising the perceived carriageway width.

Fig. 5.68: Grange Estate residential properties backing onto LG1's site boundary

LG1's layout should maximise active fronts to public space and have a hierarchy of street typologies defined by building elements and tree species informed from the local context.

References:

26. Spectrum (2022) Initial Site Noise Risk and Impact Assessment

Conclusion

5.77 In conclusion, the urban design and townscape implications of LG1's local settlement type and form characteristics are summarised below:

- **Implication 1:** A peripheral landscaped buffer along LG1's northern boundary should seek to mitigate risk of coalescence and deter further expansion of Letchworth, whilst the street layout and built form should enable easy access and an active edge to the countryside accentuating key long-distance views particularly towards Norton, Fairfield and Stotfold.

- **Implication 2:** LG1's urban structure and form should seek to incorporate a holistic approach to sustainable urban drainage, so as to not exacerbate existing flood risk issues. This could range from strategically located attenuation basins and/or swales and rain gardens as part of LG1's green open spaces and streets, to materiality considerations within public realm such as use of permeable paving, and building-scale interventions that support rainwater harvesting and recycling of grey water within the development as much as possible.

- **Implication 3:** Create a highly-connected local street system with urban blocks that are optimally sized to facilitate multimodal movement and maintain active fronts to the surrounding system of streets and other public spaces.

- **Implication 4:** Design LG1's local street typologies and sustainable transport hub to facilitate potentials for multimodal movement including walking, cycling, public transport and other shared modes of travel such as car club and bike hire.

- **Implication 5:** Learn from Barry Parker's Parkway concept to create a memorable gateway into LG1 and wider Letchworth from Norton Road.

- **Implication 6:** The link from Western Way to LG1, should be designed to minimise any sense of exclusion from the Grange estate: the masterplan should seek a seamless transition between them through built form and landscape.

- **Implication 7:** The layout of public spaces and community facilities should maximise legibility in relation to the site's local heritage assets, such as, St. Nicholas Church tower in Norton and long-distance sight lines particularly towards Fairfield.

- **Implication 8:** LG1's built form should maximise legibility, with key community and civic facilities foregrounded as landmarks of appropriate relative significance and street intersections given memorability through corner buildings designed as minor landmarks.

- **Implication 9:** Support legibility and safety, by integrating public outdoor spaces such as parks and recreation grounds as directly as possible with a naturally-surveilled street system with buildings fronting onto it.

- **Implication 10:** Locate neighbourhood-level retail and community facilities along the most connected streets to maximise accessibility.

- **Implication 11:** Co-locate the school and sustainable mobility hub as an integrated as part of a larger urban block that maximises convivial streets.

- **Implication 12:** For the conviviality and safety of public realm, all buildings - whether landmarks or background in character - should be designed to present active fronts to public space. This is particularly important along LG1's southern boundary where backs of the Grange Estate plots front onto the site.

- **Implication 13:** Explore the viability of secure private communal spaces within blocks as open amenity space for the residents; opening up opportunities for local food production, unsupervised children's play and socialisation.

- **Implication 14:** Distinguish particular identities of its LG1's street typologies through design codes that define building elements and tree species.

6

Built form and architecture

6. Built form and architecture

Introduction

The purpose of this analysis is to study the evolution of the spatial characteristics of Letchworth's built form and architecture and draw out its urban design and townscape implications to inform the LG1 masterplan as a contemporary interpretation of the Garden City principles.

6.1 LGCHF's adopted vision for LG1 establishes the intent to create buildings and street scenes that represent a modern interpretation of Garden City design; maintaining and strengthening Letchworth's pioneering brand as the world's first Garden City. The purpose of this analysis, therefore, is to study the evolution of the spatial characteristics of Letchworth's built form and architecture and draw out its urban design and townscape implications to inform the LG1's masterplan.

6.2 It is aligned with LGCHF's adopted vision, local plan policies and the relevant characteristics of well-designed places supported through the National Design Guide.

6.3 To this end, the key objectives of this study are:

- To undertake an assessment of the built form and architecture of 6 urban blocks and its adjoining streets (Fig. 6.1, overleaf) - chosen chronologically from the distinct time periods that mark Letchworth's evolution. These were identified in the historical development section of this report. The analysis focuses on understanding the underlying nature of Letchworth's architectural DNA by analysing the block configuration, plot types and massing variation, streetscape character and key architectural characteristics, seeking both positive and negative lessons for its contemporary interpretation to suit modern day living.

- To use the results to draw out the urban design and townscape implications for LG1's built form and architecture; aligned with the national and local planning policy context and LGCHF's adopted vision.

Methodology

6.4 The methodology of this study is aligned with the scope of study as agreed with NHC and includes site visits and desk-based research to enable the analysis of block configuration, plot types, massing, streetscape character assessment and key architectural characteristics for the chosen blocks:

- Block configuration analysis includes review of block sizes, integration of nodes and vistas, urban grain and provision of amenity space.

- Plots, massing and built form analysis includes key spatial characteristics such as plot size and frontage, massing height and variation, front setback, back garden depth, boundary treatment and on-plot parking and refuse storage.

- Streetscape character assessment includes analysis of the sense of enclosure, space for movement of vehicles and pedestrians, access to dwellings, on-street parking provision and layout of utilities such as street lighting.

- Analysis of the key architectural characteristics includes elements that are particularly important as visual cues that people come to associate with particular places: roof profiles and skylines, vertical and horizontal subdivision of facades, window types and groupings, front entrances, materiality and architectural detailing.

- Review of the Conservation Area Appraisal Reports for Norton, Croft Lane and Letchworth Conservation Areas, to inform the above.

- Review of relevant planning policies, national design guidance, LGCHF's adopted vision (refer Part 2 of this report).

Fig. 6.1: The chosen blocks for this study

1
(1800-1905)

2
(1905-1920)

3
(1905-1920)

4
(1920-1946)

5
(1946-1974)

6
(2000-present)

Area 1

6.5 The chosen block is located in a suburban setting (Fig. 6.2). Although there is some surviving agricultural and orchard land to the north of Croft Lane, it is otherwise completely surrounded by suburban residential development. It includes the buildings along Croft Lane and Cashio Lane included in the Croft Lane CA boundary, adjacent to the village of Norton of which it is historically part (Fig. 6.3). Its importance also lies in its connection to the foundation of Letchworth and it having within it a series of significant buildings by key Letchworth Garden City architects.

Block configuration

6.6 The block is relatively large with residential plots surrounding a playing field with no formal public access. Its intimate rural character, is primarily due to the interrelation of built form, landscape and adjoining streets and to the almost complete lack of long views either through or out of it (Fig. 6.4-6.7). Details on plots and massing characteristics are outlined in the following page.

Fig. 6.2: Block location plan

Fig. 6.3: Zoom-in block plan

0 100m

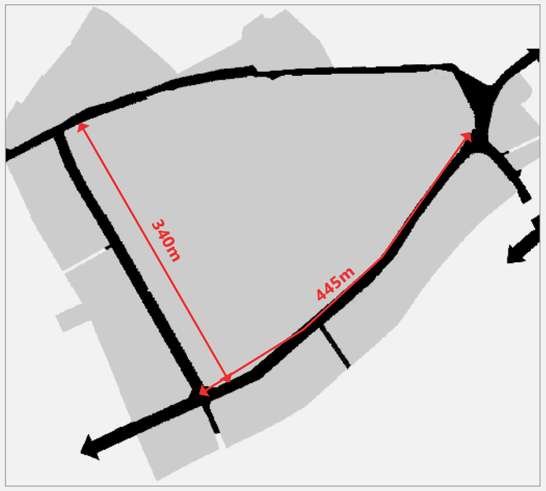


Fig. 6.4: Block size

The block size is relatively bigger than a large proportion of Letchworth Garden City plots, with conventional suburban blocks typically ranging between 60m - 150m. Best practice design guidance suggests that blocks larger than 150m discourage walkability.

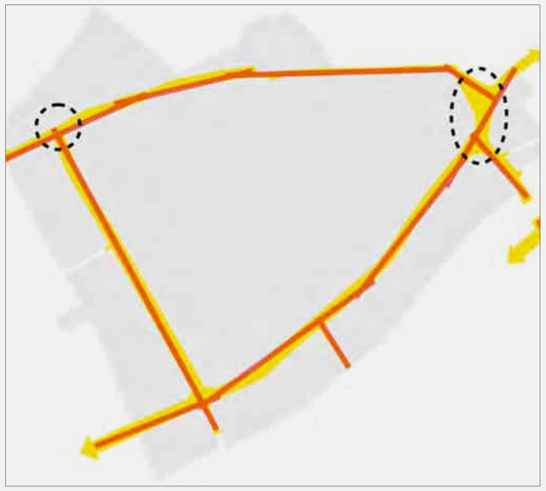


Fig. 6.5: Nodes and vistas

Cashio Lane offers straight vistas towards nodal junctions. This is in contrast to the curvilinear form of Croft Lane and Norton Road that provide breaks visual continuity contributing to an informal rural character.

Fig. 6.6: Urban grain

The plot structure is comparatively more fine-grain along Norton Road with narrower plots than along Croft Lane with relatively larger plots. Overall, the detached and semi-detached dwellings don't line up uniformly with the street reinforcing its informal rural character.

Fig. 6.7: Amenity space

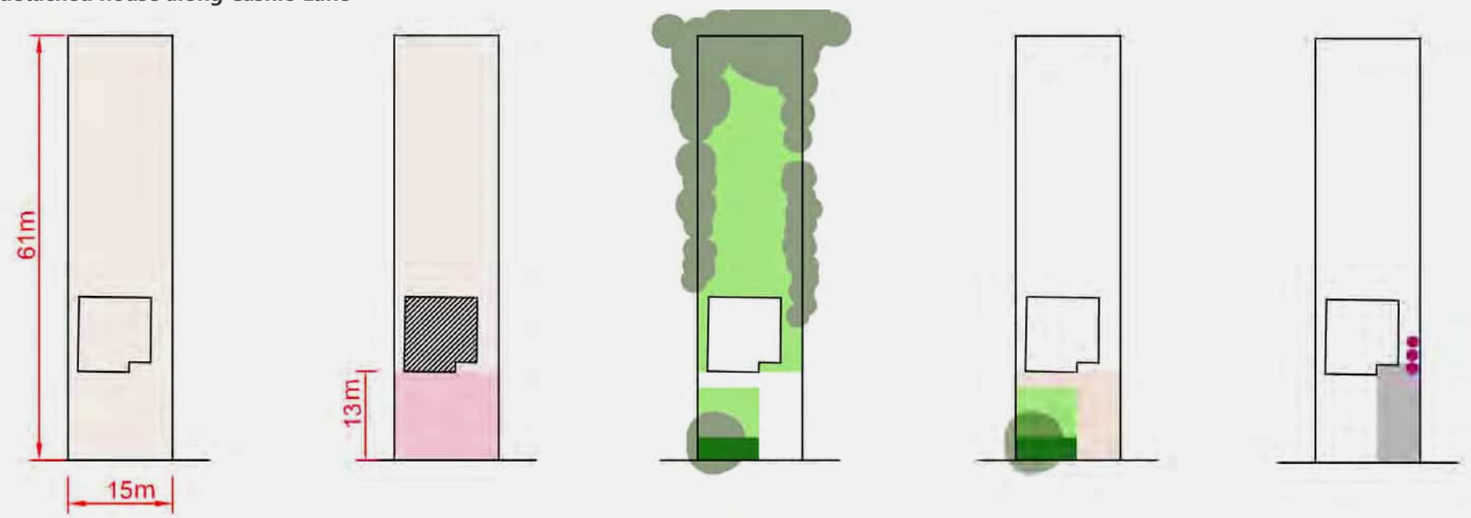
The residential plots have generous front gardens adjoining the street and long back gardens that enclose a central amenity space within the block currently used as playing fields operated by NHDC. Generously sized gardens offer opportunities for landscape and biodiversity.

Plots, massing and built form character

Plot size, frontage and massing	Typically wide plot frontages e.g. approx.15m along Cashio Lane, with 2-2.5 storey high detached and semi detached house types that offer visual gaps between buildings (Fig. 6.8, 6.9A). Plot depth of approx. 60m offer deep and spacious back gardens.
Front setback	Buildings have deep front setbacks (Fig. 6.9B) e.g. approx. 13m along Cashio Lane, and are partly screened by landscaping along plot boundary, reinforcing a sense of rural charm.
Biodiversity and environmental opportunities	Large back and front gardens provide opportunities for mature tree planting and hedgerow boundaries offering biodiversity potential. Large areas of softscaping contribute to ground water recharge (Fig. 6.9C).
Plot boundary treatment along street	Dense hedgerows and tree planting along plot boundary contributes to a strong green edge. Due to mature landscaping long views to and from the surrounding suburban residential streets are almost entirely absent, enhancing the area's rural atmosphere (Fig. 6.9D).
On-plot parking and bins	Generous front setback allows for on-plot parking and refuse provision. Bins are screened behind hedges (Fig. 6.9E).

Fig. 6.8: Conceptual massing model of houses facing Cashio Lane with 2-2.5 storey massing of houses and the visual complexity created due to varied roof profiles

Fig. 6.9: Plot plan of a typical detached house along Cashio Lane



A. Plot size and frontage

B. Front setback

C. Biodiversity opportunities

D. Plot boundary treatment along street

E. Parking and bins

Streetscape character

6.7 The block is surrounded with streets of distinct characters. Cashio Lane's suburban character mediates between the rural atmosphere of Croft Lane and the more urban Norton Road. As relevant examples for LG1, Cashio Lane (Fig. 6.10) and Croft Lane (Fig. 6.13) are analysed.

Cashio Lane

Sense of enclosure	Cashio Lane is defined by 2-2.5 storey detached and semi detached dwellings approximately 45m apart (Fig. 6.11). Plot boundaries are defined by dense hedges. There are few mature trees incorporated within the green verge and/or within plot that enhances the street's sense of enclosure.
Movement	4.4m carriageway accommodates 2-way access for vehicles. The relatively narrow carriageway and presence of continuous green verges mitigates the visual dominance of the cars as part of the overall streetscape. Provision of footpath on one side limits pedestrian accessibility (Fig. 6.12).
Access to dwellings	Clear access to plots from street, but, hedges and tree planting dominate the front plot boundary, obscuring view of front doors, impacting street conviviality (Fig. 6.12).
On-street Parking	Narrow width of carriageway limits on-street parking.
Utilities	Street lighting columns are located on the green verge facing the carriageway. There is lack of focussed lighting on the pavement (Fig. 6.12).

Fig. 6.10: Key plan - Cashio Lane

Fig. 6.11: Typical section - Cashio Lane

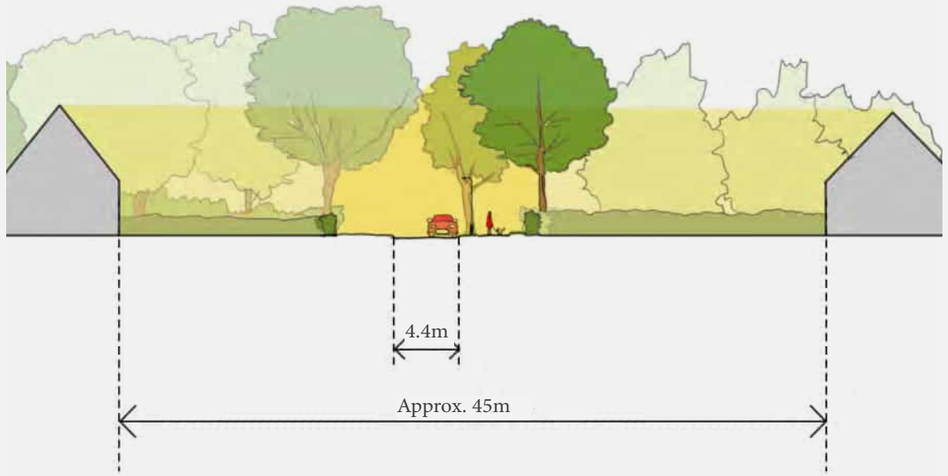
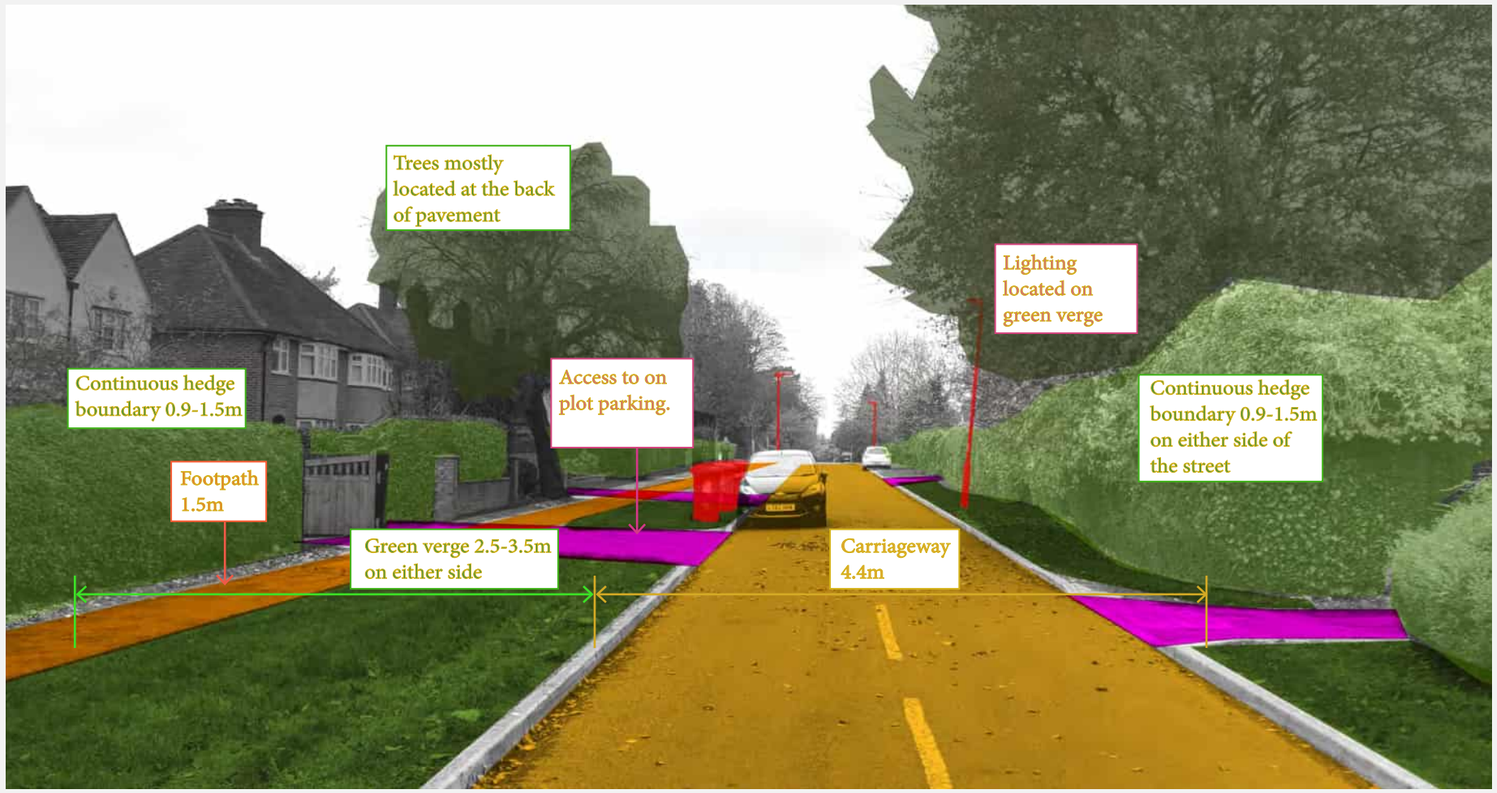


Fig. 6.12: Typical streetscape characteristics - Cashio Lane



Croft Lane

Sense of enclosure	Croft Lane is a residential lane with 2-2.5 storey detached and semi detached dwellings setback approximately 25-30m from the edge of road (Fig. 6.14). Due to planting in front of almost all properties, long views are almost entirely absent, and it retains an idyllic rural feel, despite being almost entirely surrounded by suburban residential streets.
Movement	The relatively narrow 4.6m carriageway is dominated by the presence of tall hedges, mature trees and other planting in front of almost all properties, creating a secluded rural feel. There is a pavement only on the south side of Croft Lane with a grass verge (for most part) between it and the road. Provision of footpath on one side limits pedestrian accessibility (Fig. 6.15).
Access to dwellings	Clear access to plots from the street. However, hedges and tree planting in front of almost all properties along the plot boundary obscures view of front doors, impacting street conviviality (Fig. 6.15).
On-street Parking	Narrow width of carriageway limits on-street parking.
Utilities	Street lighting columns are located on the green verge facing the carriageway. There is lack of focussed lighting on the pavement (Fig. 6.15).

Fig. 6.13: Key plan - Croft Lane

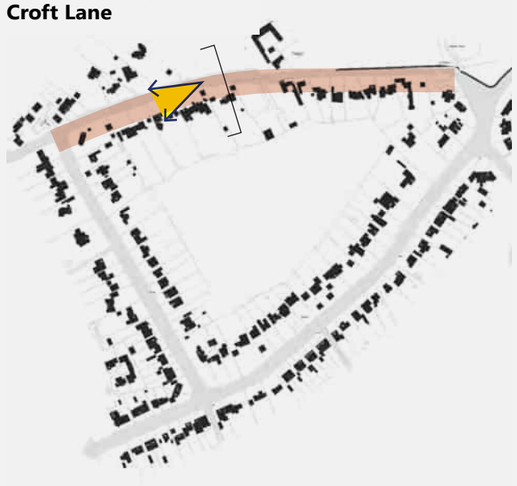


Fig. 6.14: Typical section - Croft Lane

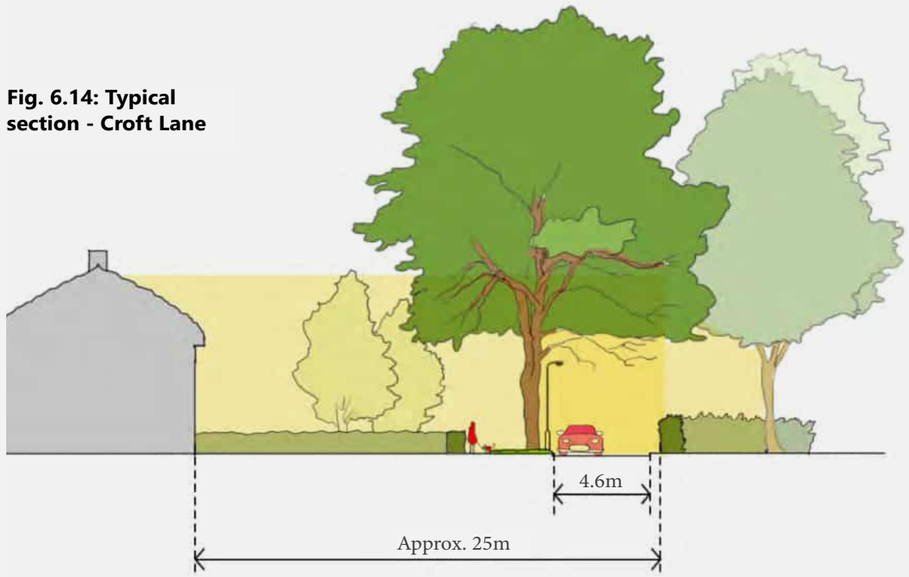
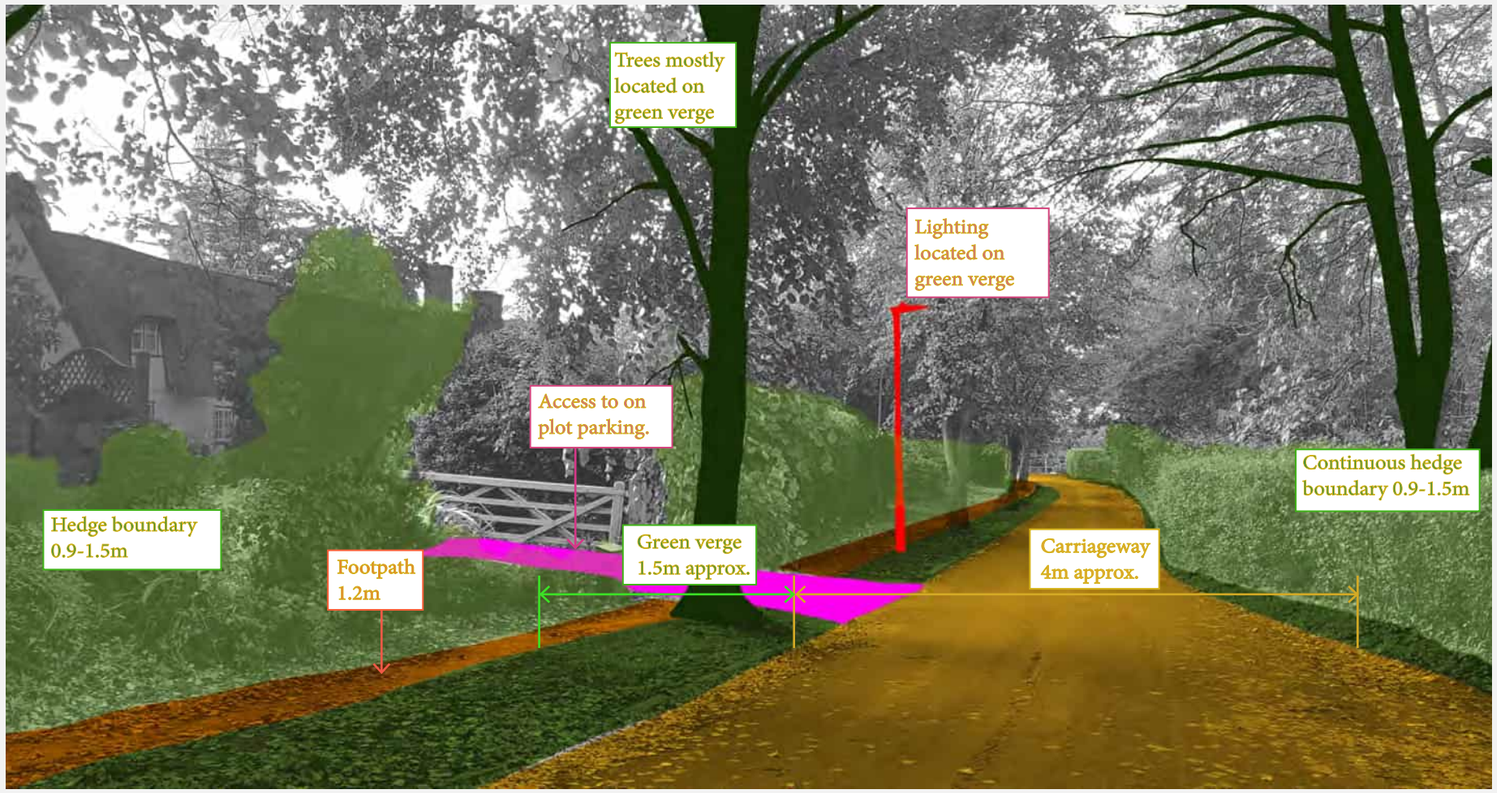


Fig. 6.15: Typical streetscape characteristics - Croft Lane



Key architectural characteristics

6.8 The block has a variety of architectural characters, primarily due to its historic roots and incremental development over time. It is distinguished for containing buildings by important Garden City architects such as Parker, Unwin, Cecil Hignett, and Geoffry Lucas. Most noticeably, the key architectural characters can be differentiated as below:

- Pre-Garden City dwellings on Croft Lane: These relate to the former agricultural use of the surrounding area. Examples include Grade II listed Norton Grange Farmhouse (Fig. 6.16), Paynes Farmhouse (Fig. 6.17) and Thatches, constructed in the 17th and 18th centuries. They are timber buildings and were part of larger farm complexes, each with farmland behind.

- Infill houses by early Garden City architects on Croft Lane: These houses are mainly characterised by roughcast brick with a thatched and/or tiled roof, casement windows, eyebrow dormers and a recessed entrance, typical of many other early Garden City houses. Typically constructed between 1905-1911, examples include Grade II listed Three Gables (Fig. 6.18), 5-7 Croft Lane (Fig. 6.19) and Croft Corner.

- 20th Century traditional Garden City housing on Cashio Lane: This contains a variety of house types and styles, some with larger dwellings on spacious plots (Fig. 6.20) through to more standard semi-detached housing (Fig. 6.21) typical of this era.

6.9 Although diverse in its architectural character and period of construction, the houses share common architectural characteristics, contributing to the underlying nature of Letchworth's architectural DNA. These can be identified as the more constant architectural features which give the place the historical continuity that underlies Letchworth Garden City's townscape identity, and hence is particularly relevant for LG1.

Fig. 6.16: Pre-Garden City dwellings - Norton Grange Farmhouse

Fig. 6.17: Pre-Garden City dwellings - Paynes Farmhouse

Fig. 6.18: Early Garden City houses - Three Gables

Fig. 6.19: Early Garden City houses - 5-7 Croft Lane

Fig. 6.20: 20th Century housing on Cashio Lane - larger dwelling on spacious plots

Fig. 6.21: 20th Century housing on Cashio Lane - standard semi-detached dwelling

6.10 To this end, some of the locally distinctive features that contribute to enabling a sense of architectural and townscape cohesion (Fig. 6.22), are summarised below.

Roof and skylines	Roofs are a dominant and uniting feature, despite a diversity of roof types (shingled hipped roof, low slung roof, thatched and tiled roofs with overhanging eaves). Protruding chimneys add to skyline variation.
Vertical subdivisions	Verticality is expressed by rain water pipes and/or surface level variation of building massing extrusions.
Horizontal subdivisions	Horizontalilty in the facade is expressed by rainwater gutters, window cills and window grouping.
Windows and its grouping	A diversity of types (casement windows, eyebrow dormers) and asymmetric grouping reinforces the rural feel. Mullions and glazing bars unify aesthetic (Fig. 6.23).
Entrances	Recessed entrance with timber, glass and ironwork detailing (Fig. 6.24).
Materiality: colours, textures and detailing	A mix of timber and brick buildings with white rough cast wallings offers close-up richness. Wall surfaces are contrasted with roof materials and landscape. Corbelled eaves and entrance details add to visual richness. A limited colour palette (reds, browns, off-white) unifies the visual aesthetic (Fig. 6.25, 6.26).

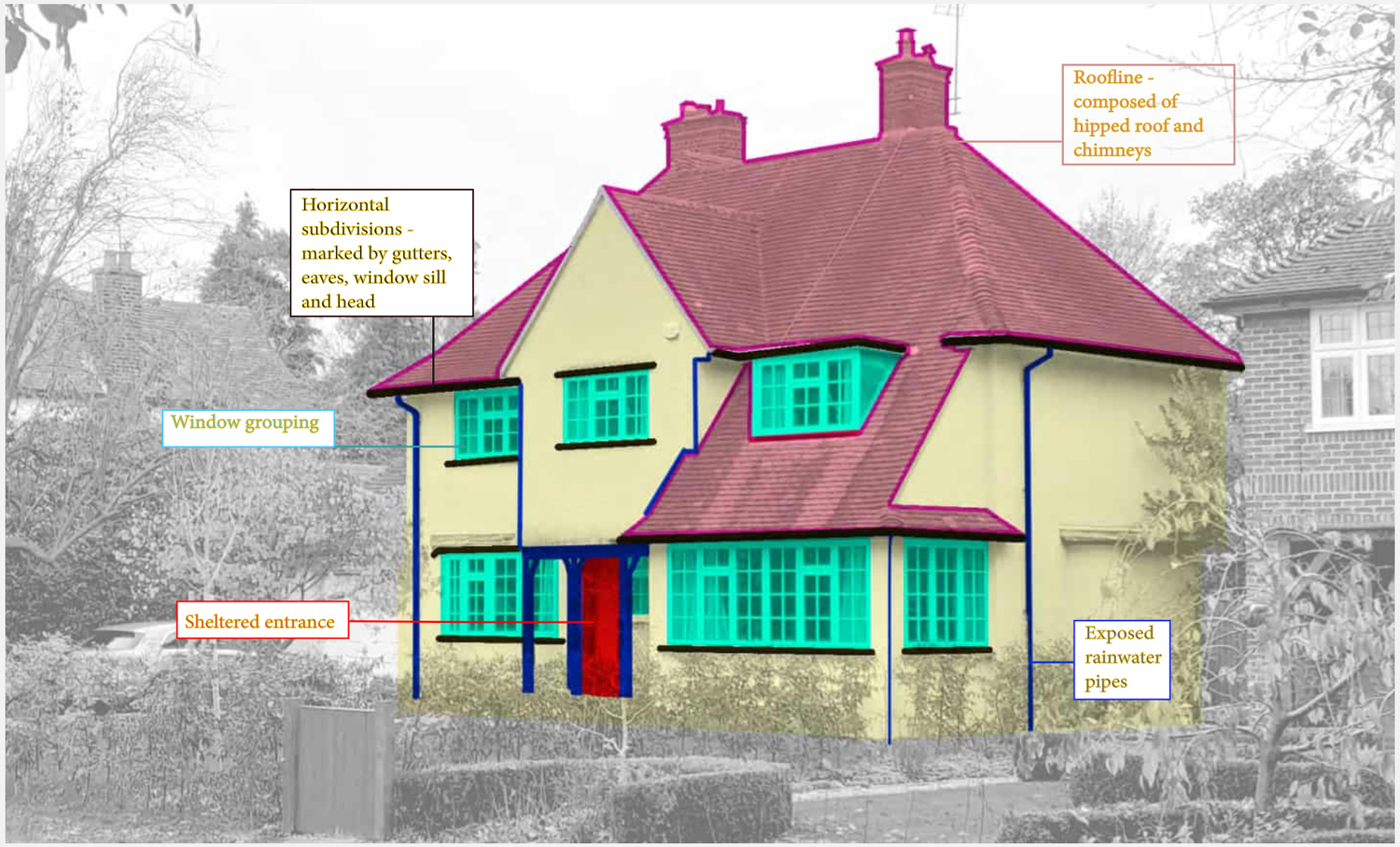


Fig. 6.22: Typical key architectural features

Fig. 6.23: Windows

Fig. 6.24: Recessed entrance

Fig. 6.25: Door detail

Fig. 6.26: Roof detailing

Area 2

6.11 The chosen block is located to the southwest of the town centre and includes the larger houses built by the upper middle classes in 1920s (Fig. 6.27). Many were built by notable architects, some, as their own private homes. Much of this area was developed early in the history of the Garden City, setting a precedent for the style of the later Garden City housing.

Block configuration

6.12 The irregular shaped block is situated within the formal layout of the central axis of Broadway and along Sollershott West, one of the minor axes, and along Hitchin Road which pre-dates the Garden City (Fig. 6.28). The larger houses in individual plots enclose a resident-only private open amenity space. The houses are generally set centrally within their plots leaving spaces either side. The buildings positioned on corner plots are aligned to respect both roads (Fig. 6.29-6.32). Further details on plots and massing characteristics is outlined in the following page.

Fig. 6.27: Block location plan

Fig. 6.28: Zoom-in block plan

0 100m

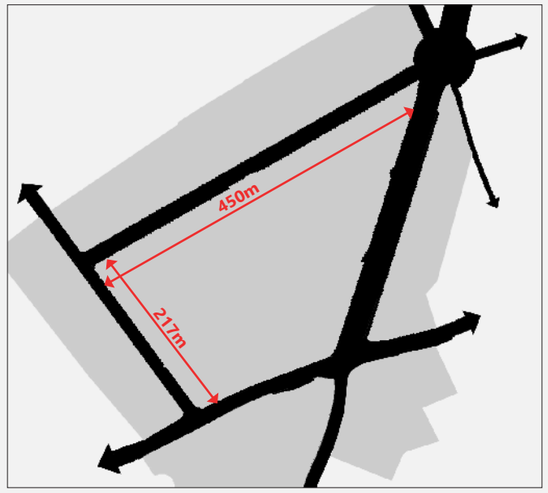


Fig. 6.29: Block size

Irregular in shape, the block is relatively large with length along Sollershott West being approx. 450m. Block length along Highfield is 217m and tapers along Broadway to meet Sollershott West. Such an irregular shape creates angled corners addressed using special plot and building types.

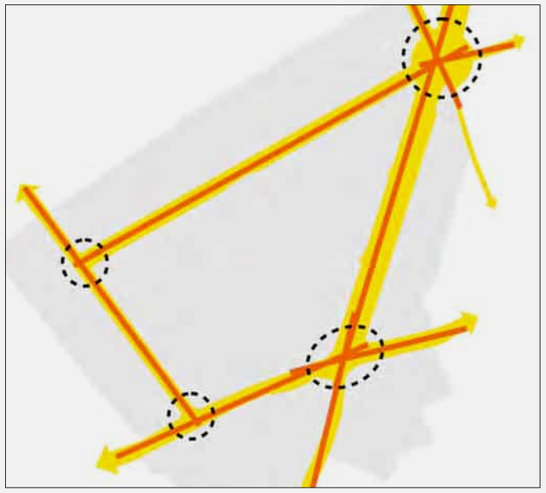


Fig. 6.30: Nodes and vistas

All the adjoining streets offer straight sight lines to nodal junctions. This creates direct vistas and contributes to the visibility of significant nodes. The landscaped roundabout at the intersection of Broadway and Sollershott West is a key landmark and contributes to enhanced legibility of the place.

Fig. 6.31: Urban grain

Large individual plots with generous gardens and spaces between centrally positioned buildings produce a low density character. The houses are oriented and/or angled to follow the line of the road, contributing to an predominantly uniform suburban setting with fairly continuous building edge.

Fig. 6.32: Amenity space

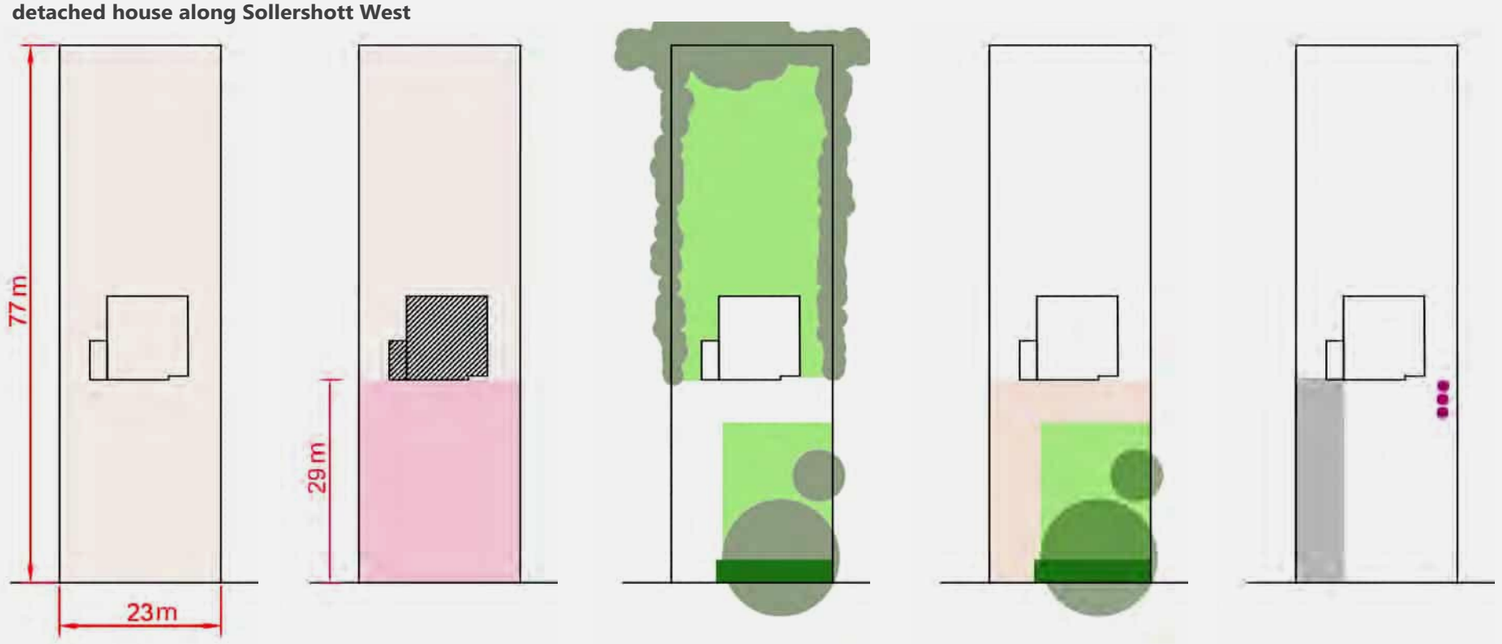
Large residential plots enclose the Broadway/Sollershott Common - a central private amenity space of approx. 12,140 sq.m. currently used by the surrounding residents and managed by LGCHF. Generously sized private gardens offer opportunities for landscape and biodiversity.

Plot, massing and built form character

Plot size, frontage and massing	Plot frontages are typically wide e.g. 23m along Sollershott West with 2-2.5 storeys detached and semi-detached house types. Despite uniformity in scale of housing there is a wide variety in massing forms largely due to varied roof profiles and massing extrusions that adds to visual complexity (Fig. 6.33). Generous plot depth of approx 80m create spacious back gardens (Fig.6.34A).
Front setback	Front setbacks are large and vary in depth e.g. 7-29m along Sollershott West (Fig. 6.34B). The building positioning varies slightly, but overall appearance is a relatively consistent building line, particularly along Broadway and Hitchin Road.
Biodiversity and environmental opportunities	Large back and front gardens provide opportunities for mature tree planting and hedgerow boundaries offering biodiversity potentials. Large areas of softscaping contribute to ground water recharge (Fig. 6.34C).
Plot boundary treatment along street	Consistent line of mature trees and hedgerows along the plot boundary creates a strong green edge to the street (Fig. 6.34D)
On-plot parking and bins	Generous front setback allows for on-plot parking. Bins are screened behind hedges (Fig. 6.34E).

Fig. 6.33: Conceptual massing model of houses along Sollershott West with 2-2.5 storey large dwellings typical of the block

Fig. 6.34: Plot plan of a typical detached house along Sollershott West



A. Plot size and frontage

B. Front setback

C. Biodiversity opportunities

D. Plot boundary treatment along street

E. Parking and bins

Streetscape character

6.13 The block is surrounded with streets of distinct characters. As examples, Sollershott West (Fig. 6.35) and Broadway (Fig. 6.38) have been analysed in further detail.

Sollershott West

Sense of enclosure	Houses on the northern side are situated further from the front boundary, providing a distinctly spacious character (Fig. 6.36). A sense of enclosure is enhanced by regularly placed lampposts, continuous hedges and trees that are not regularly placed, resulting in the overall street character as a mix of both formal and natural.
Movement	6m carriageway accommodates 2-way access for vehicles. A wide 8-9m green verge with mature trees mitigates the visual dominance of the carriageway within the streetscape. The south side has a wide verge with mature trees that are not regularly placed, creating a natural character. Provision of footpath on one side only limits pedestrian accessibility (Fig. 6.37).
Access to dwellings	Clear access to plots from the street. Mature hedges and trees obscure views of front doors impacting street conviviality, particularly on the northern side (Fig. 6.37).
On-street Parking	There is no on-street parking.
Utilities	Street lighting columns are located at the back of pavement predominantly following the footpath (Fig. 6.37).

Fig. 6.35: Key plan - Sollershott West

Fig. 6.36: Typical section - Sollershott West

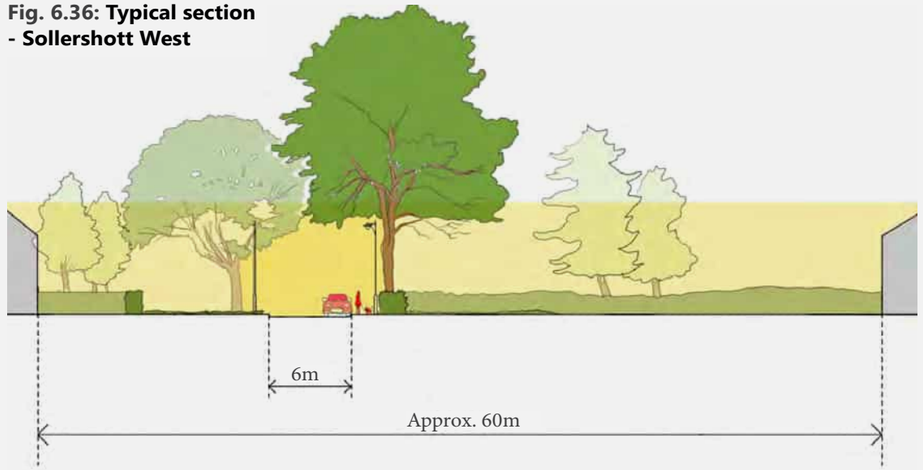
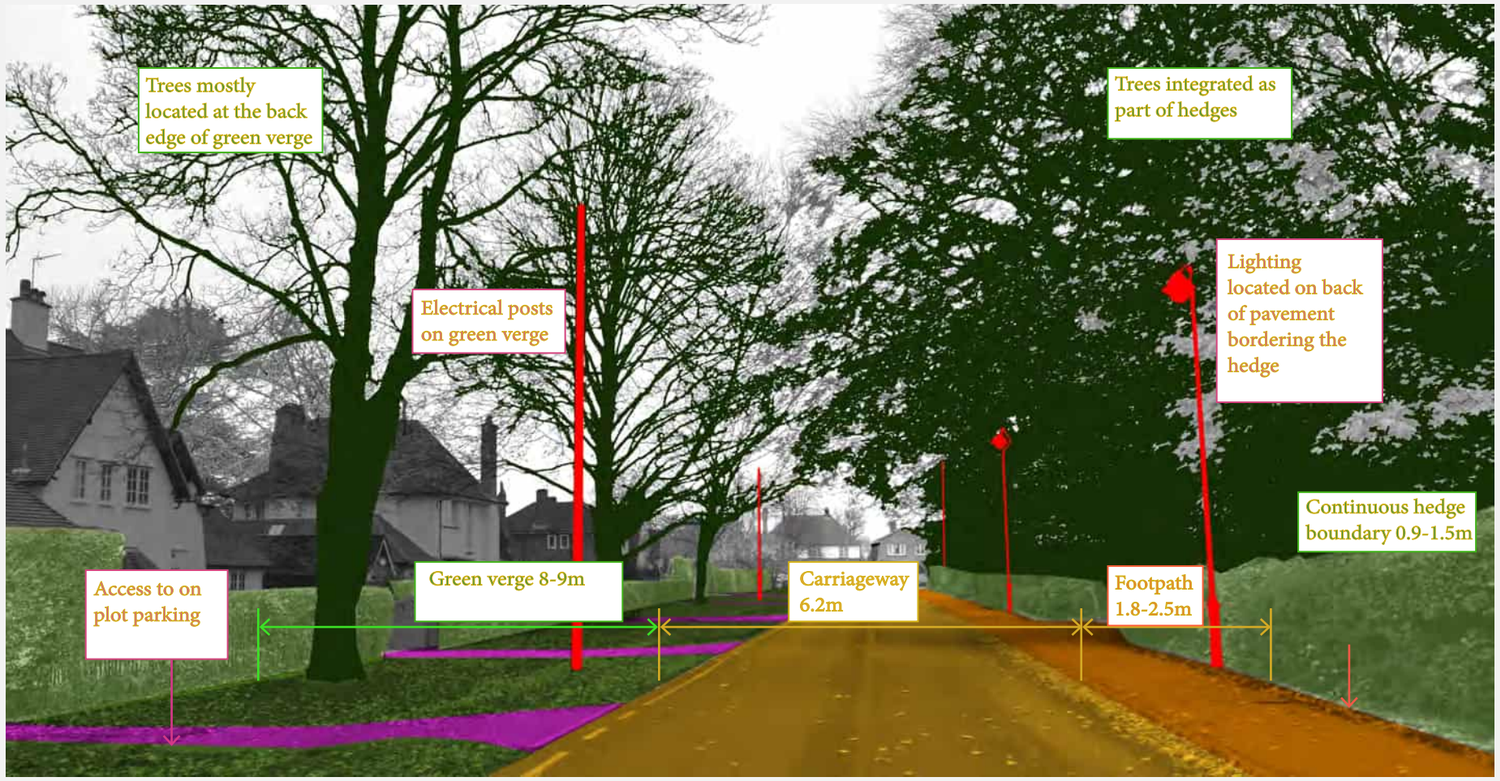


Fig. 6.37: Typical streetscape characteristics: Sollershott West



Broadway

Sense of enclosure	The Broadway is lined by 2-2.5 storey dwellings approx. 51m apart (Fig.6.39). Being far apart, buildings do not contribute much to achieving a sense of enclosure. But, the consistent hedge line and mature tree double avenue, contribute to achieving a strong sense of enclosure. The tall trees at regular intervals provide a formal character to the street.
Movement	8m carriageway accommodates 2-way access for vehicles. Mature tree avenue provides a strong green and spacious character to the road. The verges and front boundary hedges reinforce a soft character to the road and the main movement axis. The western side of the street has a generous green verge without any footpath limiting pedestrian accessibility (Fig. 6.40).
Access to dwellings	Driveways are formed via narrow breaks in the hedges, retaining their continuity. However, the continuous hedge boundary obscures view of front doors, impacting street conviviality (Fig. 6.40).
On-street Parking	No current on-street parking provision. The 8m wide carriageway, however, has the potential to accommodate on-street parking.
Utilities	Street lighting columns are located on the green verge facing the carriageway. There is lack of focussed lighting on the pavement (Fig. 6.40).

Fig. 6.38: Key plan - Broadway

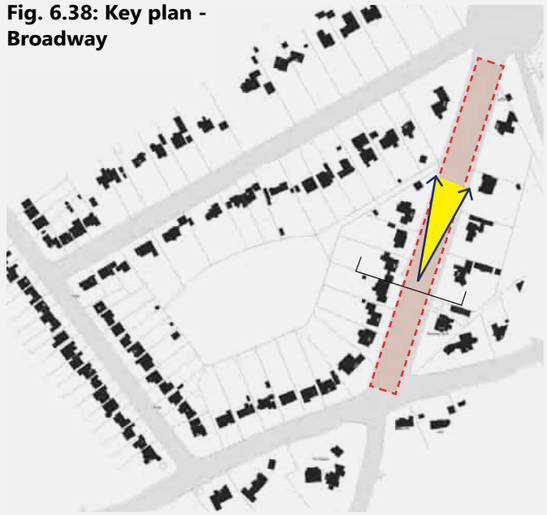


Fig. 6.39: Typical section - Broadway

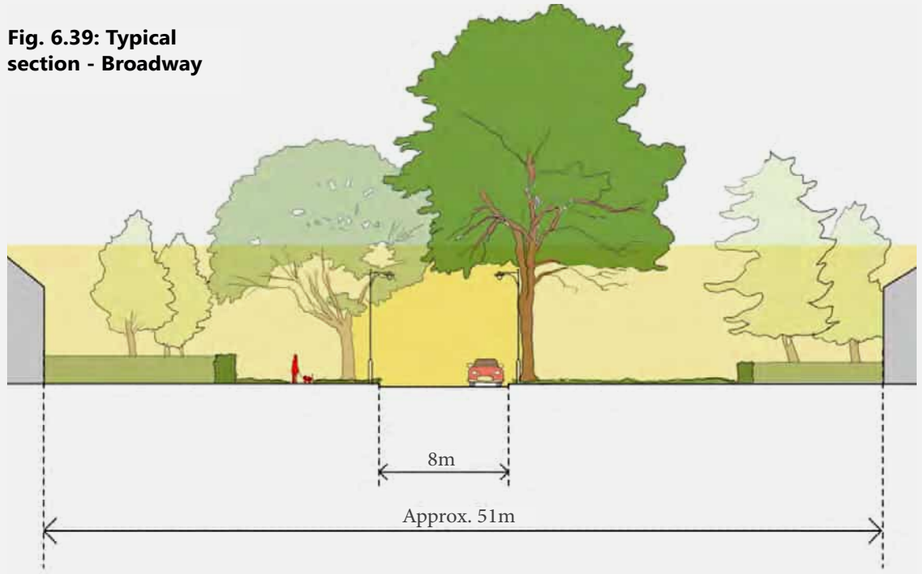
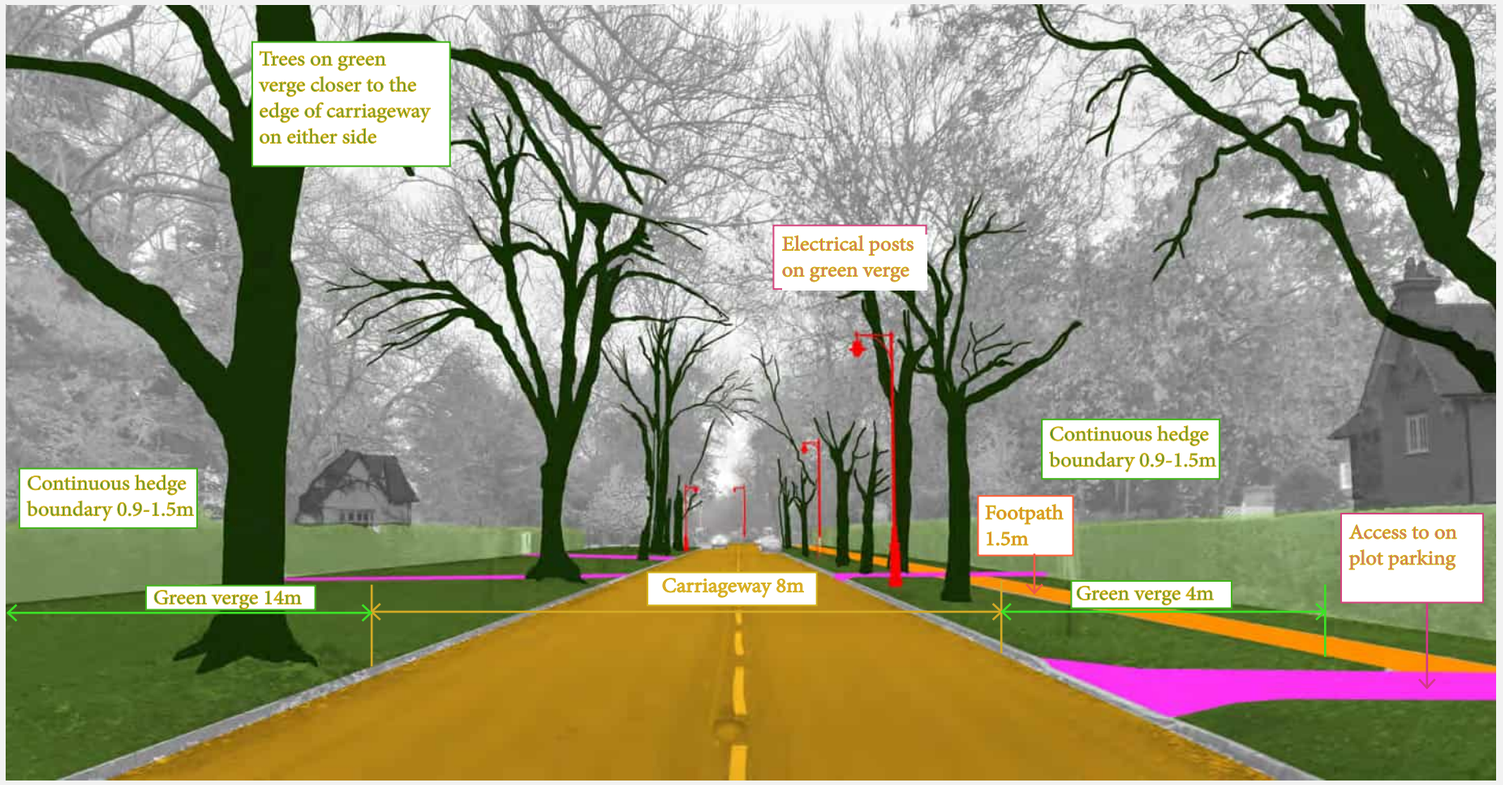


Fig. 6.40: Typical streetscape characteristics: Broadway



Key architectural characteristics

6.14 The buildings in this area are individually designed, and follow the vernacular Arts and Crafts style (Fig. 6.41). The majority of buildings are listed for their architectural and historic interest, designed by notable Garden City architects. All the houses are large in size and many are designed as a collection of rectangular forms.

Roof and skylines	Dominant roof forms (steeply pitched gabled roofs, hipped roofs) are accentuated with sweeping slopes and overhanging eaves (Fig. 6.44).
Vertical subdivisions	Gabled projections and bays balance the dominant horizontal forms.
Horizontal subdivisions	Horizontal subdivisions expressed by rainwater gutter, overhanging eaves, window cill and window groupings.
Windows and its grouping	Carefully proportioned types and groupings (dormers, small paned wooden casement windows, iron casement, stone mullion windows) provide visual richness. The ratio of walling to openings is always in the favour of the walling (Fig. 6.41,6.42).
Entrances	Recessed porches (Fig. 6.43) with doors. Some have upper part glazed.
Materiality: colours, textures and detailing	Roughcast is the predominant walling material, and contrasts a rich orange/red brick which is also characteristic. Timber-framing decoration or plain clay tiles are often used particularly to highlight gabled projections or gabled features. A limited materials palette unifies the diversity in individual building form.

Fig. 6.41: Key architectural features

Fig. 6.42: Windows

Fig. 6.43: Recessed entrance

Fig. 6.44: Roof detailing

Area 3

6.15 The chosen block forms part of Letchworth that was developed between 1906 and World War I for the Howard Cottage Society, with a strong relationship to the River Pix and Howard Park. (Fig.6.45). It includes pioneering housing layouts by Parker and Unwin that display their principles and concepts of informal design and building arrangements, setting a precedent for later housing in Letchworth and throughout the country. They are partly listed due to their layouts.

Block configuration

6.16 The block is an example of high density estate including terraces and semi-detached dwellings with individual gardens and communal areas (Fig. 6.46). The layouts were designed to provide 'unified' variety with simple terrace groupings at 90° to each other; and a culs-de-sac (Rushby Walk) enabling effective use of land. Corner plots are carefully considered as part of the block layout (Fig. 6.47-6.50). Details on plot arrangements and massing characteristics is outlined in the following page.

Fig. 6.45: Block location plan

Fig. 6.46: Zoom-in block plan

0 100m

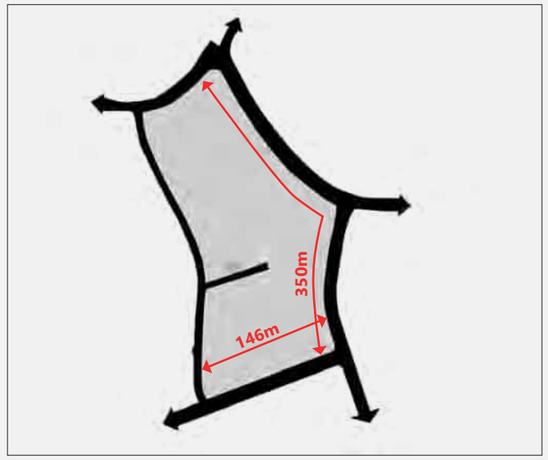


Fig. 6.47: Block size

Irregular in shape, the block is bounded by curvellinear streets, with distinct street characters marked by built edge, street trees, and amenity greens. The longer side of the block is about 350m which is not ideal for supporting walkability of the urban context. All 4 sides

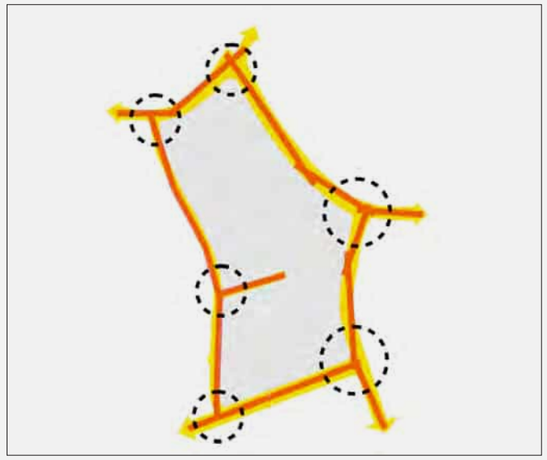


Fig. 6.48: Nodes and vistas

Buildings strategically positioned as focal points e.g. the school building in Hillshott and LGC Conservation Club form vistas and corner markers. Although curvilinear, the streets are sufficiently long with a strong built edge to support visual continuity and wayfinding. This is enhanced by pocket green spaces particularly along Ridge Road/ Ridge avenue.

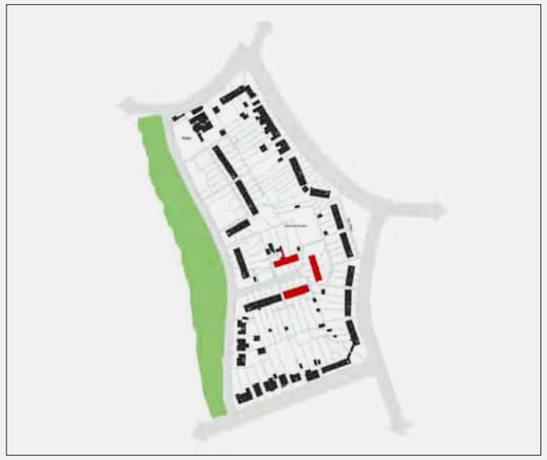


Fig. 6.49: Urban grain

A fine grain plot structure with a variety of building arrangements is unified through consistency in building line, form and scale. Rushby Walk, a culs-de-sac, terminates with an intimate-scale building grouping. The block is marked by considerable front setbacks in few segments. Buildings are positioned to complement the formation of junctions.

Fig. 6.50: Amenity space

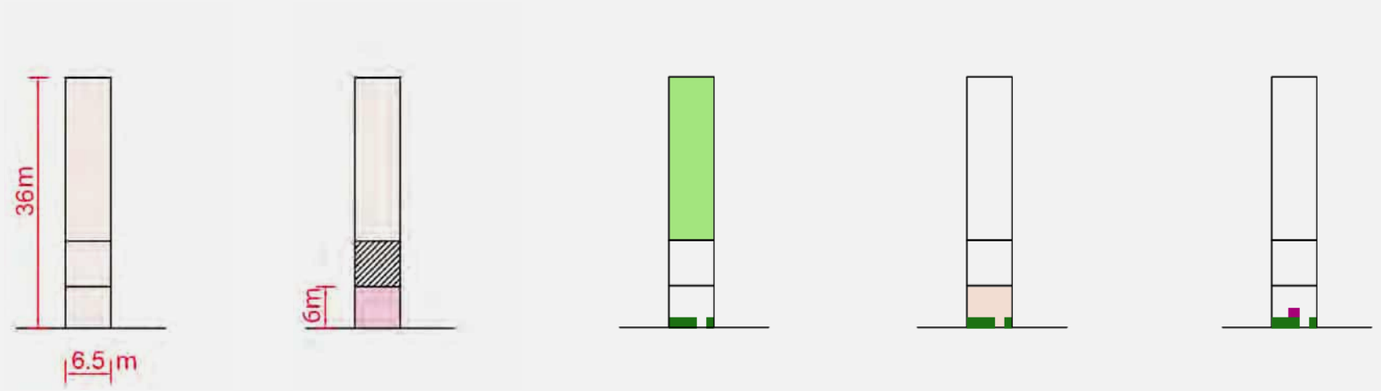
Most plots have generous front and/or back gardens offering private amenity space for individual residential plots and opportunities for biodiversity. Green open spaces along the street are bounded within strong hedgerow cover for communal use. Communal space within the block, is used as community allotments, with secure access from Ridge Road.

Plot, massing and built form character

Plot size, frontage and massing	Typically narrow plot widths vary from approx. 6.5m along Rushby Mead/ Ridge Road to 8m along Hillshott, with 1.5-2 storey high short rows of terraces and semi-detached houses (Fig.6.51). Buildings are positioned to complement junctions, but its impact is obscured by planting, e.g. Ridge Ave/ Hillshott corner. Plot depth of approx. 36m mostly creates well-sized back gardens (Fig.6.52A).
Front setback	Front setback range between 5-9m (Fig. 6.52B). This results in a fairly continuous and uniform built edge enclosing streets. Some terraces do have larger setback, particularly along Rushby Mead and junction of Ridge Road/ Ridge Avenue with communal open space at the front.
Biodiversity and environmental opportunities	Front and rear gardens provide opportunities for wildlife habitat, amenity, privacy and sunlight. Secure communal allotments support urban agriculture. Areas of softscaping contribute to ground water recharge (Fig.6.52C).
Plot boundary treatment along street	Continuous hedgerows/ planting along the front, forms a strong green street edge (Fig.6.52D).
On-plot parking and bins	On-plot parking typically seen along Birds Hill, Ridge Road and Hillshott. Bins are screened behind hedges (Fig. 6.52E).

Fig. 6.51: Conceptual massing model showing building groupings along Rushby Mead with 1.5-2 storey high tightly spaced short row of terrace groupings at 90o to each other typical of the block

Fig. 6.52: Plot plan of a typical terrace house along Rushby Mead



A. Plot size and frontage

B. Front setback

C. Biodiversity opportunities

D. Plot boundary treatment along street

E. Parking and bins

Streetscape character

6.17 The block is bounded by distinct street characters marked by built edge, street trees, and amenity greens. Rushby Mead (Fig. 6.53) fronting Howard Park and Rushby Walk (6.56) - an intimate residential culs-de-sac - are relevant precedents for LG1, hence analysed below.

Rushby Mead

Sense of enclosure	The northern end has significantly deep front building setbacks, but a well-defined sense of enclosure is achieved through a balance of built edge, hedging and planting along the edge of Howard Park (Fig. 6.54).
Movement	5.6m carriageway accommodates 2-way access for vehicles. Presence of mature trees, on-street parking, and a curvilinear form potentially slows down traffic, supporting walkability. Footpath provision on one side and a continuous fence barrier along the park limits pedestrian accessibility (Fig. 6.55)
Access to dwellings	Clear access to dwellings with front doors visible from the street (Fig. 6.55). Even the northern end - with the terraces fronted by a communal garden - has low height planting enabling some visibility to front doors.
On-street and/or off-street parking	On-street parking is clearly demarcated (Fig. 6.55), however, it can be argued that lack of tree planting between the parking spaces contribute to visual dominance of cars.
Utilities	Street lighting columns (Fig. 6.55) are regularly spaced on pavements.

Fig. 6.53: Key plan - Rushby Mead

Fig. 6.54: Typical section - Rushby Mead

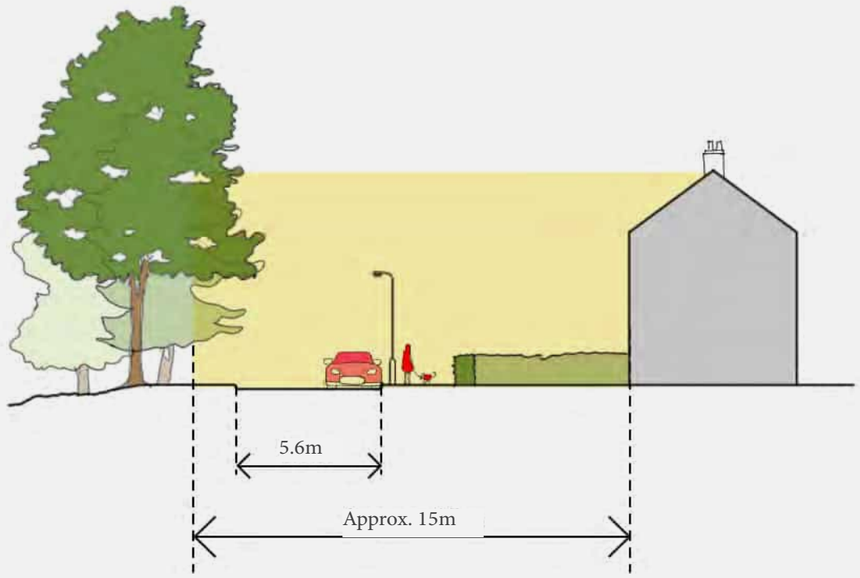
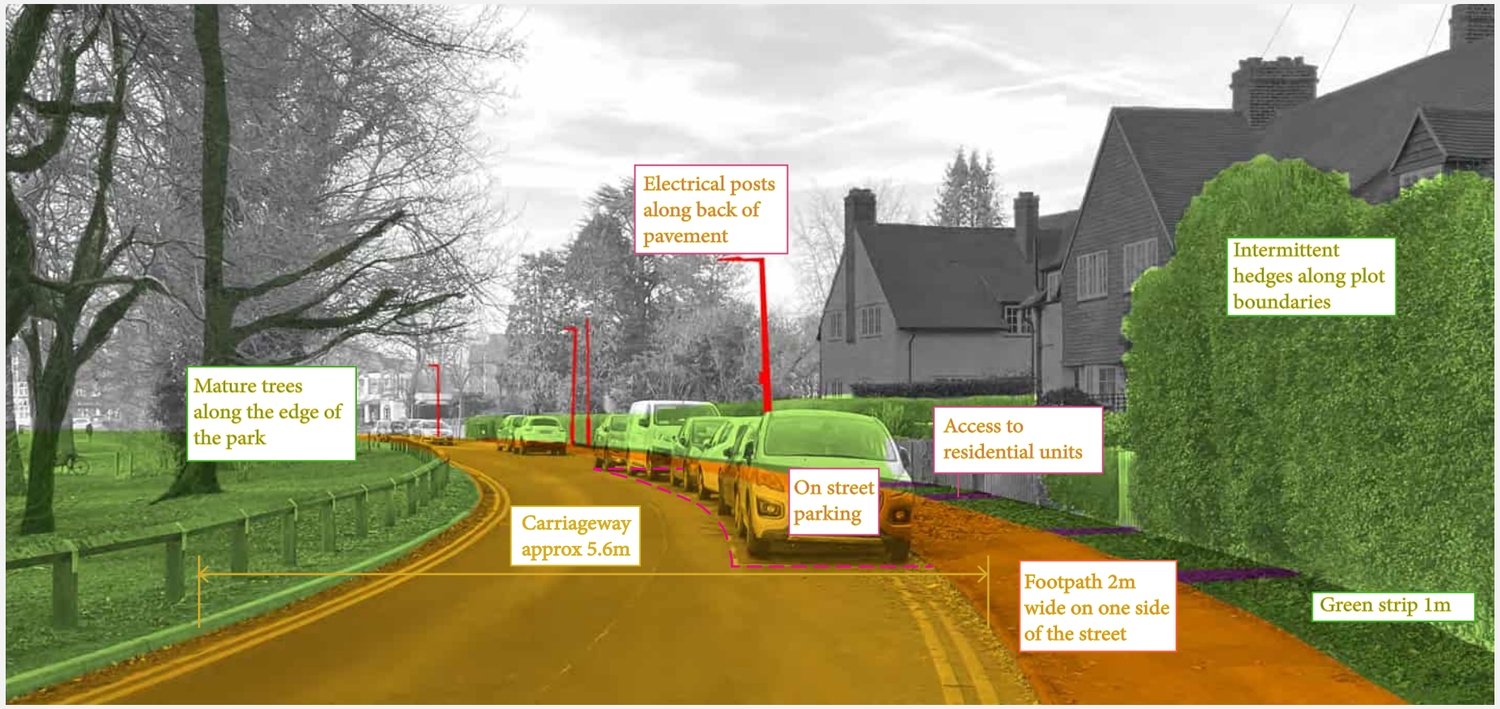


Fig. 6.55: Typical streetscape characteristics: Rushby Mead



Rushby Walk

Sense of enclosure	Narrow street width combined with 2 storey high terrace blocks arranged in groupings with a fairly continuous building line, minimal gaps between buildings, and the street vista terminating at the gabled terrace, cumulatively contribute to a strong sense of enclosure (Fig. 6.57). A single block of housing brings the building line to the road frontage, before the entrance to Rushby Walk, further enhancing its sense of enclosure.
Movement	As a residential close, it has a narrow carriageway of 3.5m accommodating vehicle access and on-street parking. Combined with the presence of fairly dense vegetation within plot boundaries contributes to slowing down traffic, supporting walkability. Footpath is either absent or less than 1m in some areas, limiting pedestrian accessibility (Fig. 6.58).
Access to dwellings	Clear access to plots from the street, with visible fronts doors supports conviviality (Fig. 6.58).
On-street and/or off-street parking	On-street parking is demarcated (Fig. 6.58). However, the street surfacing and off-plot cluster parking provision in the middle of the street contributes to the visual dominance of cars.
Utilities	Only 2 street lighting columns (Fig. 6.58) are located in this close; which is potentially insufficient.

Fig. 6.56: Key plan - Rushby Walk

Fig. 6.57: Typical section - Rushby Walk

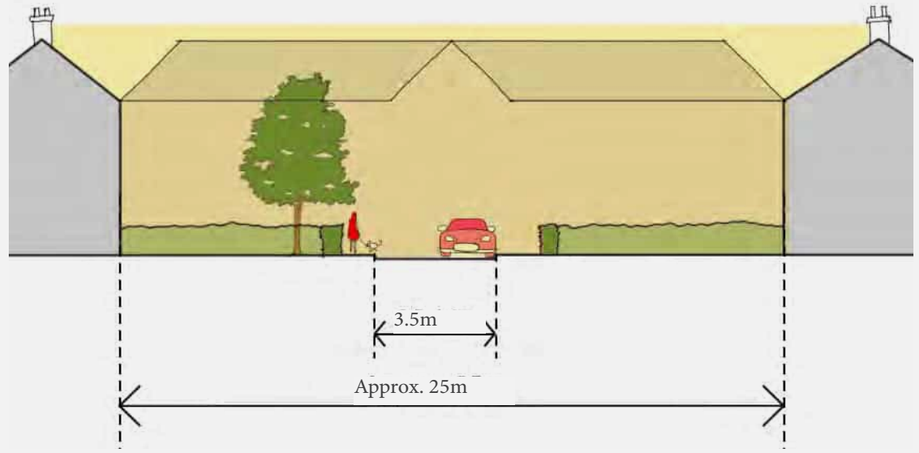


Fig. 6.58: Typical streetscape characteristics: Rushby Walk

Key architectural characteristics

6.18 The various housing typologies of this block provide a balance of unity and variety. They are based on simple rectangular forms, with a subtle variation in features and projections for visual richness. (Fig.5.47).

Roof and skylines	Gabled roof forms dominate a fairly uniform skyline with variety provided by hipped roofs and protuding chimneys (Fig.6.59, 6.60).
Vertical subdivisions	Rain water pipes (Fig.6.63), massing extrusions at consistent intervals and in some cases gabled projections supported by ground floor bay windows emphasise verticality.
Horizontal subdivisions	Horizontality is expressed by overhanging eaves, rainwater gutters, window cill and window alignments.
Windows and its grouping	Small paned casement windows dominate. Dormers appear in many different types and forms including gabled, catslide and simple flat roofed dormers usually positioned at eaves level (Fig.6.61, 6.62).
Entrances	Doors (wooden planked) are recessed under curved arches with drip mould or flushed with a canopy on moulded brackets. Some have small casement windows (Fig.6.64).
Materiality: colours, textures and detailing	Plain clay tile roofs and rough cast wall painted off-white/ cream unite the terraces in this area. Some dormers and gables are emphasised using dark brown weatherboarding or tile hanging.

Fig. 6.59: Key architectural features - Rushby Walk

Fig. 6.60: Key architectural features - Rushby Mead

Fig. 6.61: Small paned casement windows

Fig. 6.62: Eave-level dormers

Fig. 6.63: Exposed rain water pipes

Fig. 6.64 Recessed door under curved arch

Area 4

6.19 The chosen blocks known as the Aborn estate - Hallmead, Mullway and Monklands - is located to the north west of Letchworth (Fig.6.65). It was developed by a religious property developer Abba Bornstein and became a Jewish enclave, for religious Jewish families migrating from London after the World War II broke out in 1939.

Block configuration

6.20 The blocks are an example of medium to high density estate with tightly spaced short rows of terraced, and semi-detached housing (Fig.6.66). Semi-detached houses to the north of Eldefield are grouped around small amenity green of varying sizes, drawing from the planning principles of early Garden City housing. Buildings along Mullway, Hallmead and Monklands are staggered to consistently align with the line of the streets. Corner plots are carefully considered as part of the block layout (Fig.6.67-6.70). Further detail on plot arrangements and massing characteristics is outlined in the following page.

Fig. 6.65: Block location plan

Fig. 6.66: Zoom-in block plan

0 100m

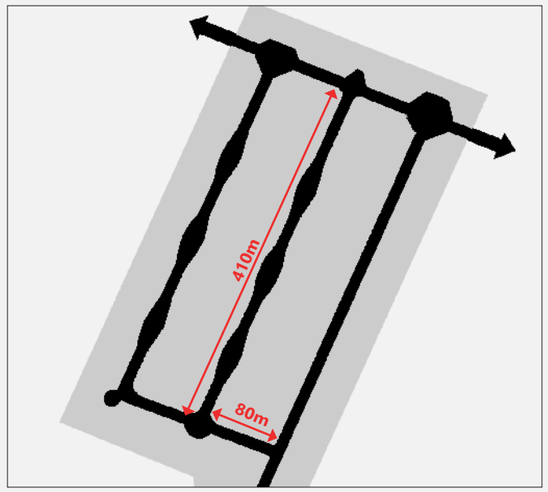


Fig. 6.67: Block size

Rectangular and narrow in shape, the block is relatively long. The length along Mullway, Hallmead and Monklands is approx. 410m. Such configurations are not ideal for supporting walkability of the urban context.

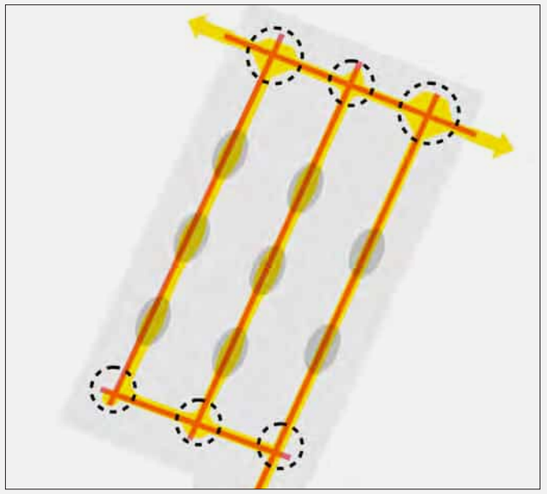


Fig. 6.68: Nodes and vistas

The main focal points at the end of Mullway, Hallmead and Monklands tends to be an arranged group of buildings around a small amenity greens that vary in size and scale. The slight curvature of streets and/or setbacks form small-scale experiential thresholds at regular intervals.

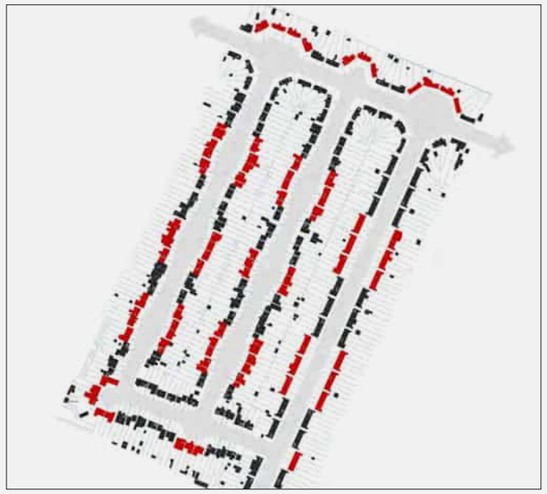


Fig. 6.69: Urban grain

A fine grain plot structure forms perimeter blocks with staggered buildings - consistent in scale and form - following the street curvature. Grouped arrangements of buildings around small greens break the monotony of the otherwise long and linear streets and provide visual interest.

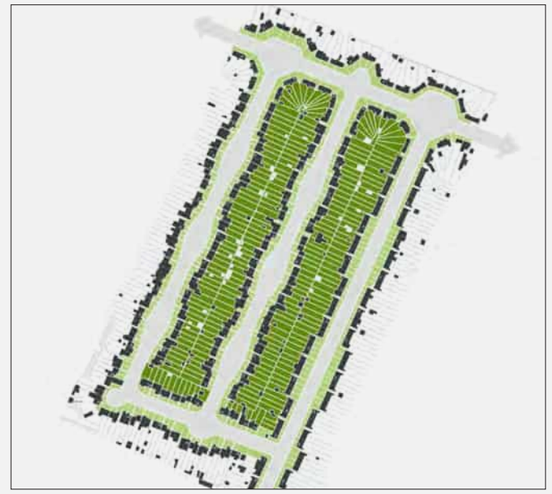


Fig. 6.70: Amenity space

Generously sized back gardens offer private amenity space for individual residential plots and opportunities for biodiversity. The green open spaces along streets are public amenity spaces providing both visual relief and visual interest along the street.

Plot, massing and built form character

Plot size and frontage and massing	Narrow plot frontages approx. 6m wide (Fig. 6.72A) with 2-2.5 storey high short rows of 3-4 terraces and semi-detached houses is typical. Despite consistency in massing, the positioning of the building in relation to the plot varies, aligned with the street geometry. This adds visual interest to the streetscape (Fig. 6.71). Most corner plots are carefully considered with buildings either positioned diagonally facing directly onto junctions or the building itself is bent at angles to reflect the angle of the road.
Front setback	Relatively consistent front setbacks of approx. 7m creates uniformity in building line that undulates in line with the street (Fig. 6.72B).
Biodiversity and environmental opportunities	Modestly sized front gardens and long back gardens provide opportunities for mature tree planting and hedgerow boundaries offering biodiversity potentials. Areas of softscaping contribute to ground water recharge (Fig.6.72C).
Plot boundary treatment along street	A mix of low hedges, bushes and fences form front boundaries (Fig. 6.72D). Visible lack of maintenance in places contributes to an unattractive street scene.
On-plot parking and bins	7m front setback offers limited space for parking. Bins left unscreened in the front open space (Fig. 6.72E) create visual clutter.

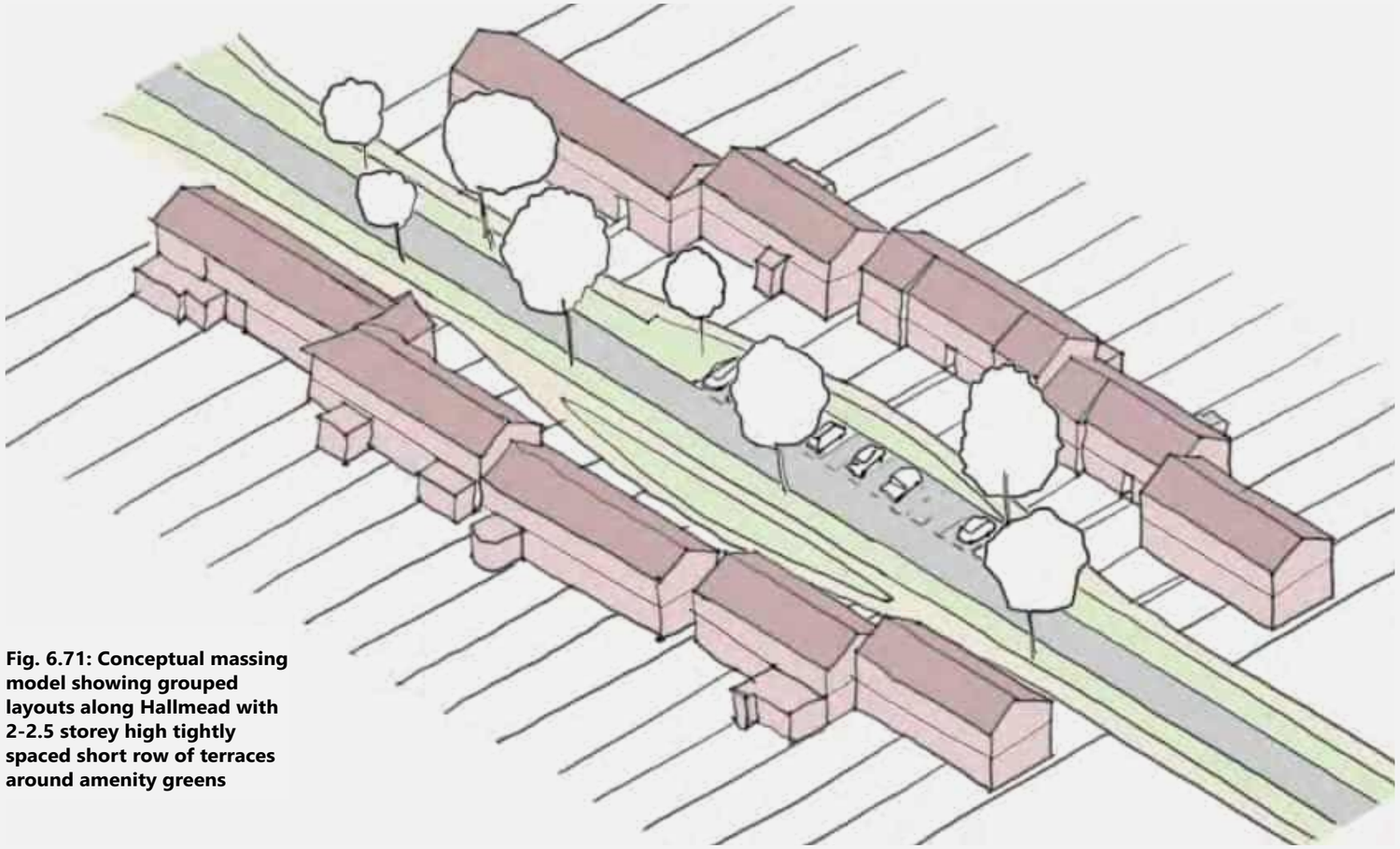
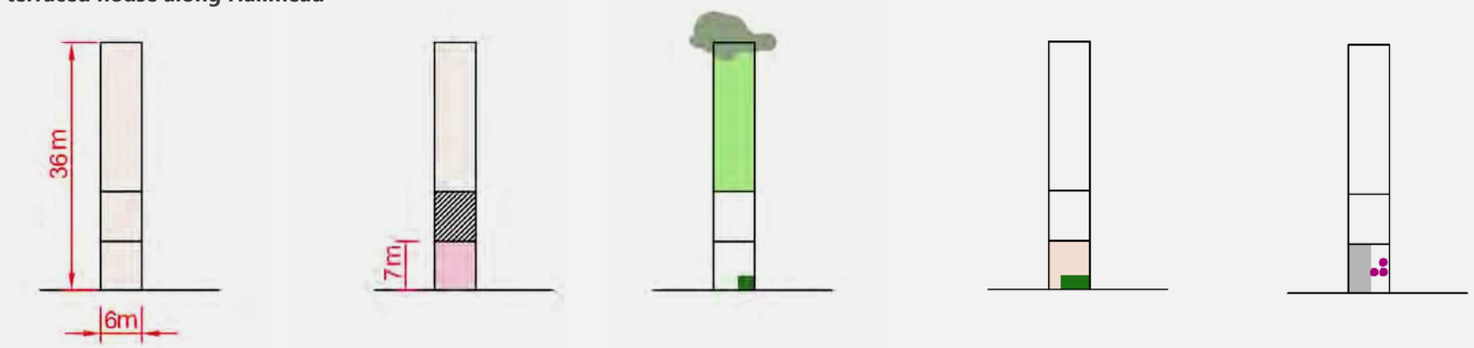


Fig. 6.71: Conceptual massing model showing grouped layouts along Hallmead with 2-2.5 storey high tightly spaced short row of terraces around amenity greens

Fig. 6.72: Plot plan of a typical terraced house along Hallmead



A. Plot size and frontage

B. Front setback

C. Biodiversity opportunities

D. Plot boundary treatment along street

E. Parking and bins

Streetscape character

6.21 Mullway, Hallmead and Monklands are typical street types for the chosen blocks. As an example, to understand the key streetscape characteristics, Hallmead (Fig. 6.73) is analysed in further detail below.

Hallmead

Sense of enclosure	Continuous built edge close to street, trees on grassed verge, and regularly spaced lampposts, cumulatively contribute to creating a well-defined sense of enclosure (Fig. 6.74).
Movement	4.8m carriageway accommodates a 2-way access for vehicles. A 3m wide green verge with irregularly spaced mature trees mitigates the visual dominance of the carriageway within the streetscape. Provision of footpath on both sides of the street supports pedestrian accessibility (Fig. 6.75).
Access to dwellings	Continuity of green verge is broken due to frequent driveways and access to plots from the street. Entrances are visible from the street enhancing a sense of conviviality (Fig. 6.75).
On-street Parking	On-street parking is designed across the whole street (Fig.5.46), but created issues of parking on grass verges. To assist with this, Council introduced some traffic management measures and additional parking bays on verges, some of which has had a negative impact on the street scene.
Utilities	Street lighting is located on the verge facing carriageway. There is a lack of focussed pavement lighting (Fig.6.75).

Fig. 6.73: Key plan - Hallmead

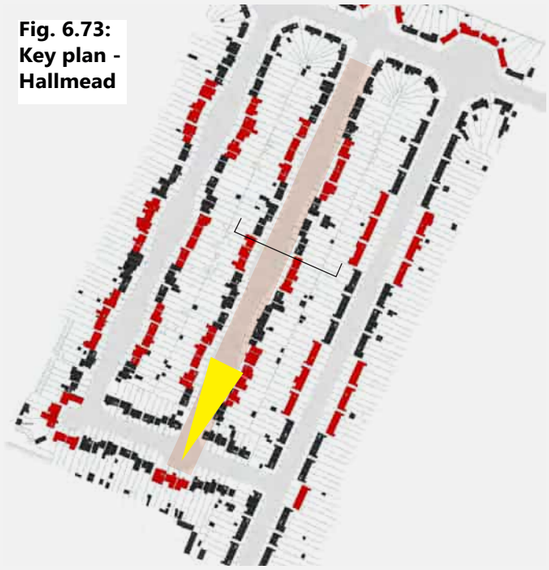


Fig. 6.74: Typical section - Hallmead

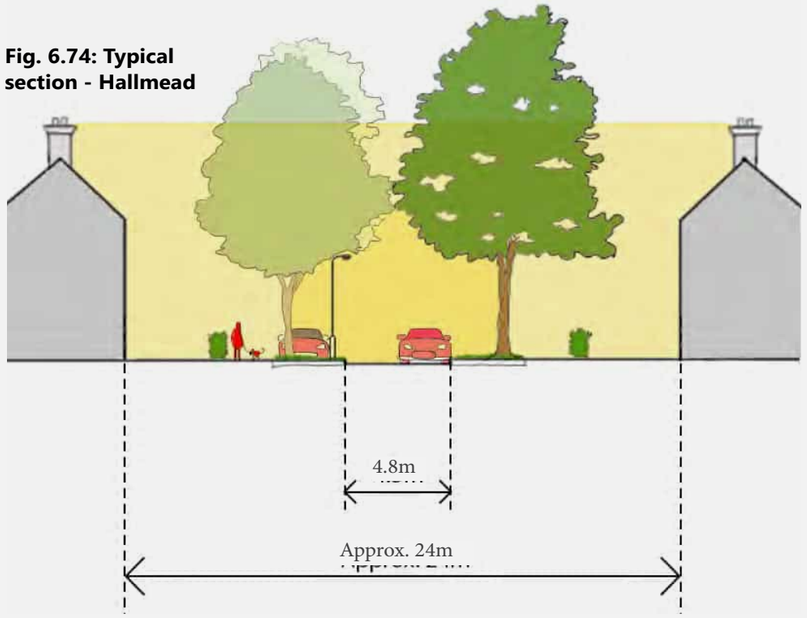
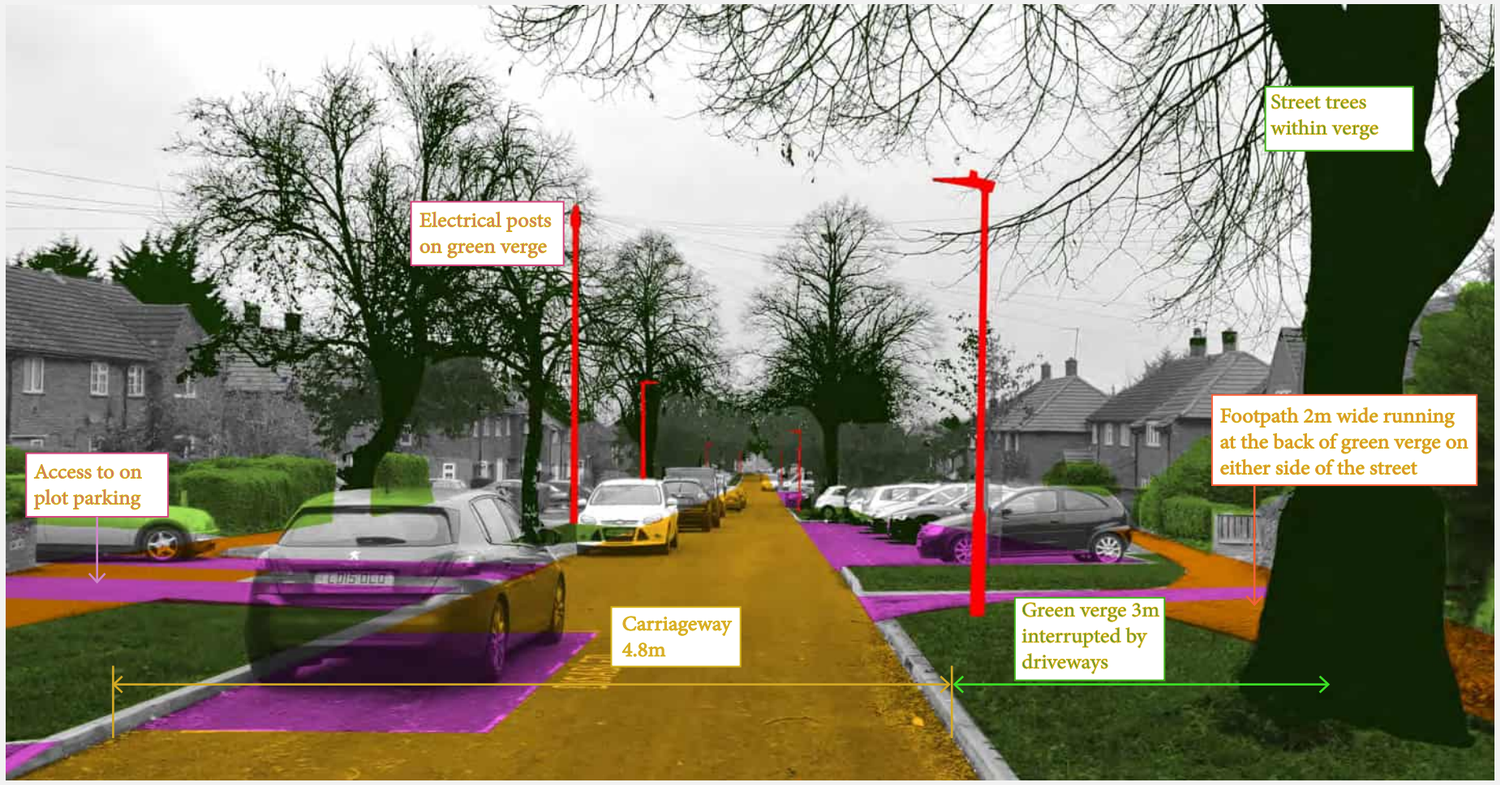


Fig. 6.75: Typical streetscape characteristics - Hallmead



Key architectural characteristics

6.22 The buildings of this area formed part of the original Garden City masterplan, and contains predominantly short rows of terraces and semi-detached houses of simple architectural forms (Fig. 6.76).

Roof and skylines	A fairly continuous skyline of shingled hipped roof with chimneys create uniformity that is broken at short intervals with gable ends (Fig. 6.76). Numerous satellite dishes on the front elevation are visible.
Vertical subdivisions	Rain water pipes and surface level variation in terms of building massing extrusions at consistent intervals emphasise verticality.
Horizontal subdivisions	Horizontality is expressed by overhanging eaves, rainwater gutters, window cill and window alignments.
Windows and its grouping	Modern UPVC windows dominate the streetscape; although there are a few mullioned casement windows with glazing bars, reminiscent of early Garden City housing (Fig.6.77).
Entrances	Recessed entrances have planked doors, some with ironwork and glass panes (Fig. 6.78).
Materiality: colours, textures and detailing	Bricks and clay roof tiles are the predominant materials. Brown brick wall has some contrast with white windows and entrance door surrounds, but there is a lack of contrast between roof and wall surface: a departure from the early Garden City aesthetics (Fig. 6.79).

Fig. 6.76: Key architectural features

Fig. 6.77: Windows

Fig. 6.78: Recessed entrance

Fig.6.79: Roof detailing

Area 5

6.23 The chosen blocks form part of Grange Estate - a major planned expansion of Letchworth in 1950s based on designs by renowned landscape architect Sir Geoffrey Jellicoe and developed as a Local Authority scheme, following a compulsory purchase order. It is located to the west of the local centre along Southfields (Fig. 6.80).

Block configuration

6.24 The blocks are an example of medium to high density housing with tightly spaced short rows of terraced, and semi-detached housing based around a deformed street grid with rear parking courts (Fig. 6.81). Mid-way along Caslon Way and Heathermere, residential plots are grouped around small amenity greens, reminiscent of Letchworth's early grouped layouts. Buildings front the roads and are set around blocks with houses backing onto one another. Building frontages are staggered and/ or arrayed consistently to respond to the curvilinear form of the streets (Fig. 6.82-6.85). Further details on plot and massing characteristics is outlined in the next page.

Fig. 6.80: Block location plan

Fig. 6.81: Zoom-in block plan

0 100m

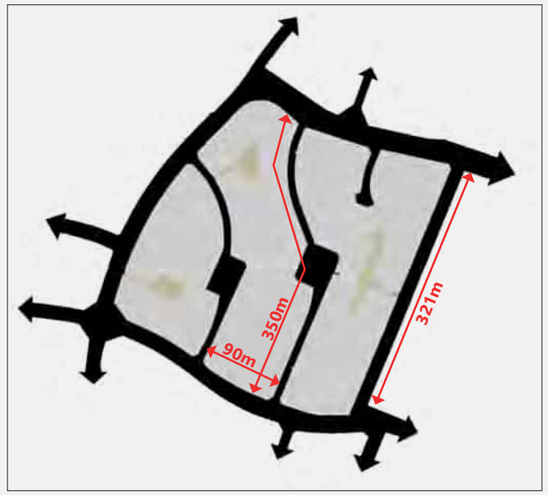


Fig. 6.82: Block size

The blocks are irregular in shape. Block sizes are relatively large ranging from 350mx90m to 260mx117m, which is not ideal for supporting walkability. They also benefit from visual relief provided by the small amenity greens along Caslon Way and Heathermere.

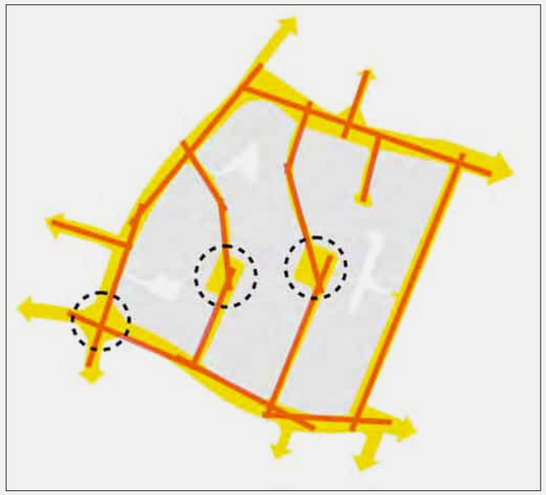


Fig. 6.83: Nodes and vistas

The small greens along Caslon Way and Heathermere streets form key nodes/ markers and provide continuity of vistas at critical junctures i.e. mid-way along these long streets; where it curves. This enhances navigation, wayfinding and adds visual interest to the streetscape experience.

Fig. 6.84: Urban grain

A fine grain plot structure forms perimeter blocks with arrayed buildings and key groupings that follow street curvatures, forming a consistent built edge. The corner plots and positioning of buildings within in are not given any special consideration in terms of local legibility markers.

Fig. 6.85: Amenity space

Generously sized front and back gardens offer private amenity space for individual residential plots and opportunities for biodiversity. The green open spaces along streets are public amenity spaces providing both visual relief and visual interest along the street.

Plot, massing and built form character

Plot size, frontage and massing	Narrow plot frontages approx. 8m wide (Fig. 6.87A) with 2-2.5 storey high short rows of terraces and semi detached house types (Fig. 6.86). The corner plots are not treated any differently to other residential plots in terms of building disposition, form and aesthetics. This results in corners not being consciously designed to maximise legibility and enhance memorability through buildings designed as minor markers.
Front setback	Buildings are setback from street by approx. 7m in a fairly consistent manner (Fig. 6.87B). This results in a continuous and uniform built edge enclosing public space.
Biodiversity and environmental opportunities	Rear gardens that back onto other rear gardens is a means of maximising wildlife habitat, privacy and sunlight. Areas of softscaping contribute to ground water recharge (Fig. 6.87C).
Plot boundary treatment along street	Front gardens are delineated by intermittent hedges, small boundary walls, wooden fences, chain link fences and visible hardstandings (Fig. 6.87D), not always in line with GC character.
On-plot parking and bins	7m front setback allows for on-plot parking. Bins are stored in the front open, not always screened behind hedges (Fig. 6.87E).

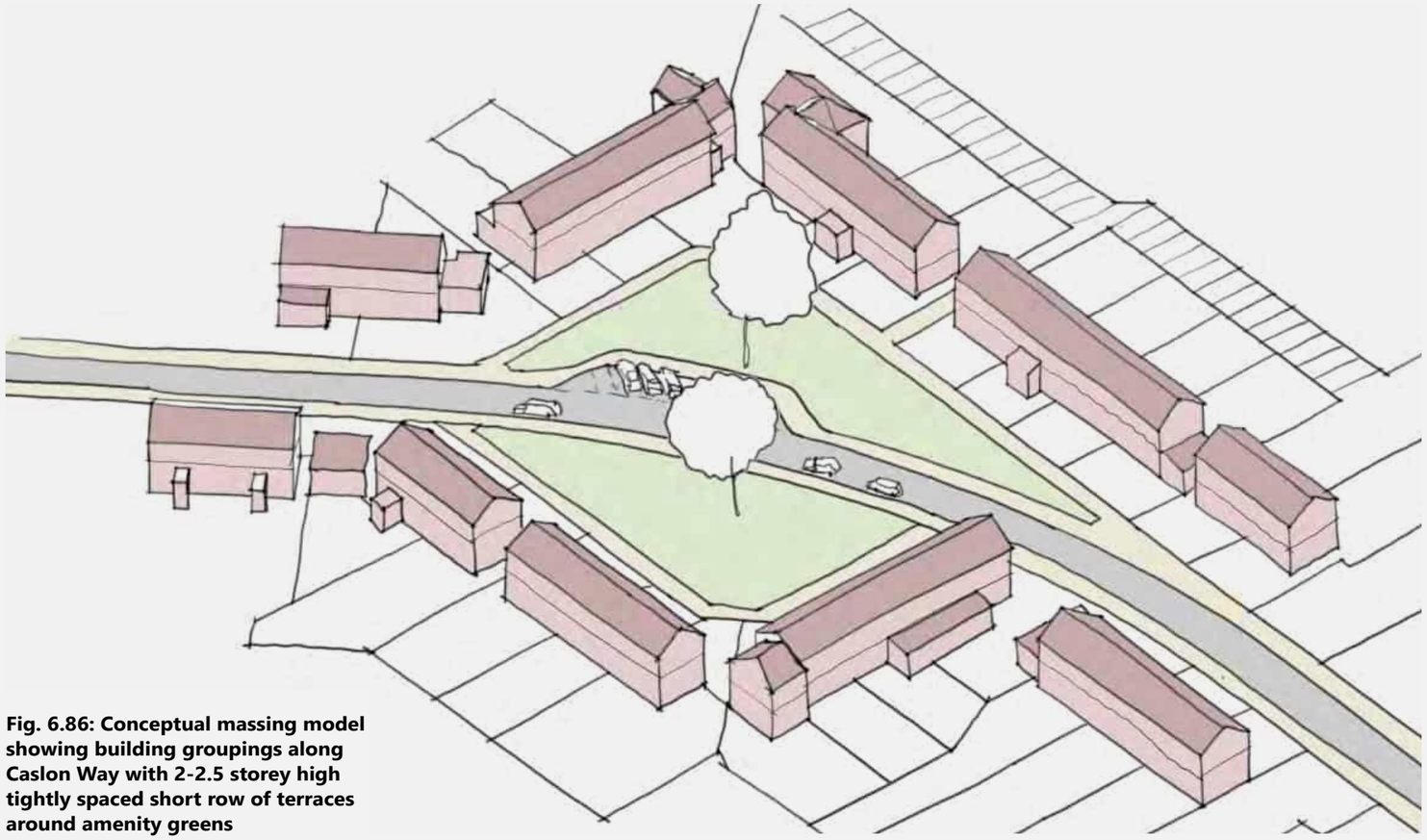
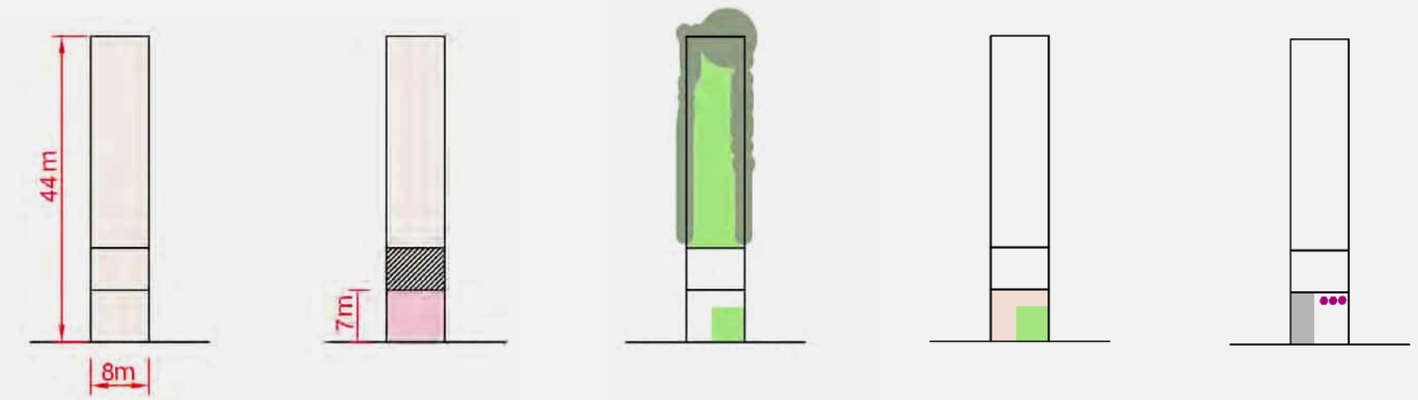


Fig. 6.86: Conceptual massing model showing building groupings along Caslon Way with 2-2.5 storey high tightly spaced short row of terraces around amenity greens

Fig. 6.87: Plot plan of a typical terraced house along Caslon Way



A. Plot size and frontage

B. Front setback

C. Biodiversity opportunities

D. Plot boundary treatment along street

E. Parking and bins

Streetscape character

6.25 Overall, the Grange Estate typifies the design approach of a large proportion of post-war Council estates, but with Jellicoe's input displays a greener and more considerate perspective towards its landscape strategy. Northfields, Southfields and Western Way are main roads, characterised by verges, small greens and corner splays with small trees. In contrast, Caslon Way (Fig. 6.88; analysed below) and Heathermere are local residential streets that lack green verges but include grouped layouts.

Caslon Way

Sense of enclosure	The 2-2.5 storey buildings have a well-defined relationship with the road, creating a consistent building line and a strong sense of enclosure (Fig. 6.89).
Movement	4.8m carriageway accommodates 2-way access for vehicles. A lack of green verge and/or mature tree planting makes the buildings, hard standings and street/ pavement surfaces as the most dominant feature of the streetscape (Fig.6.90), except for the middle section where buildings are grouped around small amenity greens.
Access to dwellings	There is clear access to plots from the street. Provision of 2m wide footpath on both sides of the street supports pedestrian accessibility. Front doors are visible from the street (Fig.6.90).
On-street and/or off-street parking	There is some on-street parking but not always clearly demarcated (Fig.6.90). Rear parking courts and garages provide off-plot parking.
Utilities	Street lighting columns (Fig.6.90) are regularly spaced on pavements.

Fig. 6.88: Key plan - Caslon Way

Fig. 6.89: Typical section - Caslon Way

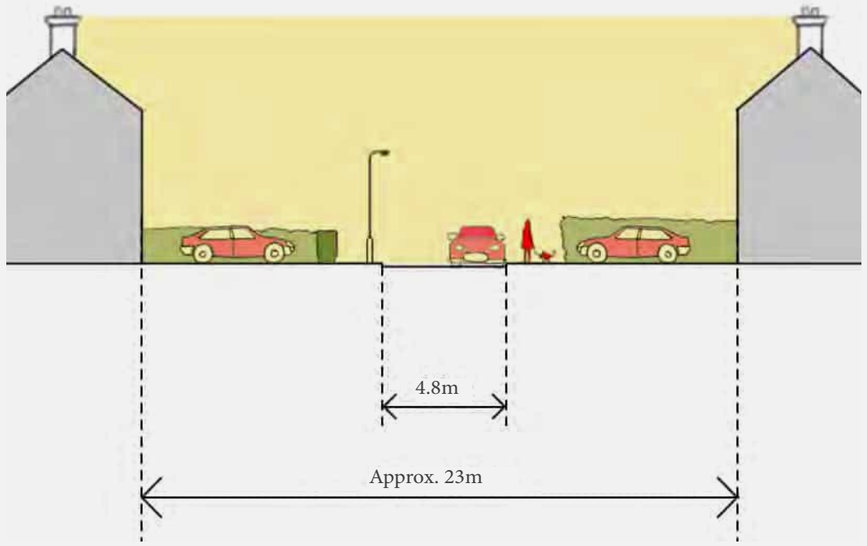


Fig. 6.90: Typical streetscape characteristics: Caslon Way

Key architectural characteristics

6.26 Terraced blocks and small semi-detached houses largely form the housing in this area. They are uniform in scale, generally simple and rectangular in plan form and relatively narrow in depth (Fig. 6.91).

Roof and skylines	Hard brown tiled hipped roofs with chimneys at regular intervals forms a fairly consistent and uniform skyline.
Vertical subdivisions	Exposed rain water pipes are the only vertical elements in an otherwise fairly flat facade.
Horizontal subdivisions	Overhanging eaves, rainwater gutters, alignment of windows and window cills, cumulatively emphasise horizontality of the building elevation.
Windows and its grouping	Modern UPVC windows dominate the street scene (Fig. 6.92); although there are a few mullioned windows with glazing bars, reminiscent of early Garden City housing.
Entrances	A mix of recessed entrances and protruding porches of varying sizes. Some houses also have modern entrance doors with small and typically flat-roofed cantilevered canopies for shelter (Fig. 6.93, 6.94).
Materiality: colours, textures and detailing	There is a lack of contrast between the walling and roofing materials which is a departure from the early Garden City aesthetics. Integrated PV panels are installed on some of the roofs (Fig. 6.95).

Fig. 6.91: Key architectural features

Fig. 6.92: Windows

Fig. 6.93: Protruding entrance porch

Fig. 6.94: Doors typically with flat-roofed canopies

Fig. 6.95: Roofs with PV panels

Area 6

6.27 Hartington Place is a innovative Code for Sustainable Homes Level 4 contemporary residential development located at the north-eastern edge of Letchworth (Fig.6.96). It was designed as a modern interpretation of Garden City principles, following a design competition, comprising 60 dwellings spread over 10 blocks, incorporating mixed tenure houses and apartments.

Block configuration

6.28 The site layout draws from a range of Garden City principles including: grouping of buildings around a central amenity green, vista, closure, accent and integration of landscape within the development (Fig. 6.97-6.101). Unrestricted access into the central landscaped area, however, might pose privacy and safety issues. Further details on plot arrangements and massing characteristics are outlined in the following page.

Fig. 6.96: Block location plan

Fig. 6.97: Zoom-in block plan

0 50m

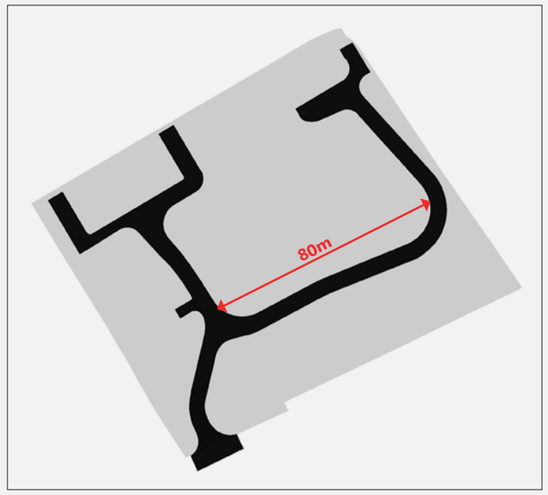


Fig. 6.98: Block size

The development is small in scale with internal street network characterised by cul-de-sacs. Such layouts are typical of the immediate local area, cumulatively encouraging car dependency.

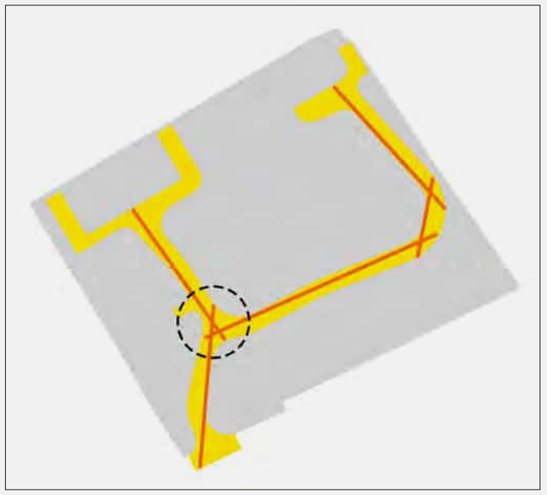


Fig. 6.99: Nodes and vistas

The entrance into Hartington Place is defined by a strong built edge of the apartment buildings on either side, that frames a vista towards the central green amenity space, supporting easy wayfinding within the site.

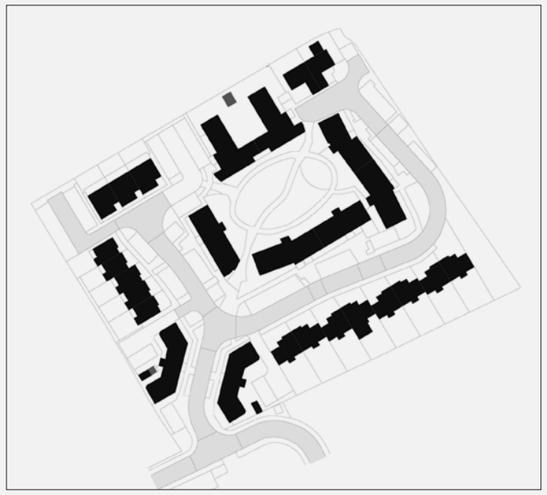


Fig. 6.100: Urban grain

The fine-grain plot structure of the terraces is combined with a more coarser grain of apartment plots, resulting in a relatively high density development. Undulation in massing heights provides some visual relief through gaps between buildings in certain places.

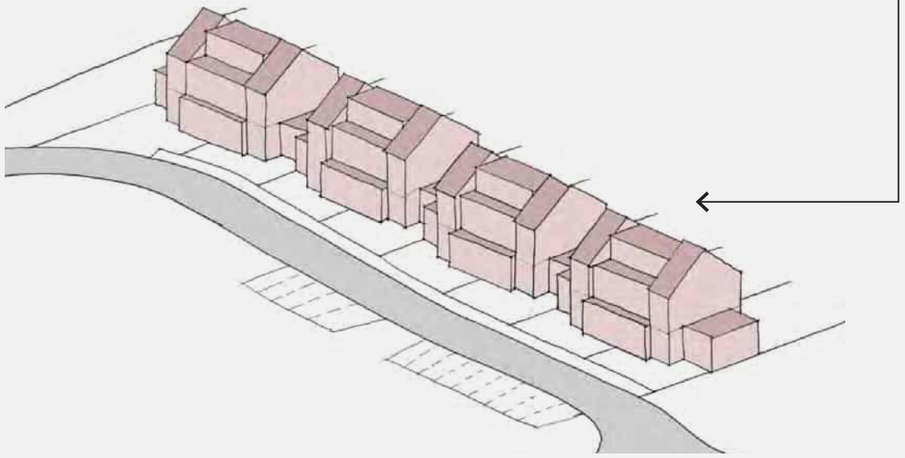
Fig. 6.101: Amenity space

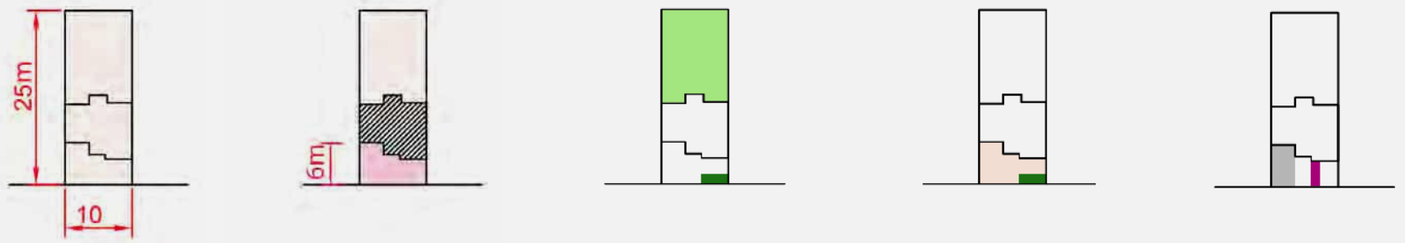
Modestly sized front and back gardens offer private amenity space for individual terraced houses. The central green space functions as an 900sqm of shared amenity space with a small play area. There is no gated access to this central space. Hedges provide privacy to ground floor residential units.

Plot, massing and built form character

Plot size, frontage and massing	3-storey high terraces have relatively narrow plot frontages approx. 10m wide with private back gardens (Fig. 6.103A). Massing variations from 1-3 storeys creates visual gaps between terraces. 3-4 storey high apartment plots are located at the entrance to and around the central green space (Fig. 6.102, 6.103).
Front setback	Varies from 4-7.5m for terraces (Fig. 6.103B). The building edge is relatively consistent with slight massing projections and extrusions. Apartment buildings have an approx. 1.4m wide setback for hedge as defensible space, resulting in a strong built edge.
Biodiversity and environmental opportunities	Approx. 10m deep back gardens and central green amenity offer opportunities for planting and biodiversity (Fig. 6.103C). Geotextile membranes are used with grass for parking spaces to improve surface water runoff, but these have not always established.
Plot boundary treatment along street	Front boundaries are defined by low height intermittent hedges that does not compromise visibility of front doors (Fig. 6.103D).
On-plot parking and bins	Garages/ driveway parking are provided for terraced houses. Enclosed bin storage is integrated on-plot (Fig. 6.103E). Apartments have cluster parking to the rear.

Fig. 6.102: Conceptual massing and layout of Hartington Place development showing 3-4 storey high buildings grouped around a landscaped green space





A. Plot size and frontage | **B. Front setback** | **C. Biodiversity opportunities** | **D. Plot boundary treatment along street** | **E. Parking and bins**

Fig. 6.103: Conceptual massing (left) and plot plans (below) of larger 3-storey houses with private front and back gardens

Streetscape character

6.29 The roads of this development are designed to give pedestrian priority over the car. Main elements include landscaping, hedges and feature trees to create 'green' streets that foster walking and outdoor play (Fig. 6.104).

Hartington Place

Sense of enclosure	Hartington Place is well defined by 3-4 storey apartment blocks and terraces. Minimal front setbacks with planted defensible space contribute to a strong sense of enclosure; reinforced by trees on landscaped strip (Fig.6.105).
Movement	5.4m carriageway accommodates a 2-way access for vehicles. The relatively narrow width and surfacing material for carriageway mitigates visual dominance of car. Provision of footpath on either side of the street supports pedestrian accessibility. Landscaped strip with trees between the pavement and carriageway contributes to traffic calming and a sense of safety (Fig. 6.106).
Access to dwellings	There is clear access to the residential units from the street. Front entrances are clearly visible supporting conviviality and natural surveillance of public space (Fig. 6.106).
On-street parking	The street hosts perpendicular parking in clusters, but limited verges and pavement in places provide limited visual relief to frontage parking.
Utilities	Street lighting is staggered and located at the back of pavement (Fig. 6.106).

Fig. 6.104: Key plan - Hartington Place

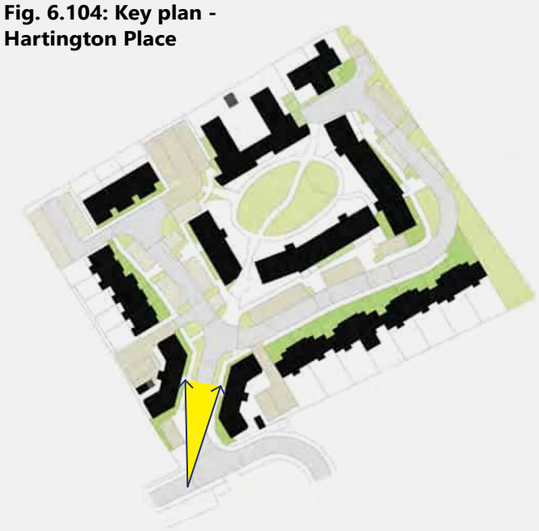


Fig.6.105: Typical section - Hartington Place entrance

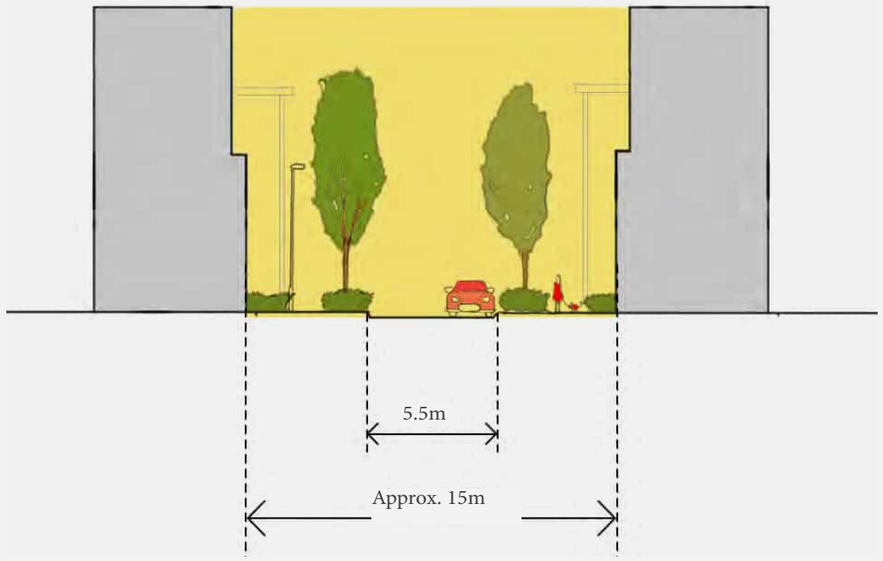


Fig. 6.106: Typical streetscape characteristics - Hartington Place entrance

Key architectural characteristics

6.30 Building design is a contemporary interpretation of GC principles of contrast, coherence and a strong group identity (Fig. 6.107). Each group of buildings has it's own design, avoiding the 'mass produced' model and giving it an unique feel. However, there are some issues regarding material palette and maintenance which has impacted on its appearance.

Roof and skylines	Pitched roofs are interrupted by flat roofs creating geometric complexity in the skyline (Fig. 6.107). Each building has south-facing roof area, integrating solar panels (Fig. 6.109).
Vertical subdivisions	Rain water pipes and facade extrusions with contrasting materials creates a sense of verticality in a relatively flat facade.
Horizontal subdivisions	Horizontality is expressed by multiple terrace and roof levels, balcony railings, rainwater gutters and alignments of windows.
Windows and its grouping	A limited palette of window types and grouping arrangements balances variety with coherence.
Entrances	Mix of recessed and protruding porches with the use of contrasting colours support legibility (Fig.6.110).
Materiality: colours, textures and detailing	White rendered facade and galvanised roof contrasts with the wooden finish windows, timber panelled wallings and low level landscape (Fig.6.108, 6.109). Use of innovative sustainable materials create a low carbon development.

Fig. 6.107: Key architectural features

Fig. 6.108: Windows

Fig. 6.109: Variation in massing and PV on south-facing roofs

Fig. 6.110: Entrance detail

LG1 built form and architecture

To support a modern interpretation of Garden City design, LG1's built form and architecture should be based on an understanding of the underlying nature of Garden City design principles.

6.31 The review of the chosen blocks seek positive and negative lessons in regards to block configuration, streetscape character, plot types, massing and built form characteristics that constitute Letchworth's architectural DNA. In conclusion, we now focus on the common lessons learnt to draw out urban design and townscape implications for LG1, to help guide the masterplanning process aligned with the planning policy (NHC Local Plan, Appendix 5) and LGCHF's adopted vision.

Block configuration

6.32 The fine-grain perimeter block typology with a clear distinction between fronts and back, can be traced to the early phases of Letchworth designed by Unwin and Parker. Aligned with National Design Guidance[1] such blocks are a fundamental design strategy for creating highly-connected but lively streets. The existing properties of Grange Estate that currently back onto the southern boundary of LG1 (Fig. 6.111) should therefore be considered when developing LG1's block structure, to create perimeter blocks where possible.

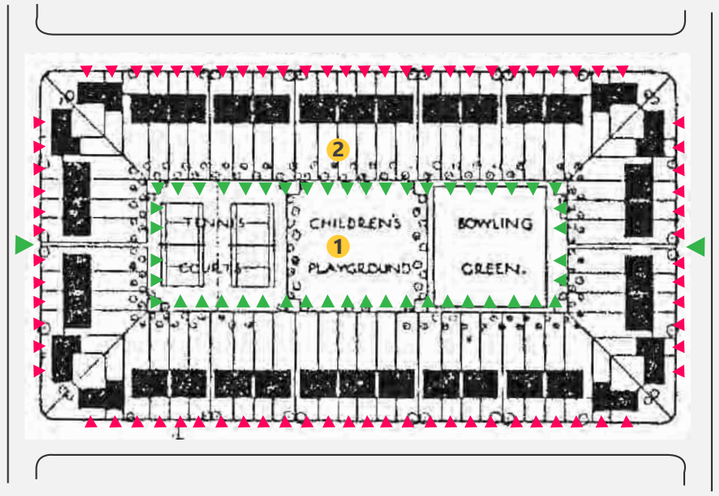
6.33 Unwin also emphasised the advantages of a more cooperative approach; suggesting that blocks might also contain shared outdoor spaces. Unwin explained that 'effective individual co-operation is limited to the comparatively small number who can have immediate personal knowledge of each other and can come into constant personal relation. Such a limited number of individuals form a group'[2]. He went on to further explain that in order to support a whole range of intimate neighbourly relations and co-operative activities, it would be better if this area is not too distant from each unit and is accessible without passing through the street, giving the opportunity of introducing them as central internal courtyard features within blocks as seen in the early block layouts (Fig. 6.112). Some of these spaces continue to be used even today either as resident-only amenity space or for facilities such as playing fields operated by NHDC.

6.34 Aligned with LGCHF's adopted vision for LG1, the purpose for these larger communal spaces can be reimagined in the context of today's particular social and ecological issues. Since they are safely disconnected from the wider settlement, for example, these spaces are suitable for active, relatively unsupervised play in outdoor green environments with health and socialisation potentials. These larger, secure outdoor spaces also afford opportunities for urban food-production. These opportunities are valuable not only for nutrition, but can contribute to addressing the problems of high or very high risk of loneliness' which currently afflict older people in half of Letchworth's neighbourhoods[3].

6.35 Relatively small reductions in the sizes of individual gardens, could be combined to create sizeable communal spaces; so that 'green commons' is created at block centres. This should be explored in terms of design, viability and as part of LG1's masterplanning exercise. Aligned with policy (SP9/para c. ix), a stewardship strategy would be needed for such communal spaces.

Fig. 6.111: Grange Estate's houses back onto LG1's southern boundary

Fig. 6.112: Unwin's spatial block prototype



Prototype of cottages grouped together around a co-operative centre: this crystallised Unwin's aspirational fostering of neighbourly co-operation into an outward spatial form, with inclusion of communal amenities preserved at block centres whilst retaining maximum road frontages for building purposes. / Source: Raymond Unwin's Town Planning in Practice in 1909 p. 381

1 Communal green
2 Private green
Building footprint
Building entrances
Access/ service entrance

References:

1. MHCLG (2021) National Design Guide, 2021.

2. Unwin, R. (1994) Town Planning in Practice. Princeton Architectural Press.

3. LGCHF (2017) A View of Life in Letchworth Today, p11.

6.36 Although part of a joined-up street grid, the block sizes in Letchworth are frequently seen to be quite large in the early garden city layouts, impacting walkability. In developments post 1960s, however, the block sizes are comparatively smaller, but the overall street layout is generally dominated with culs-de-sac fostering car-dependency. To overcome these issues, a highly connected street network that responds to local landscape with junctions spaced to create optimally sized blocks that foster walkability should be explored for LG1. This is in line with local planning policies (SP9/para c. i & d. i).

6.37 Blocks configurations generally following the line of the roads (Fig. 6.113), sometimes set back and/or grouped around small amenity greens (Fig. 6.114, 6.115). Group design was used as a means of giving identity to the various roads within Letchworth' (NHC Local Plan, Appendix 5) and should be explored for LG1.

6.38 Special attention was paid to corner plots where buildings were often positioned at an angle within the plot. Variety was provided through the careful positioning of buildings and their overall layout, particularly in areas where the housing is more simple and uniform in design. Its adaptation for modern day living should be explored as part of LG1's masterplan development to create block configurations that are rooted in Garden City principles (NHC Local Plan, Appendix 5).

Fig. 6.113: Buildings and hedges reinforcing the line of the roads at Pixmore Way, Letchworth

Fig. 6.114: Houses set around small greens at Meadow Way, Letchworth

Plots, massing and streetscape character

6.39 The underlying principle, developed by Parker and Unwin, is that the Garden City should create harmonious living environments, providing an optimal balance between country and town life, with picturesque street scenes incorporating a variety of buildings within beautiful settings. This was achieved in a variety of ways.

6.40 The scale of the houses complemented the relative size of the plot, with adequate spaces between neighbours. The relationship between the size of the houses and the size of the plots is an important characteristic of

Letchworth that should be considered in the planning of LG1. Grouped layouts and setbacks contribute to creating a hierarchy of public spaces, avoiding monotony and adding visual interest to the overall streetscape. This aligns with policy (NHC Local Plan, Appendix 5; SP9/ para c. i & d. i) and should be adapted for LG1.

6.41 Both early Garden City blocks and contemporary developments like Hartington Place illustrate how the houses are positioned to complement the roads, neighbouring buildings and the overall layout, creating vistas and accents. Historic views to St. Nicholas Church and long-views towards Fairfield, in particular, should be framed by LG1's streets and built form where possible to create a contextually responsive and legible masterplan layout for LG1 (SP9/para c. i; SP15/para d). Special buildings and corner plots should further enhance legibility at a finer-grain as architectural focal features.

6.42 A wide variety in plot sizes, setbacks and building disposition within plots are seen at Letchworth. Achieving coherence despite variety can be traced back to The Garden City Company providing regulations regarding building lines although houses could be set back or forward within certain limits if agreed and could be set at various angles where this was considered advantageous. As a result, there are often slight fluctuations in the positioning of buildings, however, overall the building lines appear generally constant. Adopting such an approach for aligns with the Garden City principles (NHC Local Plan, Appendix 5), LGCHF's adopted vision for LG1, and requires further design exploration.

6.43 Landscape is integral to the experience of the streetscape and built form at Letchworth (Fig. 6.115, 6.116). Front gardens, green verges, trees lining the roads and hedgerows forming boundaries to properties form common characteristics that contribute to this character, and can be traced to the regulations of the Garden City Company. For example, the arrangement and type of trees and the use and size of verges tends to relate to the status of the roads. In some roads the character is formal with regularly placed avenues of trees such as Broadway. In others there is a natural arrangement of trees either along the road side or within front gardens such as Cashio Lane; creating a diversity of street types. Hedgerows are also found to be both small and boxed in the areas of smaller terraced housing, or larger and more natural in areas such as Sollershott West.

6.44 All house types are fronted by gardens of varying sizes and adequate space between terraces and/or larger dwellings create visual gaps offering views of landscape, helping to soften the impact of the built form and enhance the 'green' identity of neighbourhoods.

6.45 Integration of existing and new landscape within public space and within plots is therefore critical for LG1's masterplan to reflect the Garden City ethos (NHC Local Plan, Appendix 5). The built form and landscape at LG1 should contribute towards creating a positive transition with the adjacent countryside and enhancing its existing character (SP9/para c. i & v; SP15/para j).

6.46 Adequate car and cycle parking and discreet refuse storage is a requirement for modern housing. This impacts Unwin's idea of creating 'street pictures', as the Garden City pioneers had not designed streets to accommodate them. Therefore, a design approach that integrates these functional needs with the Garden City's principle of landscaped-integrated streets and built form should be explored for LG1.

6.47 Contrary to the perception that Garden City developments are always low density, the pioneers' focused on the importance of making settlements human scale. The early FGC Ltd Building Regs indicates a maximum density of 12 dwellings/ acre (i.e. approx. 30 dwellings/ hectare) exclusive of roads, which was the intention in 1919. For example, Rushby Mead (Fig. 6.117) shows how layouts within this density range can be designed to provide good quality places.

Fig. 6.115: Westholm, Letchworth

Fig. 6.116: Grange Estate, Letchworth

Fig. 6.117: Rushby Mead, Letchworth

Key architectural characteristics

6.48 The Garden City architects brought a high standard of design to complement the carefully designed masterplan and housing layouts. Terraces of housing were carefully positioned to maximize the use of space to form housing estates in which individual dwellings had privacy, sunlight and airspace. A high standard of beauty was attained from simple, straightforward buildings forms and the use of good harmonious materials. LGCHF's vision for LG1 to be a contemporary interpretation of Garden City vernacular requires that these principles are adapted aligned with modern day living needs, in particular with regards to sustainability and energy efficiency.

6.49 Buildings were designed for their purpose; unnecessary ornamentation was discouraged. This complemented the ideals of the Arts and Crafts style -a strong characteristic of early Garden City housing - which was a result of a movement against the standardization produced through manufacture by machine and reverted back to the traditional methods with ideas of simplicity, truth to materials and the unity of crafts.

6.50 Key architectural features of the Arts and Crafts style that became a prototype for Letchworth's housing includes vernacular forms that reject conventional symmetry, off-white rough cast walls (because the pioneers did not like the local stock brick) and dominant roofs with overhanging eaves and chimneys. Rectangular forms with prominent gabled and hipped red tiled roofs, enlivened with dormers, bays windows and gabled projections shows the distinct style established for Letchworth. There is a careful balance between unity and variation which avoids monotony but is cohesive in appearance.

6.51 As Unwin argues, in Town Planning in Practice, architecture 'should enable the creation of, not destroy the harmony of our street pictures' so that the variety of each must be dominated by the harmony of the whole'. Advising that 'harmony does not require monotony, but a proper relation between the different colours and parts', Unwin explained that monotony can be avoided 'not by an irregular jumble of materials....but by a sufficient though unobtrusive variation in the different buildings, leading up to more definite breaks in colour in certain parts; treating differently different roads or parts of roads, and so producing interest and variety on the estate, which will be greatly helped by the sense of unity maintained in each individual part, and of harmony over the whole'[4].

6.52 The scale and overall use of walling and roofing materials generally unite the different styles of buildings and character areas in Letchworth. Variety is provided through the selective use of features and detailing, including the use of materials within the design composition, for example, simply reverting between gabled and hipped roof forms, or the differing dormer types or the use of materials and small-scale detailing to highlight different forms or features of the building[5].

6.53 The range of likely viewing distances affects the range of scale at which richness is considered. Where the surface are seen at long range, large scale richness is necessary; while at close range, richness must be achieved by small-scale elements. So, to maintain richness from long range to close range, Garden City pioneers employed a hierarchy of elements from large-scale to small-scale (Fig. 6.118); for example, building envelopes with several gables and bays, each with several windows, several glazing bars, and complex profiles, set in the smallest scale texture of rough-cast, supporting multi-scale sensory experiences.

6.54 However, the current pressures to address climate change through the energy efficiency of buildings by streamlining built envelopes to simpler airtight rectangular boxes, and the production processes and scale of economies favouring mechanical uniformity, standardisation and visually simpler forms, raises both challenges and creative opportunities in terms of achieving the multi-scale richness that underpins Unwin's 'street pictures'. This is evident from a wide range of developments delivered in Letchworth post 1950s.

Fig. 6.118: Built form engaging with different scales of perception

6.55 This emphasises on the need to develop design principles for LG1 providing early clarity of aspirations. This would need to be undertaken in collaboration with LGCHF and the appointed development partner for LG1. The key architectural characteristics that people notice about buildings in the street scene[6] (Fig. 6.119) provides a potential framework to conduct these discussions.

6.56 Aligned with LGCHF's adopted vision for LG1, the built form and architecture should meet today's needs of high-quality, tenure-blind, adaptable and climate-efficient homes, whilst drawing from the local distinctiveness of Letchworth's Arts and Crafts tradition. We call this 'rooted innovation'.

6.57 Balancing sustainability with Garden City aesthetics, however, is a difficult task. To do so, the sustainability targets and specific delivery requirements for the development would need to be discussed and agreed with LGCHF and the appointed development partner. Learning from Hartington Place, the approach related to the choice of materials palette and its potential implications on maintenance, detailing and construction methods would also need to be discussed to ensure the incorporation of sustainability measures early into the design process and avoid it being treated as a bolt-on design feature.

6.58 In conclusion, finding the functional and aesthetic balance between the Garden City principles (NHC Local Plan/ Appendix 5) and the sustainability aspirations for the development at LG1, would be central to developing a masterplan that embodies a creative reinterpretation of these principles in the light of modern-day requirements.

Fig. 6.119: What people notice about buildings in the street scene

1. Elements such as chimneys and roof pitches that affect skylines.

5. Street details such as trees, lights, refuse bins, seats and signs

2. Vertical subdivisions of elevations, such as bays and setbacks and, at smaller scale, columns or rainwater pipes

6. Colours and textures of materials

3. Horizontal subdivisions, such as string courses

7. Ground level details, particularly including enclosures to front gardens and bins

4. Windows and entrances, the horizontal and vertical relationships between them, and the elevations' overall ratios of solid to void areas

8. Small-scale constructional details

References:

4. Unwin, R. (1994) Town Planning in Practice. Princeton Architectural Press.

5. NHDC (2001) Letchworth Conservation Area Appraisal.

6. Appleyard, D. (1980), Why buildings are known: a predictive tool for architects and planners, in Broadbent et al.

Conclusion

6.59 In conclusion, the key urban design and townscape implications for LG1's built form and architecture to be a contemporary interpretation of Garden City design aligned with current planning policy are as below:

- **Implication 1:** The masterplan should seek to create blocks that support walkability, with entrances fronting the street and back-to-back gardens; in particular, along LG1's southern boundary where existing residential properties back onto it.

- **Implication 2:** LG1's built form and architecture should explore design, viability and stewardship models for not only providing front green spaces with grouped building layouts, but also, secure communal spaces within blocks that offer safe play spaces, local food production and socialisation potentials.

- **Implication 3:** Create a variety of human-scale blocks configurations with built edges that follow the line of roads (with slight fluctuations), and capitalises on the site's landscape assets, building setbacks and grouped layouts around small greens to create vistas and accents, achieving coherence despite variety.

- **Implication 4:** Corner plots should be designed to relate to both streets in terms of frontage, natural surveillance, enhancing local legibility and wayfinding.

- **Implication 5:** The scale of houses should complement the size and location of the plot with adequate space between terraces and/or larger dwellings to create visual gaps offering views of landscape.

- **Implication 6:** Integrate existing and new landscape within LG1's streets and plots using green verges, trees-lined streets and hedgerows, to ensure that landscape remains integral to LG1's streetscape and built form.

- **Implication 7:** Develop a design approach that integrates modern day functional needs such as car and cycle parking and refuse storage within landscaped-integrated streets and plots, so as to not visually clutter LG1's 'street pictures'.

- **Implication 8:** Individual house types should be designed to reflect the key Garden City architectural principles such as maximising privacy, sunlight and airspace and create functional design devoid of unnecessary ornamentation through use of simple geometric forms and harmonious materials.

- **Implication 9:** Use key Garden City architectural features (asymmetrical forms, materials palette, dominant roofs with overhanging eaves and chimneys, rectangular forms with prominent gabled and/or hipped red tiled roofs, enlivened with dormers, bays windows and gabled projections) to create a balance between unity and variation within LG1's built form, enabling the creation harmonious street pictures.

- **Implication 10:** LG1's architecture should focus on key characteristics that people notice about buildings and street scenes (skylines, vertical and horizontal subdivisions of building facades, window types and groupings, entrances, colours and textures of materials, ground level details including enclosures to front gardens and bins, small-scale constructional details, and street details such as trees, lights, refuse bins, seats and signs) using contemporary materials and detailing to achieve the multi-scale richness that underpins Unwin's 'street pictures' for a modern day Garden City.

- **Implication 11:** For LG1's architecture to meet today's needs of high-quality, adaptable and climate-efficient homes, the sustainability targets and specific delivery requirements should be agreed with LGCHF and development partner, and incorporated into the design principles for this development.

7

Conclusion

7. Conclusion

7.1 The outcome of this study is a clear distillation of the urban design and townscape implications of the site's local characteristics in relation to its wider context.

7.2 This encompasses landscape, urban structure, built form and architectural characteristics, that should be taken account in the development of LG1's strategic masterplan framework. Although this has been outlined at the end of each section, a summary provided below.

Historical development

7.3 This section focuses is on understanding the reasons why Letchworth's character has changed over time, as well as identifying the more constant factors which give the place the historical continuity that underlies its townscape identity, to inform the future development of LG1.

7.4 Key conclusions from the period pre-1905 include the importance of the historic village of Norton (located close to the east and south-east boundaries of LG1) as a key character area to offer lessons for LG1's masterplan development with regard to the local characteristics of rustic country lanes and streetscapes, urban grain and housing typologies that underlie its distinctive rural charm. With LG1 at the interface between urbanity and countryside, this is particularly relevant. It also highlights historic buildings within the wider context of LG1 such as the Fairfield Hospital with current intervisibility of the culpae of the hospital/spire of the church from LG1.

7.5 Character areas of Letchworth from 1905-1946 establishes and reinforces some of the fundamental principles of the original Garden City ethos in terms of layout and town planning. It provides the foundation for masterplanning LG1's urban design and townscape character as a modern-day Garden City.

7.6 The period from 1946-1974 focuses on two major public sector led expansions of Letchworth, namely Grange Estate and Jackmans Estate, and the private development of Lordship Estate. The Grange Estate offers urban design and townscape lessons in relation to the sensitive integration of LG1's masterplan with its adjacent context, whilst Jackmans Estate, reflects a radical departure from key original Garden City principles in terms of its street layout, block and plot configuration.

7.7 Developments post-1980s focus on a number of smaller in-fill and extension sites within Letchworth. Examples include developments along Cade Close, Kristiansand Way, Manor Park and more recent schemes such as Hartington Place, Maddon Gardens, Wissen Drive and Lindsell Avenue. In general, they represent continued exploration of the integration of modern-day needs with garden city principles. Hartington Place, in particular, offers lessons on how a contemporary scheme can fit well into the Garden City story, whilst addressing issues related to parking, refuse collection, energy efficiency and lifetime homes.

7.8 Character areas that are representative of the key periods of growth in Letchworth are identified for further analysis, undertaken in the built form and architecture section.

Landscape and environmental character

7.9 This includes a review of the strategic green infrastructure of the wider context and LG1's landscape structure including topography, hydrology and geology, views and visibility, footpaths, rights of way and access to recreational facilities, ecology and habitat to inform LG1's landscape infrastructure. Key urban design and townscape implications include the need to:

The outcome of this study is a clear distillation of the urban design and townscape implications of the site's local characteristics in relation to its wider context. This encompasses landscape, urban structure, built form and architectural characteristics, to inform the development of LG1's strategic masterplan framework.

- Protect and enhance the Greenway as a linear park;
- Increase and enhance recreational facilities;
- Strengthen existing landscape buffers and ecological networks;
- Provide a defensible Green Belt boundary to LG1;
- Respect and frame views towards locally prominent landmarks to create distinctive place-based townscapes;
- Integrate sustainable drainage systems with the existing drainage network;
- Limit vehicular access points through hedgerows, whilst enabling a permeable street network for walking and cycling that minimises disruption to the hedgerows' ecological functions;
- Protect mature trees and established hedgerows as well as planting additional trees and expanding the existing hedgerow network to support biodiversity net gain, a landscape-integrated street network for LG1 and nature recovery networks that link into the wider countryside.

Settlement type and form

7.10 This includes an analysis of the urban structure of surrounding settlements including Stotfold, Fairfield, Arlesey, Baldock and Letchworth, focusing on countryside integration, facilitating multimodal access to uses and facilities, and achieving legible and active street scenes that support sustainability and resilience of development through urban form. Informed by the Garden City principles of town planning, key conclusions include the need to:

- Facilitate a holistic approach to sustainable urban drainage encompassing the design of the green infrastructure, streets, buildings and materiality considerations.
- Provide a peripheral landscaped buffer along LG1's northern boundary to mitigate risk of coalescence with surrounding settlements and deter further expansion of Letchworth;
- Enable easy access and an active edge to the countryside through the alignment of LG1's streets and built form;
- Facilitate a joined-up local street system with optimally-sized blocks that support multimodal movement and catalyse a modal shift from using cars to walking and cycling;
- Create a memorable gateway into LG1 and wider Letchworth from Norton Road;
- Design the link from Western Way to minimise any sense of exclusion from the Grange Estate;
- Maximise legibility in relation to the site's local heritage assets, such as, St. Nicholas Church tower in Norton and long-distance sight lines particularly towards Fairfield;
- Place key community and civic facilities foregrounded as landmarks of appropriate relative significance and enhance memorability of street intersections through corner buildings designed as minor landmarks;
- Support safety of public outdoor spaces by a naturally-surveilled street system with buildings fronting onto it;
- Locate retail and community facilities to maximise accessibility and conviviality of public realm;
- Distinguish street typologies through building elements and tree species.

Built form and architecture

7.11 Drawing from historical analysis, it focuses on analysing the evolution of the spatial characteristics of Letchworth's architectural DNA to inform LG1's built form and architecture as a contemporary interpretation of the Garden City principles. Key conclusions include the need to:

- Create blocks with entrances fronting the street and back-to-back gardens; in particular, along LG1's southern boundary where existing residential properties back onto it;
- Create a variety of human-scale blocks configurations capitalising on the site's landscape assets, building setbacks and grouped layouts around small greens to create vistas and accents;
- Design the scale of houses to complement the size and location of the plot with potentials for visual gaps offering views of landscape;
- Integrate modern-day needs such as car and cycle parking and refuse storage within landscaped-integrated streets and plots;
- Reflect the key Garden City architectural characteristics and features within LG1's housing typologies using contemporary materials and detailing to achieve the modern-day equivalent of Unwin's 'street pictures';
- Explore stewardship models for front green spaces with grouped building layouts and secure communal spaces;
- Meet today's needs of high-quality, adaptable and climate-efficient homes aligned with the sustainability targets and specific delivery requirements that are yet to be agreed with LGCHF and the appointed development partner.

Cumulatively, these urban design and townscape implications set a foundation for the creative reinterpretation of the original Garden City principles for 21st century as part of LG1's strategic masterplan development process.

Appendix C

Statement of Community Involvement

Letchworth Garden City
Heritage Foundation

Statement of Community Involvement – LG1 Masterplan

May 2024

Contents

1. Executive summary p.5
Background

2. Introduction p.12
Project background
Stages of a masterplan
Engagement approach
Engagement prior to the masterplanning process

3. Meeting the requirement to consult p.16
National Planning Policy Framework (NPPF)
Localism Act
North Hertfordshire Council's Statement of Community Involvement (SCI)

4. Community engagement p.19
Approach to consultation
LG1 early understandings
LG1 masterplan options
LG1 preferred masterplan
Project website
LG1 early understandings
LG1 masterplan options
LG1 preferred masterplan
Promotional materials
LG1 early understandings
LG1 masterplan options
LG1 preferred masterplan
Stakeholder meetings
LG1 early understandings
LG1 masterplan options
LG1 preferred masterplan
Events

Contents

LG1 early understandings
LG1 masterplan options
LG1 preferred masterplan
Grange Community Panel
Masterplanning workshop
Ongoing engagement
Youth engagement
Feedback
LG1 early understandings
Survey 1 – ‘Share your views: the vision for LG1’ (289 responses)
Survey 2 – ‘Share your views: what we have heard to date’ (140 responses)
Survey 3 – ‘Share your views: Sustainable Outdoor spaces’ (42 responses)
Survey 4 – ‘Share your views: Getting around Letchworth’ (50 responses)
Survey 5 – ‘Share your views: New homes for local people’ (236 responses) Demographics
LG1 masterplan options
Survey 1 – ‘Share your views: masterplan options for LG1’
Survey 2 – ‘Share your views: improvements to the Grange Recreation ground’
Demographics
LG1 preferred masterplan
Demographics
Response to feedback
Response to feedback - LG1 early understandings consultation
Response to feedback - LG1 masterplan options consultation
Response to feedback - LG1 preferred masterplan consultation

5. Conclusion p.98
Who we engaged with
Next steps

Contents

6. Appendices p.101

Appendix A1 – Project website
LG1 early understandings consultation
Appendix B1 – Event banners
Appendix C1 – Community newsletter
Appendix D1 – Newsletter distribution area
Appendix E1 – Community flyer
Appendix F1 – Flyer distribution area
Appendix G1 – Social media advertisement
Appendix H1 – 'Sorry We Missed You' card
Appendix I1 – Postcard
Appendix J1 – Stakeholder list
Appendix K1 – Demographics
LG1 masterplan options consultation
Appendix A2 – Event banners
Appendix B2 – Exhibition boards
Appendix C2 – Feeback booklet
Appendix D2 – Information booklet
Appendix E2 – 'Sorry We Missed You' card
Appendix F2 – Business cards
Appendix G2 – Community flyer
Appendix H2 – Flyer distribution area
Appendix I2 – Social media advertisement
Appendix J2 – Social media advertisement video
Appendix K2 – Youth engagement masterplanning activity
Appendix L2 – Demographic questions on survey 1 'share your views: masterplan options for LG1'
Appendix M2 – Demographic questions on survey 2 'share your views:
improvements to the Grange Recreation ground'
Appendix N2 – Stakeholder list
Appendix O2 – Feedback slides
Appendix P2 – Flyer distribution area LG1 preferred masterplan consultation
Appendix A3 – Event banners
Appendix B3 – Feedback form
Appendix C3 – Community flyer
Appendix D3 – Digital banners
Appendix E3 – Social media adverts
Appendix F3 – Preferred masterplan & Grange opportunities plan interactive board
Appendix G3 – North Hertfordshire Council e-newsletter
Appendix H3 – Stakeholder list for preferred masterplan consultation
Appendix I3 – Demographics
Appendix J3 – Flyer distribution area

1. Executive summary

1. Executive summary

1.1.
This statement of community involvement (SCI) report has been prepared by Kanda Consulting on behalf of Letchworth Garden City Heritage Foundation (referred to as 'LGCHF') in support of their community engagement programme to support the development of a masterplan for allocated land to the north of the Grange Estate in Letchworth (referred to as 'the LG1 site').

1.2.
This report covers all LGCHF's community engagement conducted for developing a preferred masterplan for LG1.

1.3.
Following previous discussions with the local community over the last few years, the team launched community engagement about the initial design process of developing a masterplan for the site. This began in June-October 2022 and is referred to the 'early understandings' consultation in this report, a summary report of this engagement was published by LGCHF in April 2023. In October-November 2023, LGCHF then ran a further programme of community engagement on three masterplan options for the LG1 site, known as the 'masterplan options' consultation. These options were developed from the conversations and feedback we received from the local community, ongoing background studies, technical and commercial advice and statutory consultees. This community engagement report was published in January 2024.

1.4.
Following this, LGCHF developed the LG1 preferred masterplan. The local community and stakeholders were engaged with on this from February - March 2024, this is referred to as the 'preferred masterplan' consultation in this report. The masterplan was developed using the feedback from the three LG1 masterplan options and continuous engagement carried out between the two previous consultation periods, such as via the Grange Community Panel. The preferred masterplan is also informed by commercial and technical advice as well as discussions with key stakeholders.

1.5.
The site is allocated in the North Herts Local Plan (2011-2031) as Policy SP15 for up to 900 homes. For more information on what the policy entails, please see section 2.8 of this report.

1.6.
The site is located within the Letchworth Grange ward of North Herts Council (NHC). It is one of the most northern wards in North Herts and shares a border with Central Bedfordshire Council (CBC) to the northwest. To the South, the ward is bordered by Letchworth Wilbury and Letchworth East wards (see figure 1).

1.7.
For the May 2024 local elections in North Herts, many ward boundaries have been re-drawn. The site remains part of the Letchworth Grange Ward but will only be represented by two ward councillors, rather than the previous three ward councillors. LGCHF have engaged with current and prospective ward councillors of the site and will continue to do so as part of its continuous community and stakeholder engagement. Please see Appendices J1, N2, and H3 for a full stakeholder list on who LGCHF engaged with for each consultation.

Figure 1: Aerial view of the LG1 site and the Grange to the south.

1. Executive summary

1.8.
LGCHF appointed Kanda Consulting, a specialist community engagement and consultation company, to undertake resident, community, and wider stakeholder engagement about the preferred masterplan for LG1.

1.9.
Kanda's brief was to undertake the community engagement to help the project team develop a masterplan of the LG1 site. This included undertaking an early understandings consultation, before the site was allocated in the North Herts Local Plan (2011-2031) to learn what the local community wanted to see from the site. It also included engagement on three masterplan options for the LG1 site and engagement on the preferred masterplan, which was developed from previous feedback received and other technical and commercial advice.

1.10.
The team devised a detailed community engagement programme, aligned with the design development programme and leading up to the submission of a masterplan to the Council. This engagement will ensure that the masterplan provides an accurate reflection of what the local community wants to see on the site.

1.11.
The engagement focussed on the following key areas:

- Preparation and initial engagement with key stakeholders
- Initial engagement to inform the masterplan
- Public community engagement on the masterplan
- Engagement on the masterplan ahead of submission

1.12.
For more details about the engagement strategy, please refer to section 2.0 of this report.

1.13.
The team established a hybrid approach of carrying out both in-person and online engagement.

1.14.
LGCHF published its initial Community Engagement Report in April 2023, and then the succeeding report in January 2024 regarding the engagement on the LG1 masterplan options. The project team has continued to engage with the local community via the Grange Community Panel. This provides an opportunity for key local residents, groups and key stakeholders to work closely with the project team on the development of the masterplan for LG1.

1.15.
LGCHF have now compiled this full engagement report on both the engagement covered in the previous reports and their most recent engagement, carried out between February-March 2024, on the preferred masterplan for LG1.

1.16.
To date, LGCHF have also held four Grange Community Panels and an accompanying workshop on masterplanning since its inception. For more information, please see section 3.182 and the previous community engagement reports on the masterplan options. LGCHF are planning to host the next panel in early summer 2024.

1.17.
This SCI covers all the engagement carried out to date, the most recent being on the consultation on the preferred masterplan between Friday 8th March and Friday 26th March 2024. The engagement consisted of a hybrid engagement strategy to increase the accessibility of the engagement process. This process was led by the feedback received from the previous consultation between October and November 2023 and regular Grange Community Panel meetings.

1. Executive summary

1.18.
Each consultation (named in this report as 1) early understandings, 2) masterplan options and 3) preferred masterplan included continuous website updates (www.shapeletchworth.com), public events, press releases, newsletter and flyer distributions, social media adverts and static exhibitions. Further details of these can be seen in this report in Project Website, Promotional Materials and Events sections and in the appendices at the end.

1.19.
Throughout the process, any comments, questions and feedback were welcomed via a dedicated email address (consultation@letchworth.com) and a dedicated phone number was provided and managed by Kanda. This was the same for every round of consultation. During each consultation, residents were able to complete and send LGCHF their feedback, either in-person or online. More information and analysis of this feedback can be found from section 4.114 in the feedback sections of this report.

1.20.
The feedback received from the conversations that have taken place throughout the project's lifespan have largely focused on the following topics:

Theme	Feedback
The importance of green, open spaces, including maintaining the Greenway	At every stage of our community engagement for LG1, local residents have highlighted this as a key priority and outlined how deeply they value green spaces and the Greenway. In the feedback surveys and conversations with local residents regarding the preferred masterplan, the retention and enhancements of the Greenway were strongly supported as well as providing green open spaces. The most popular answer regarding elements of the LG1 preferred masterplan was the retainment, maintenance and enhancing of green spaces and the Greenway; this was mentioned in 28.0% of responses. This was reflected in survey responses from both our early understandings consultation and that on the LG1 masterplan options. In the former, 140 respondents (19.3%) answered that they most valued greenery/countryside/greenbelt land in their local area. This was further emphasised when 46.8% of respondents put 'parks and green spaces' as one of their top three priorities for the LG1 masterplan. In the latter, we found out that over 70% of respondents visited the Grange Rec every day, at least once a week or once a month and over 71% strongly agreed with a landscape buffer. This feedback furthered the case for why LGCHF maintained the landscape buffer around the site in the preferred masterplan and these plans were set out in previous engagement reports.

Theme	Feedback
Biodiversity and landscaping	Many residents were supportive of retaining and enhancing biodiversity and landscaping in the LG1 preferred masterplan. This often led from support for retaining green spaces and the Greenway on the LG1 site. Respondents were mostly supportive of the addition of over 2,000 trees and the retention of all mature trees and existing hedgerows. With strong support for more planting and landscaping to enhance the biodiversity and wildlife on the site. In the early understandings consultation, the most commonly mentioned theme regarding how outdoor spaces can be improved was wildlife and animals. This helped demonstrate that biodiversity and green spaces were at central to residents' opinions regarding the LG1 masterplan. Unsurprisingly, this was reflected further in both the following consultations. For example, 53.8% of respondents argued there should be more landscaping and biodiversity in the Rec as part of the LG1 masterplan options.
Traffic, access points & road layout	Traffic is a clear concern for many residents of Letchworth and of the Grange Estate. Our transport consultants, Steer, have been working with Hertfordshire County Council (HCC) Highways on this to ensure that all traffic is mitigated on both the LG1 site and across the town as a whole. Representatives from Steer were at public exhibitions during both the consultation on the LG1 masterplan options and on the preferred LG1 masterplan. At each stage of the consultation process, traffic is a clear concern for many residents of Letchworth and of the Grange Estate. Traffic was the topic that was most brought up when survey respondents were asked if there were any aspects of the preferred masterplan they did not support (54.4%). The need for the road layout to reduce traffic in the masterplan options consultation was reflected in the survey. 30 responses to the final question recognised the need to reduce traffic and congestion in the local area. Solutions to this included support for encouraging the use of and enhancing walking and cycling routes, including to the town centre and rail station, as well as implementing traffic-calming measures to discourage rat running through the site. 38.4% of respondents in the masterplan options consultation wanted LGCHF to prioritise pedestrian and cycle links to key locations as a way to reduce traffic and congestion.
Sustainability	In our most recent survey, respondents also asked questions on how sustainable the buildings on the site will be once they are built, particularly regarding homes. Ensuring that they are built to high sustainability standards, including efficient and future-proofed flexible buildings was the second most popular design influence (43.7%). This highlights that respondents value the importance of the sustainable credentials of the proposals. Sustainability was also a topic that arose frequently in our earlier consultations. In our early understandings consultation, ensuring homes are energy efficient and built with a long-term plan was often brought up in the feedback surveys. Furthermore, when we door-knocked on the Grange Estate during our masterplan options consultation, the sustainability of the site and homes that will be built was often brought up on the doorstep.

Theme	Feedback
Housing mix and affordable housing	This was another topic that came up often in survey responses. Many local residents during our latest consultation were supportive of including a mixture of housing types across the LG1 site and supported the proposed 40% affordable housing provision (9.3%). In our preferred masterplan survey, including a diverse housing mix was the fifth most popular design influence on our survey also (21.8%), further demonstrating this demand. This is an issue that was flagged even in our early understandings consultation, as respondents were keen to understand how affordable the new homes would be. People were supportive of LGCHF's commitment to 40% of affordable housing in the preferred masterplan but often questioned the true definition of 'affordable' and whether the homes would genuinely be affordable. Members of the project team explained that this provision is in accordance with North Herts Council policy and would be manged by a housing association with NHC having nomination rights. Additionally, the LGCHF are committed to ensuring that the affordable housing is evenly distributed across the LG1 site and to creating community housing models for local people.
Supporting infrastructure	There were many suggestions to bring about infrastructure on the LG1 site to accompany the homes being built there. On aspects respondents support about the preferred masterplan, providing supporting infrastructure was the fourth most popular answer (6.7%). The consultation also explored possible improvements to the Grange Estate that could be delivered in partnership with Settle as part of the delivery for LG1. In response, over 25% of the feedback refenced improvements to the local infrastructure. Responses frequently mentioned providing a GP surgery or medical facilities and the need for a secondary school (over a primary school). LGCHF explained that the requirement for medical facilities is part of the Council's policy requirement and a matter of concern locally. The provision of these facilities is outside LGCHF's jurisdiction, but we will work with the statutory bodies to see if this can be facilitated. The delivery of a primary school is also part of council policy, and land remains allocated for a reserve school site in the preferred masterplan. This was also a topic that was often mentioned in our early understandings consultation. Even at this early stage, before the masterplan options were developed for the site, residents wanted to know what infrastructure will be in place to support 900 homes. Regarding specific provisions, feedback on this was much more detailed in our masterplan options consultation. These most often included a medical facility and a secondary school.

Theme	Feedback
Appearance of homes	LGCHF is committed to ensuring that the character of buildings on the LG1 site respects the surrounding context and a modern interpretation of Garden City design principles. In our early understandings consultation, architectural design was mentioned 7 times with regards to what aspects of a masterplan people would support. These people mainly highlighted the Garden City Principles and the need to develop in line with these and the character of the local area. In our masterplan options consultation, 42.3% of respondents wanted a historic design, similar to what is already on the Grange. However, second to that was wanting a modern/ unique design (22.3%). This was reflected in survey responses for the preferred masterplan, with 61.8% of respondents choosing homes having private gardens as the most important design influence. There was also desire for the design reflecting early Garden City homes, using traditional materials and details (36.4%) as well as having a similar design to those on the Grange Estate (20%). This reflects the current character of Letchworth and how residents wish to see that maintained on the LG1 site. Therefore, there is clearly a desire for a mixture of a modern design but respecting the character of the local area.

1.21.
LGCHF will continue to consider and respond to feedback throughout the design process on all the above matters and beyond the submission of the preferred masterplan to NHC.

1.22.
LGCHF is committed to maintaining a programme of ongoing engagement with the local community.

1.23.
The team will collate the feedback as seen in this report and use it to refine the preferred masterplan which will then be submitted to NHC for approval.

Figure 2: Illustrative sketch of the Grange Rec.

2. Introduction

2. Introduction

Project background

2.1.
The LG1 site is located in Letchworth, to the north of the Grange Estate, bordering the Grange Recreation Ground (known locally as the Rec). Letchworth is the world's first garden city, and the town has now developed to Ebenezer Howard's original vision of 32,000 residents. In response to local housing need, a sensitive extension to the town was considered. After much consideration, LG1 – Land North of Letchworth has been allocated in NHC's Local Plan as a Strategic Housing Site for approximately 900 homes.

2.2.
NHC resolved to adopt the plan in November 2022.

2.3.
The Local Plan requires that a strategic masterplan is adopted by NHC ahead of submitting a planning application. This masterplan is a statutory document which sets out the strategic approach to a development site. This includes setting rural land uses, principles parameters, constraints and a high level plan for the site.

2.4.
This should deliver a framework which has enough detail to define predictable outcomes but allows for enough flexibility to permit and encourage creative responses from developers and promoters. Masterplans are produced by developers and promoters for the Council to adopt.

2.5.
Future planning applications should be consistent with the strategic masterplan. It will be a material consideration for future planning applications.

This adheres to North Herts Council's own Statement of Community Involvement which states: 'We strongly encourage landowners/ developers to provide and agree masterplans [for strategic sites] before they apply for planning permission. Where this is the case, good quality public consultation will be a critical element of the project'.

2.6.
Significantly, it will be informed by the valuable feedback received from the public during our public consultation activities. This enables the local community to have a say in how Letchworth will look in the future and, specifically, how LG1 will be designed to best benefit the local community.

2.7.
The Local Plan aims to deliver 2,167 new homes between 2011 and 2031 across the local authority. Policy SP15 in NHC's Local Plan relates to the LG1 site, which includes:

- Approximately 900 homes, including at least 40% affordable housing and homes for older people
- Plots for self-build development
- A new primary school
- More than 2,000 new trees
- A new neighbourhood centre, with retail, community, and improved medical facilities
- An access solution which integrates the site with Letchworth whilst mitigating the impact on nearby residents
- Public transport and cycling provision and improvements for the whole Grange Estate
- Although not specified within the allocation, there is also the possibility for enhancements to the Grange Recreation Ground in line with local feedback

2. Introduction

Stages of a masterplan

2.8.
The development of a masterplan includes several key stages, as laid out in the first community report in April 2023, these include:

- **Stage 1** – **Startup** – developer notifies the council that they would like to enter into the masterplan process. The council then sets out what information and analysis should be included in the masterplan.
- **Stage 2** – **Technical assessment** – engagement with the council and stakeholders begins. This will include technical stakeholders such as the local highways authority and other political and community stakeholders.
- **Stage 3** – **Consultation** – the masterplan has been split into three options. The community are then engaged with on which of the three options they prefer.
- **Stage 4** – **Second consultation** – once all the feedback has been collated from the first consultation, the masterplan is developed further and made into one preferred masterplan option. The public is then reconsulted on this preferred option before we submit it to the council.
- **Stage 5** – **Formal approval** – a consultation report will be published to the council's website which notes the number of responses, key themes and amends that have been made to reflect community feedback.

2.9.
LGCHF has currently just finished stage 4, during which LGCHF engaged with the local community on the preferred masterplan for LG1. The valuable feedback received from this community engagement will enable LGCHF to refine the masterplan further before submitting to NHC for approval.

2.10.
It is of vital importance that the local community has ample opportunity to provide their feedback to the project team. To do this, LGCHF adhered to our overarching objectives which are set out in more detail in our first engagement report:

Raise awareness for the project among a wide and diverse audience
Develop local community buy-in for the project
Build and evidence local support for the project

Engagement approach

2.11.
LGCHF's engagement approach was centred on making it as easy as possible to engage with us. This required going to people and using a range of different methods. LGCHF wanted to engage with both those who live on the Grange Estate and elsewhere in Letchworth.

2.12.
The team maintained their method of continuous engagement. This enables LGCHF to be a constant and transparent presence in the local community and build a long-term relationship. We have produced the following materials to ensure this:

- Website updates and blog posts
- Social media adverts
- E-newsletters
- Grange Community Panel meetings
- Flyer
- News articles published
- Public exhibitions
- Static exhibitions

2. Introduction

Engagement prior to the masterplanning process

2.13.
Between October 2018 and July 2019, LGCHF engaged with local residents and stakeholders about the 'Future of Letchworth'. This included collecting feedback on the vision for Letchworth as well as LG1 and LG3, two sites allocated in the North Herts Local Plan. LGCHF held a Design Competition with RIBA called "Re-Imagining the Garden City". 95 entries were shortlisted, and the winner was EcoResponsive Environments' "Grange-in-the-Hedges", which was also the preferred entry by the local community.
The project team was subsequently appointed by LGCHF.

2.14.
During the Covid-19 pandemic, limited face-to-face engagement took place, and the team were mindful of the importance of inviting feedback on how priorities changed over that time.

2.15.
LGCHF are also thankful to the local shops and restaurants for allowing them to compliment the static exhibitions, which were on display for multiple consultations. For more information on the locations, please see section 3.211.

Figure 3: LGCHF & the project team at community events

3. Meeting the requirement to consult

3. Meeting the requirement to consult

3.1.
Pre-application consultation is a crucial element of the planning and development process. It is focused on engaging with local communities, stakeholders, groups and organisations with aim of shaping a proposal so that the subsequent final application takes into account, as far as is appropriate and possible, local views and opinions. The quality of the consultation undertaken is seen as increasingly vital.

National Planning Policy Framework (NPPF)

3.2.
The Applicant has complied with the Government's National Planning Policy Framework (NPPF), which places a strong emphasis on community consultation within the planning system. The principles of consultation detailed in this report are based on the government's advice in the Decision Taking section of the NPPF. It makes clear the central role in the planning process for consultation and participation:

> *39.*
> *Early engagement has significant potential to improve the efficiency and effectiveness of the planning application system for all parties. Good quality preapplication discussion enables better coordination between public and private resources and improved outcomes for the community.*
>
> *40.*
> *Local planning authorities have a key role to play in encouraging other parties to take maximum advantage of the pre-application stage. They cannot require that a developer engages with them before submitting a planning application, but they should encourage take-up of any pre-application services they offer. They should also, where they think this would be beneficial, encourage any applicants who are not already required to do so by law to engage with the local community and, where relevant, with statutory and non-statutory consultees, before submitting their applications.*
>
> *41.*
> *The more issues that can be resolved at pre-application stage, including the need to deliver improvements in infrastructure and affordable housing, the greater the benefits. For their role in the planning system to be effective and positive, statutory planning consultees will need to take the same early, pro-active approach, and provide advice in a timely manner throughout the development process. This assists local planning authorities in issuing timely decisions, helping to ensure that applicants do not experience unnecessary delays and costs.*

Localism Act

3.3.
The aim of the Localism Act (2011) is to increase public participation in the decision-making process and has particular emphasis on the planning process. The Act, for large scale applications, has introduced a statutory requirement for the developer to consult local communities. The Act under Chapter 4 61W states:

> *The person must publicise the proposed application in such manner as the person reasonably considers is likely to bring the proposed application to the attention of a majority of the persons who live at, or otherwise occupy, premises in the vicinity of the land.*

3. Meeting the requirement to consult

3.4.
The Applicant is confident that our approach to public engagement and consultation has been undertaken in such a way that meets this requirement.

North Hertfordshire Council's Statement of Community Involvement (SCI)

3.5.
North Hertfordshire Council's SCI expresses the importance of community involvement and consultation:

'We strongly encourage landowners/developers to produce and agree masterplans before they apply for planning permission. Where this is the case, good quality public consultation will be a critical element of the project'.

3.6.
In designing our programme of engagement, we have prioritised national and local requirements, building on best practice consultation. Our consultation process has also been led by the vision and principles set out by North Hertfordshire Council's SCI.

Figure 4: LGCHF & the project team at community events

4. Community engagement

4. Community engagement

4.1.
In line with recommendations from North Herts Council's SCI, LGCHF has sought to engage with the Local Planning Authority, elected Members and the local community prior to submission of the masterplan. This has also involved setting up a dedicated project group, Grange Community Panel (GCP), to regularly meet and discuss different aspects of the proposals (see section 3.182 for more information on the GCP).

4.2.
In order to achieve this, LGCHF aimed for the following from its community engagement for each consultation:

- Understand the community's views on the proposed development
- Provide the opportunity for elected Members to discuss the proposals with the project team and the local community
- Undertake early engagement with the Local Planning Authority, statutory and non-statutory consultees
- Keep all consultees and the local community informed at all major milestones of the project

Approach to consultation

LG1 early understandings

4.3.
The team utilised a variety of methods to engage with the local community about the LG1 site at this early stage.

4.4.
In addition to the activities outlined below, an advertised freephone telephone number (0800 368 9809) and dedicated email address (consultation@letchworth.com) were provided and managed by Kanda to supply further information to residents, businesses, and stakeholders on request, as well as to answer any questions that they may have about the engagement process and developing a vision for the LG1 site.

4.5.
The dedicated phone number and email address were provided in each consultation also and were continuously managed by Kanda between consultation periods also.
LG1 masterplan options

4.6.
Following our community engagement on discovering early understandings and priorities of what local people wanted to see from LG1, LGCHF and their design team developed three masterplan options for the LG1 site.

4.7.
Once designed, LGCHF then engaged with the community again to receive their feedback on the masterplan options. This feedback was incorporated into the development of the preferred masterplan for LG1 (see section 4.206 for more information).

4.8.
As was the case with our early understandings engagement, our approach centred on making it as easy as possible to engage with us, by going to people and using a range of different methods. This is designed to reach an audience across Letchworth whilst continuing to also engage with residents of the Grange Estate.

4.9.
The team also saw value in moving to continuous engagement. This enabled LGCHF to be a constant and transparent presence in the local community and build a long-term relationship. LGCHF produced the following materials to ensure this:

- Website updates and blog posts
- E-newsletters
- Social media adverts
- Grange Community Panel meetings
- Static exhibitions
- Promotional materials
- Public exhibitions and events
- School engagement

4. Community engagement

4.10.
Prior to the public consultation on the masterplan options for the LG1 site, LGCHF held a number of Grange Community Panel meetings (see section 4.96 for more information on the panel).

LG1 preferred masterplan

4.11.
This community engagement took place from 27th February-26th March 2024 and the purpose of this was to present to the local community the preferred masterplan for the LG1 site.
The masterplan was informed from previous community engagement LGCHF undertook late last year.

4.12.
From the feedback LGCHF received during this round of engagement, the masterplan will be refined further before being submitted to North Herts Council.

4.13.
The team utilised a variety of methods to engage with the local community about the preferred masterplan LG1 site to ensure a broad audience was reached both in the Grange Estate and elsewhere in Letchworth.

Project website

LG1 early understandings

4.14.
To provide greater flexibility and increased levels of engagement, a dedicated project website, www.letchworth.com/consultation (redirects to www.shapeletchworth.com) was launched. The website offered further information on the proposals and included online blog updates and a range of online surveys that were open between 14th June and 2nd October 2022 – enabling the local community to provide their feedback.

4.15.
Those who were interested in finding out more were able to visit the website and view all background material, before providing feedback through digital surveys.

4.16.
The dedicated project website also provided a dedicated contact form so that people could contact the project team directly with their questions and comments.

4.17.
In total, **3,532** users viewed the project website during the consultation period, with a total of **627** feedback surveys completed online and an additional **119** hardcopy responses being completed. The breakdown of this engagement can be seen in the table below and Section 4 provides further detail on the feedback received.

4. Community engagement

URL	www.shapeletchworth.com
Period reported on	01/06/22 - 14/10/22
Total no. of visitors	3,532
Total no. of individual visits	4,470
Avg. number of visits per visitor	1.27
Avg. length of visit	02:13
Total no. of individual page views	19,794
Proportion of visitors accessing the website on desktop/mobile/tablet	Desktop = 21.91% Mobile = 69.18% Tablet = 8.92%
Total no. of people registered to the mailing list (via the website)	131
Total no. of online survey responses	627

4.18.
The below map illustrates the postal addresses of those who responded to the surveys and provided a postcode. They demonstrate most respondents live in relative proximity to the site.

Figure 5: Overview of the postcodes of respondents.

LG1 masterplan options

4.19.
The same project website was used for the masterplan options consultation. It was updated to offer further information on the masterplan options and included online blog updates and two online surveys that were open between 11th October and 17th November 2023 – enabling the local community to provide their feedback.

4.20.
A series of blog posts outlined the masterplan options, advertised the public exhibitions and community pop-up events. These were also accompanied by a timeline showing major events and milestones of the project.

4. Community engagement

4.21.
Those who were interested in finding out more were able to visit the website and view all background material, before providing feedback through digital surveys. The dedicated project website also provided a dedicated contact form so that people could contact the project team directly with their questions and comments.

4.22.
To provide feedback, the website also included online surveys which asked users key questions about the masterplan options for the LG1 site. LGCHF also published another survey on what people want to see regarding possible improvements to the Grange recreational ground.

4.23.
The dedicated website also provided details of how to get in touch with the project team, these included the details as provided in section 1.19 of this report.

4.24.
In total, **1,027** users viewed the project website during the consultation period, with a total of **135** feedback surveys completed online. A further **26** surveys specifically on improving the Grange Rec were also completed. The breakdown of this engagement can be seen in the table below.

URL	www.shapeletchworth.com
Period reported on	11/10/23 – 17/11/23
Total no. of visitors	1,027
Total no. of individual visits	1,416
Avg. number of visits per visitor	5.51
Avg. length of visit	1m 51s
Total no. of individual page views	5,660
Proportion of visitors accessing the website on desktop/mobile/tablet	Desktop = 344 Mobile = 637 Tablet = 47
Total no. of people registered to the mailing list (via the website)	5
Total no. of online survey responses	161

4. Community engagement

4.25.
The below map illustrates the postal addresses of those who responded to the surveys and provided a postcode. They demonstrate most respondents live in relatively close proximity to the site.

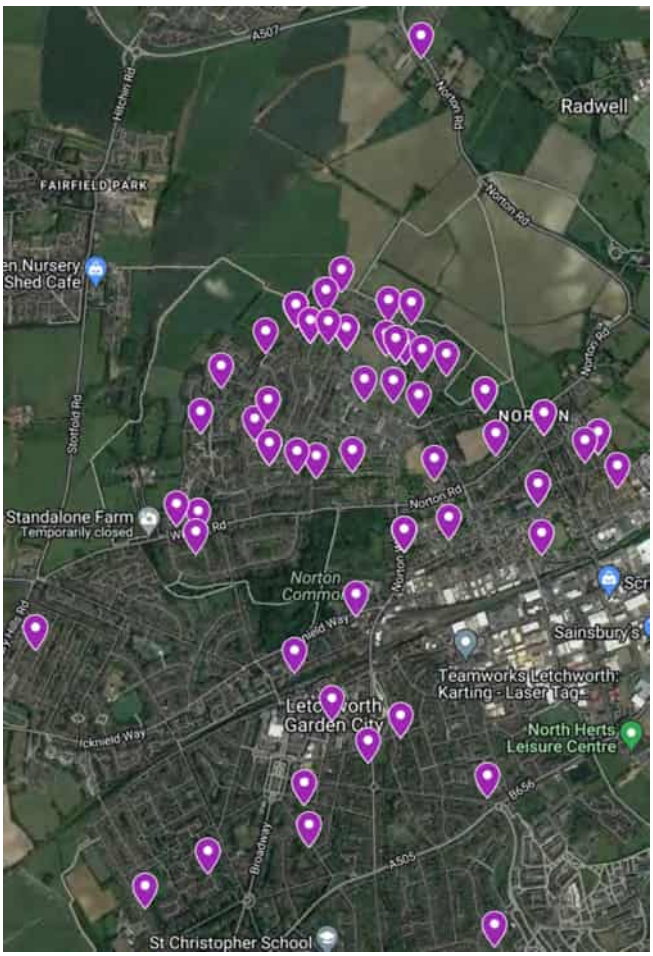


Figure 6: Overview of respondents' postcodes

LG1 preferred masterplan

4.26.
As indicated above, the same project website was used for the consultation on the preferred masterplan for the LG1 site.

4.27.
If local residents or attendees the public exhibition had any questions on which they wanted to follow up with the project team or had not engaged in person and wanted to ask a question, they were free to do so via the phone number or email address above (see section 4.4).

4.28.
The website was updated with information regarding the preferred masterplan for LG1. The website also contained blog posts on the consultation, including event materials on previous feedback received and the preferred masterplan, as well as information on the public exhibition and how to provide feedback.

4.29.
Respondents could provide feedback using one of our hardcopy feedback forms which were at the public exhibition, or they could fill in our survey on the dedicated project website. In total, we received **133** completed feedback forms.

4. Community engagement

4.30.
In total, **530** users viewed the project website during the consultation period, with a total of **117** feedback surveys completed online. The breakdown of this engagement can be seen in the table below.

URL	www.shapeletchworth.com
Period reported on	07/03/24 – 26/03/24
Total no. of visitors	530
Total no. of individual visits	714
Avg. number of visits per visitor	0.68
Avg. length of visit	1m 17s
Total no. of individual page views	2,305
Proportion of visitors accessing the website on desktop/mobile/tablet	Desktop = 176 Mobile = 348 Tablet = 19
Total no. of people registered to the mailing list (via the website)	3
Total no. of online survey responses	117

4. Community engagement

4.31.
The map below (overleaf) illustrates the postal addresses of those who responded to the surveys and provided a postcode. They demonstrate most respondents live in relatively close proximity to the site. Please note there was one respondent who lives in Hemel Hempstead and is not included on this map.

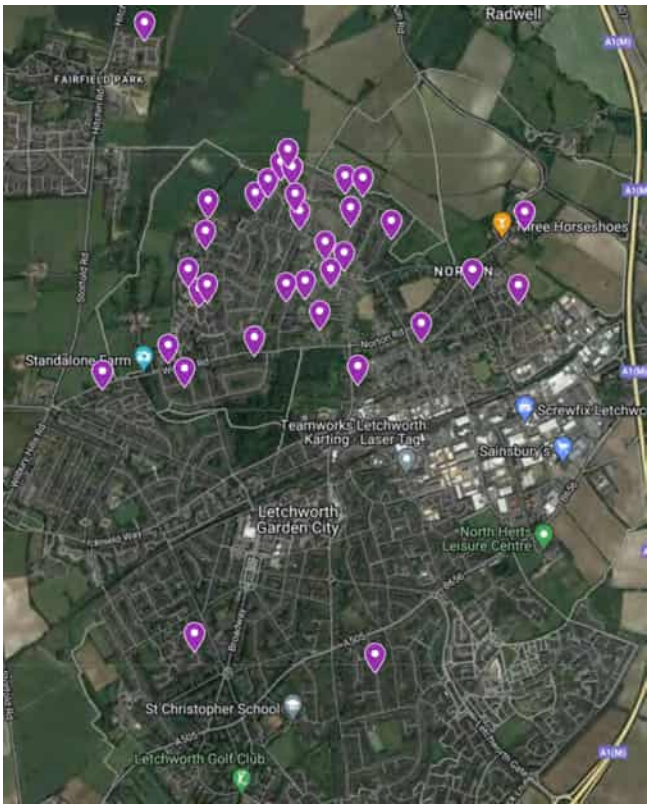


Figure 7: Map of addresses of respondents to surveys who supplied a postcode.

Promotional materials

LG1 early understandings

4.32.
A newsletter (Appendix C1) was distributed to the whole of Letchworth, a total of 16,427 addresses (see Appendix D1 for a copy of the distribution area), mailed to residents on 17 June 2022.

4.33.
The newsletter offered a summary of the LG1 site's history and previous consultations, whilst introducing the concept of developing a masterplan for the site shaped by the local community. The newsletter introduced the dedicated project website and advertised the online and in-person community engagement. It also provided contact details, through which interested stakeholders could send any further questions or comments about the consultation or LG1 masterplan. Additionally, a hardcopy version of survey two was also enclosed with freepost return to encourage feedback from the local community.

4.34.
A flyer (Appendix E1) was distributed to 2,834 addresses on the Grange Estate (see Appendix F1 for a copy of the distribution area) via Royal Mail on 24 June 2022.

4.35.
The flyer focused on the Grange, which neighbours the LG1 site, inviting local residents to two joint consultation drop-in events with Settle (on 2nd and 5th July) to discuss ideas for Pelican Way, the Grange Neighbourhood Plan and the LG1 site. It also invited residents to join the Grange Community Panel and provided contact details, through which interested stakeholders could send any further questions or comments about the consultation or LG1 masterplan.

4.36.
The community engagement was also advertised wider as part of a social media advertising campaign (see Appendix G1) to ensure that as many people in the local area were aware of the community engagement to inform the LG1 masterplan as possible. In total, the adverts reached 20,262 people with 77,296 impressions meaning that some people viewed the advertisements more than once.

4. Community engagement

LG1 masterplan options

4.37.
A flyer (Appendix G2) was distributed to the whole of Letchworth, a total of 16,427 addresses via door-to-door delivery prior to 11th October (see Appendix P2 for a copy of the distribution area).

4.38.
The flyer offered a summary of the engagement undertaken to date and the masterplan options process, which has led LGCHF to narrow it down to three masterplan options for the LG1 site. It introduced the dedicated project website and advertised both the online and in-person consultation. It also provided contact details through which interested stakeholders and the local community could send any further questions or comments about the consultation or LG1 masterplan.

4.39.
The flyer advertised the three public exhibitions LGCHF held over the course of the consultation period (Monday 30th October 5pm-9pm, Saturday 4th November 10am-2pm, and Wednesday 15th November 5pm-9pm). It also mentioned that the team would be popping up at across Letchworth and at different events throughout October and November.

4.40.
LGCHF also invited people to ask to be sent a printed version of the feedback form and printed material on display at the exhibitions and highlighted that they could be collected from One Garden City, Broadway Cinema or Standalone Farm. These three locations were also where static exhibitions were located.

4.41.
LGCHF notified its dedicated mailing list via an e-newsletter on 19th October 2023 consisting of those who had signed up or had asked to be on it to be kept up to date with the plans for LG1. This went to 424 people and was opened by 303 people.

4.42.
The local newspaper The Comet, also posted about the public consultation and events (see here) on 19th October 2023.

4.43.
The team also left static exhibition banners at Broadway Cinema, Standalone Farm, and One Garden City Museum (see Appendix A2) which advertised the masterplan options and the consultation events, as well as website details and how to get in touch with the project team.

4.44.
LGCHF are extremely thankful to the local shops and restaurants for allowing them to compliment the static exhibitions by displaying posters and business cards which advertised the consultation and left details of the website and how to get in touch with the project team. These locations were as follows:

- Grange Community Centre & Café, SG6 4NG (1x community board poster & business cards)
- Grange Tesco Express, SG6 4NG (1x community board poster)
- Sainsbury's Local, SG6 3DD (1x community board poster & business cards)
- Letchworth Library, SG6 3PF (1x community board poster)
- David's Books, SG6 3DE (1x community board poster)
- Morrisons, Boardway Gardens, SG6 3TS (1x community board poster)
- Cultivo Lounge, SG6 3EW (1x community board poster)
- Khoi Khoi, SG6 3DA (1x shop window poster & business cards)
- Little Miss Green Fingers, SG6 3DE (business cards)
- Cherries and Tea Café, SG6 3DG (business cards)
- Costa Coffee, SG6 3DN (business cards)
- Bakehouse, SG6 3EL (business cards)
- Cook's boutique, SG6 3EW (business cards)
- G's Café and Deli, SG6 3DE (business cards)

4. Community engagement

Social media

4.45.
The community engagement was also advertised as part of a social media advertising campaign (see Appendix i2) to ensure that as many people in the local area were aware of the events to inform the LG1 masterplan as possible. In total, the adverts reached 1,761 people with 1,889 impressions meaning that some people viewed the advertisements more than once.

4.46.
There were multiple social media ads posted by LGCHF advertising the consultation and events that people could attend, as well as a video was produced to further promote the consultation for LG1 (please see Appendix J2).

4.47.
LGCHF are extremely grateful to have received support from the whole community to promote the consultation and thank everyone who engaged with them about the plans for the LG1 site.

LG1 preferred masterplan

4.48.
A flyer (Appendix C3) was distributed to 2,689 addresses on the Grange Estate between 2nd, 3rd and 4th March 2024 via door-to door delivery. Please see Appendix J3 for the flyer distribution area.

4.49.
The flyer updated recipients on the previous engagement undertaken and that LGCHF had developed the preferred masterplan for LG1. It outlined the details of the public exhibition and how to provide feedback, either digitally or as a hardcopy. It also provided contact details through which interested stakeholders and the local community could get in touch with the project team and ask any questions.

4.50.
LGCHF also invited people on the flyer to request printed consultation materials and versions of the feedback form via a freepost address and highlighted that these could also be collected from One Garden City, Broadway Cinema or Standalone Farm (Appendix B3).

4.51.
The flyers were also sent to the following local schools on 1st March 2024 to enable LGCHF to conduct further youth engagement following the consultation on the masterplan:

- Northfields Infants & Nursery School
- The Grange Academy
- Stonehill School
- Norton St Nicholas CofE Primary School

4.52.
LGCHF met with representatives from the North Herts Council Grange Network Team who sent the flyer to community groups on the Grange that they have existing links with.

4.53.
At One Garden City and Broadway Cinema, LGCHF displayed static exhibitions. These were both digital and physical event banners and had the flyers and feedback forms on display alongside.

4.54.
LGCHF also included details of the consultation and public exhibition in their newsletter and also had this information reported in North Herts Council's e-newsletter on Friday 1st March 2024 (see Appendix G3).

Social media

4.55.
The community engagement was advertised as part of a social media advertising campaign (see Appendix E3) to ensure that as many people in the local area were aware of the event to receive as much feedback as possible on the LG1 masterplan.

4. Community engagement

4.56.
There were three social media ads posted by LGCHF advertising the consultation and public exhibition, as well as how to provide feedback and submit feedback forms. These ads were posted on Tuesday 27th February, Friday 8th March and Friday 22nd March. In total, these adverts reached 28,311 with 33,190 impressions, meaning multiple people clicked on the ads more than once.

Stakeholder meetings

LG1 early understandings

4.57.
Building on national and local policy guidance and best practice advice, LGCHF has sought to engage with stakeholders at an early stage of the consultation process. The aim of this is to raise awareness of the proposals amongst key local stakeholders and develop a constructive relationship, while identifying their key priorities, thoughts and ideas for the LG1 masterplan. This included undertaking a stakeholder mapping exercise.

4.58.
The team sought to inform and initiate a dialogue with the local elected Members for where the site is situated (Letchworth Grange Ward), NHC leadership and several key local community stakeholders. Stakeholders were notified of the plans and invited to a meeting with the project team to discuss them further. Please see Appendix J1 for a full list of each stakeholder we sought to engage with.

4.59.
Meetings were held with Cllr Simon Bloxham and Cllr Tina Bhartwas to discuss the engagement approach. They were generally positive about the approach and provided feedback about how to effectively engage with local communities.

LG1 masterplan options

4.60.
LGCHF entered into a planning performance agreement with North Herts Council and Herts County Council to ensure the engagement takes place.

4.61.
On 24th October 2023, LGCHF met with North Herts Council to discuss the consultation and they reported that Danny Pearson, the Community & Partnerships Officer for Letchworth and Hitchin, had also posted some information about the consultation. This further widened outreach when advertising the consultation and ensured as many people as possible had the opportunity to provide feedback on the masterplan options and engage with the consultation.

4.62.
The project team meets regularly with the members of the planning team and its appointed advisers at Hyas and the transportation team at HCC. They have also been in discussions with technical teams at HCC on matters such as flooding, ecology and archaeology. The team sought to inform and initiate a dialogue with the local elected members for where the site is situated (Letchworth Grange), NHC leadership, and several key local community stakeholders. The project team meet with the team at settle on a regular basis and has also engaged with the local police unit. Stakeholders were notified of the plans, the consultation events, and invited to a meeting with the project team to discuss them further. Please see Appendix N2 for the full list of stakeholders.

4.63.
Following the consultation on the masterplan options the project team produced three slides visually summarising the key themes of feedback, please see Appendix O2 for the consultation summary slides. These slides were used in the LG1 Masterplanning Milestone Workshop with NHC and HYAS on 4th December 2023.

4. Community engagement

LG1 preferred masterplan

4.64.
The information in sections 4.63 and 4.64 is also relevant for the preferred masterplan consultation.

4.65.
LGCHF invited key local stakeholders to a stakeholder preview event the hour before the public exhibition begun (5:00pm-6:00pm). This provided stakeholders with the opportunity to ask the project team any questions and view the proposals before the exhibition was open to the public. Please see Appendix H3 for the full list of stakeholders who were invited.

4.66.
Following the preferred masterplan public exhibition, the project team has also engaged with the British Horse Society Access and Road Safety Officer for North Hertfordshire and Stevenage, particularly regarding some of the bridleways surrounding the site.

4.67.
As part of their continuous engagement, LGCHF are undertaking school engagement to ensure their plans for LG1 reach as wide an audience as possible. The LGCHF have arranged an engagement event for students at North Herts College in the Summer term and hosted a workshop at The Grange Academy on 19th April 2024. Please see section 4.112 for more information.

4.68.
This will enable LGCHF to engage with local young people about the LG1 preferred masterplan, following conducting youth engagement at Standalone Farm (see section 4.112 and Appendix K2). LGCHF aim to engage with a wide range of audiences of different ages and backgrounds and speaking to local students is another way they can carry this out effectively and continuously.

Events

LG1 early understandings

4.69.
LGCHF attended a range of community events in its early understandings consultation for the LG1 site. This section provides further detail on the responses and feedback received.

4.70.
LGCHF team attended several community events and popup sessions, which can be seen in the table below. They provided an opportunity for attendees to provide their feedback about the masterplan for the LG1 site and members of the project team were in attendance to discuss and answer questions about the proposals. Overall, these events reached over **900** members of the community.

4.71.
Our programme of community events has included a range of town centre and Grange-focused events to ensure that we are providing a range of opportunities for everyone to get involved in the engagement process.

4.72.
The project team held a door knocking session on 11th August 2022 from 10am-1pm and from 2-5pm to raise awareness of the ongoing consultation process and highlight the ongoing engagement via the dedicated project website (please see Appendix A1), inviting residents that had not engaged thus far to view the website, learn about the proposals and provide their feedback. Residents that we were unable to speak to were left a 'Sorry We Missed You' card (Appendix H1), which highlighted that members of the project team had come to speak with them and offered details of the consultation website and the team's contact details. The team knocked on over 400 doors, focusing on homes closest to the site to ensure these people were aware of the engagement.

4. Community engagement

4.73.
This ran parallel with a drop-in surgery hosted at the Grange Community Café which ran from 3pm-7pm, allowing residents to discuss the plans in more detail with members of the team. A total of 4 residents attended, suggesting that those who wished to engage with us had already done so.

4.74.
The full list of events and the numbers of people who engaged with the team can be seen in the table below.

Event	Purpose of the event	Location	Date	Attendees
Fathers' Day	The team attended the event to raise awareness and broaden the audience of the engagement process. They also encouraged attendees to provide feedback.	Standalone Farm	19th June 2022	50
Armed Forces Day	The team attended the event to raise awareness and broaden the audience of the engagement process. They also encouraged attendees to provide feedback.	Broadway Gardens	25th June 2022	40
Garden City meeting	Annual Foundation meeting where members of the public attended to find out about the progress of the Foundation. The team attended to gather feedback and answer questions about the development of the masterplan for LG1.	Broadway Hotel	29th June 2022	30
Joint Settle Consultation	A joint engagement event alongside Settle, hosted on the Grange. This event provided an opportunity to discuss the future of the Grange, helping to dispel any confusion about who was responsible for each development proposal.	The Grange Community Cafe	2nd and 5th July 2022	200
Grange Assembly	The team attended the school assembly to gain feedback from the pupils about how they used the Rec and asked for the student council to gather further feedback following our discussions.	Grange Academy	5th July 2022	100
Door knocking and drop-in surgery	The team conducted a door knocking and drop-in surgery to ensure that those living closest to the site were aware of the proposals and how to take part in the engagement process.	The Grange and the Grange Community Cafe	11th August 2022	400 & 4

cont. on next page.

4. Community engagement

Event	Purpose of the event	Location	Date	Attendees
Farmers' Market	The team attended the event to raise awareness and broaden the audience of the engagement process. They also encouraged attendees to provide feedback.	Leys Avenue	20th August 2022	50
Food, Drink and Music Festival	The team attended the event to raise awareness and broaden the audience of the engagement process. They also encouraged attendees to provide feedback.	Leys Avenue	24th September 2022	80
School Council meeting	The team attended a meeting with the School Council at the Grange Academy to discuss their feedback and opportunities for future engagement.	Grange Academy	2nd November 2022	11

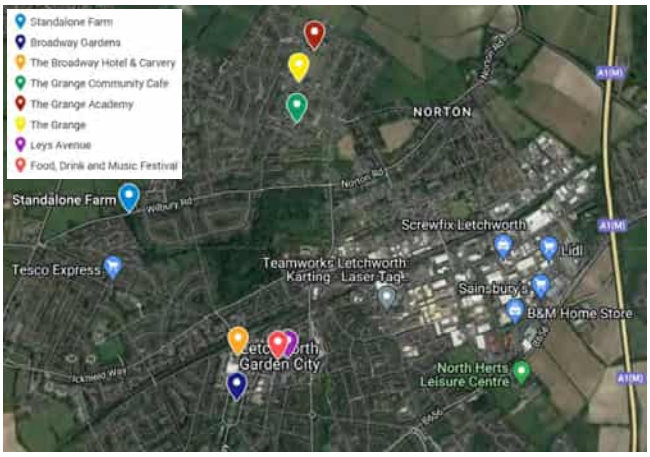


Figure 8: A map and key to show all locations of community events that LGCHF attended or hosted.

Videos

4.75.
As part of the analysis of feedback received, two areas were identified where the team feels it is important to address concerns in more detail. These are green infrastructure/landscaping and transport, which have both been key themes throughout the feedback on both the website and during the events. LGCHF is producing two videos about these topics that will be available to view on the dedicated consultation website and LGCHF's social media.

4.76.
The videos respond to the points raised in the feedback to date and provide further information and context about the proposals and the engagement process.

4.77.
The videos were published after the consultation and were promoted to local people via social media and our website once available.

LG1 masterplan options

4.78.
LGCHF also organised and attended a range of community events during their masterplan options consultation. This section provides further detail on the responses and feedback received.

4.79.
LGCHF hosted several events and attended a number of community events and pop-up sessions, which can be seen in section 4.84. They provided an opportunity for attendees to provide their feedback on the masterplan options for LG1 and members of the project team were always in attendance to discuss and answer any questions about the proposals. Overall, 712 members of the community attended a range of engagement events and door-knocking across Letchworth, this is broken down by section 4.85 of this report.

4. Community engagement

4.80.
LGCHF's project team held three public exhibitions, three door-knocking sessions and four pop-up events during the consultation period. These spanned across Letchworth to ensure that we are providing a range of opportunities for everyone to get involved in the engagement process.

4.81.
Cllr. Daniel Allen also attended our public exhibition on Saturday 4th November at The Three Horseshoes and provided useful and valuable feedback. Cllr. Allen was generally positive about the approach and provided useful and valuable feedback on the masterplan options.

4.82.
The full list of events and the numbers of people who engaged with the team can be seen in the table below.

Event	Purpose of the event	Location	Date	Attendees
Pop-up at Letchworth Farmers' Market	The team attended the event to raise awareness and broaden the audience of the engagement process, targeting families and more elderly residents. They also advertised the public exhibitions and encouraged people to provide feedback.	The Arcade	21st October 2023	90
Pop-up at Standalone Farm	Children were invited to draw their own masterplans of what they would like to see on LG1. Members of the team there would also speak to them and their parents about the plans for LG1 and which option they preferred. Please see some images of the session in Appendix K2.	Standalone Farm	24th October 2023	65
Pop-up on Grange Rec	The team attended the event to raise awareness and broaden the audience of the engagement process, particularly engaging with parkrunners. They also advertised the public exhibitions and encouraged people to provide feedback.	Grange Rec	28th October 2023	50
Public exhibition	The team were on hand to demonstrate the masterplan options for LG1 and answer any questions and encourage attendees to fill out hardcopy feedback forms.	Grange Academy	30th October 2023	49
Public exhibition	The team were on hand to demonstrate the masterplan options for LG1 and answer any questions and encourage attendees to fill out hardcopy feedback forms.	Three Horseshoes	4th November 2023	71

cont. on next page.

4. Community engagement

Event	Purpose of the event	Location	Date	Attendees
Pop-up at Letchworth train station	The team attended the event to raise awareness and broaden the audience of the engagement process, targeting commuters on their way home from work. They also advertised the public exhibitions and encouraged people to provide feedback.	Letchworth train station	14th November 2023	106
Public exhibition	The team were on hand to demonstrate the masterplan options for LG1 and answer any questions and encourage attendees to fill out hardcopy feedback forms.	Grange Academy	15th November 2023	58

Figure 9: A map and key showing the locations of all our consultation events for the LG1 masterplan options consultation.

Door-knocking on the Grange Estate

4.83.
The project team held a series of door knocking sessions to raise awareness of the ongoing masterplan options consultation process and highlight the ongoing engagement via the dedicated project website (please see Appendix A1), inviting residents that had not engaged thus far to view the website, learn about the proposals and provide their feedback. Residents that we were unable to speak to were left a 'Sorry We Missed You' card (Appendix E2) or business card (Appendix F2), which highlighted that members of the project team had come to speak with them and offered details of the consultation website and the team's contact details.

4.84.
Overall, the team knocked on 636 doors and spoke to 223 people. The door-knocking sessions were held on Monday 30th October (10am-4pm), Tuesday 14th November (1pm-4.30pm) and Wednesday 15th November (10am-4pm).
events and door-knocking across Letchworth, this is broken down by section 4.85 of this report.

Door-knocking session	Date & time	People spoken to
1	Monday 30th October (10am-4pm)	72 people
2	Tuesday 14th November (1pm-4.30pm)	56 people
3	Wednesday 15th November (10am-4pm)	95 people

4. Community engagement

4.85.
Key themes that came up on the doorstep were similar to those that arose during our other consultation events, including:

- Traffic, particularly through the Grange Estate, and access points into the site.
- Privacy from the homes in the LG1 development.
- Maintaining green spaces and improvements to the Grange Rec
- Supporting infrastructure, particularly health facilities
- Sustainability of the site and homes that will be built
- Cycle routes around the site and further into Letchworth

4.86.
The team also advertised the consultation events and encouraged local residents to review the wider materials and speak to other members of the project team. Please see below a map of the door-knocking the project team undertook over the course of the consultation period. These homes were chosen as they are closest to the site and therefore are likely to be the most impacted.

Figure 10: Map showing our door-knocking areas covered.

LG1 preferred masterplan

4.87.
LGCHF held the public exhibition for the LG1 preferred masterplan at The Grange Academy, SG6 4PY, on Thursday 7th March 2024, 6:00pm-8:00pm.

4.88.
The event was advertised on the dedicated project website, social media, the consultation flyer and in an article in The Comet.

4.89.
In total, 88 people attended the exhibition and 13 hardcopy feedback forms were completed and submitted and a further 3 feedback forms were taken away and sent back to LGCHF at a later date.

4.90.
The event was staffed by David Ames (LGCHF), Emma Hone (LGCHF), Prachi Rampuria (EcoResponsive Environments) Martin Hubbard (Steer), Debbie Wildridge (Locality/Eastern Community Homes), Emma Benson (Kanda), and Charles Mabbutt (Kanda).

4.91.
The exhibition also included two interactive posters on the preferred masterplan and Grange Opportunities Plan (Appendix F3). Attendees were invited to stick post-it notes on either poster on what feedback they had, which has also been taken into account in this report.

4.92.
LGCHF also invited stakeholders a preview between **5-6pm** on the same evening and at the same venue as the public exhibition. This offered stakeholders an opportunity to ask the project team any questions and give feedback before the exhibition was open to the public. Cllr. Daniel Allen (Lab, Letchworth Grange) and Emma Fernandes (Lab, Letchworth Grange ward candidate) both attended and stayed at the event to understand the views of the local community.

4.93.
Please see section 4.282 for feedback received at both the public exhibition and online.

4. Community engagement

Grange Community Panel

4.94.
Following LGCHF's early understandings engagement and prior to the public consultation on the LG1 masterplan options, LGCHF set up and hosted a Grange Community Panel. This panel was set up for local residents of the Grange Estate and key stakeholders to help shape the proposals.

4.95.
LGCHF have now held four GCP meetings regarding the plans for LG1, most recently in January 2024. The panel was set up for local residents on the Grange Estate and key stakeholders to help shape the proposals.

4.96.
The latest meeting focused on an update on the masterplan options consultation held October – November 2023, discussion on the key feedback received on the masterplan options and an activity on possible improvements to the Grange Rec.

4.97.
The panel has several aims, including:

- Act as a sounding board for the development of LG1 and partners so that they can understand their perspective at all stages of the design of the development.
- Ensure that residents and stakeholders are receiving accurate and timely information throughout the masterplan process and guide the communication process to support this.
- Advise on engagement with the community, including what is and is not working, and shape engagement plans.
- Ensure that residents are kept up to date with engagement activities and any advancements of the scheme.
- Ensure regular engagement with local residents to ensure transparency between the project team and local residents.
- Help to communicate decisions to residents by disseminating information through their networks.
- Work with LGCHF and its consultants to ensure that community engagement activities capture the views of the wider community. Continue to meet throughout the whole of the development process.

4.98.
Attendees are able to provide their local expertise to assist LGCHF and its development partners throughout the design and development of the masterplan.

4.99.
In establishing the panel, we invited anyone interested in taking part which included community members who lived and worked on the Grange Estate to attend meetings. Through this, we have quickly developed a group of regular attendees, though we have new members attending each meeting. Local representatives such as ward and county councillors are also invited and have attended multiple meetings.

4. Community engagement

4.100.
The panel meetings so far have been on the following topics:

Topic	Details of meeting	Description
Constraints and opportunities of the LG1 site	Grange Community Centre & Café, SG6 4NG, 23.05.23, 7pm-9pm	• Summary of scheme and feedback to date. • Purpose of the panel. • Constraints and opportunities workshop in which groups marked up constraints and opportunities plans with their feedback.
Transport	Grange Community Centre & Café, SG6 4NG, 01.08.23, 7pm-9pm	• Summary of the first panel meeting • Presentation on the transport context for LG1 and its wider connections. • This covered access points, the need for cars, signage and lighting and schools. • Travel workshop on discussing modes of travel and their usage in Letchworth. This was then compared to census data to see how accurate they were. • After discussing how their predictions compared to the census data, the groups discussed their aspirations for transport use for the future and how development at LG1 could influence this.
Masterplan options	Grange Community Centre & Café, SG6 4NG, 20.09.23, 7pm-9pm	• A preview and presentation of the three masterplan options for LG1. • Attendees were split into three groups and each group had assessment criteria (natural infrastructure, transport and movement infrastructure, land use & urban design) and discussed which option best fits the assessment criteria.
Consultation feedback & Rec	Grange Academy, SG6 4PY, 17.01.24, 7pm-9pm	• The meeting will cover the feedback we received from the consultation on the masterplan options. • We will also look to receive attendees feedback on possible improvements and enhancements to the Grange Rec.

4. Community engagement

4.101.
Each of the meetings were staffed by LCGHF, EcoResponsive Environments and was facilitated by Kanda. Where appropriate, LGCHF's transport consultants, Steer, and landscape architect, Peter Neal, were also in attendance to talk attendees through aspects of the masterplan relevant to their profession.

Figure 11: Grange Community Panel meeting on the LG1 masterplan options.

4.102.
Over the course of the panel meetings, multiple local councillors were engaged with and attended the panel meetings, including, Cllr. Daniel Allen (Lab, Letchworth Grange), Cllr. Daniel Marsh (Lab, Letchworth Grange), Cllr. Simon Bloxham (Con, Letchworth Grange) and Cllr. Tina Bhartwas (Lab, Letchworth North Division on HCC). They were able to provide their valuable feedback from their unique perspective as a councillor which local residents appreciated and engaged with.
Masterplanning workshop

4.103.
A week before the panel meeting on the LG1 masterplan options, those on the mailing list were invited to a masterplanning workshop. This introduced attendees to the masterplanning process, most of whom would likely have no or very little experience in masterplanning.

4.104.
The groups were tasked to form their own masterplan for the LG1 site based on the assessment criteria (green infrastructure, movement and transport, and land use & urban design).

4.105.
The aim of the workshop was to introduce masterplanning to attendees and for them to understand the complexities of the process and need for compromise, whilst recognising that there are often no simple solutions.

4.106.
The workshop took place at the Grange Community Centre & Café on 13th September 2023, 7pm-9pm.

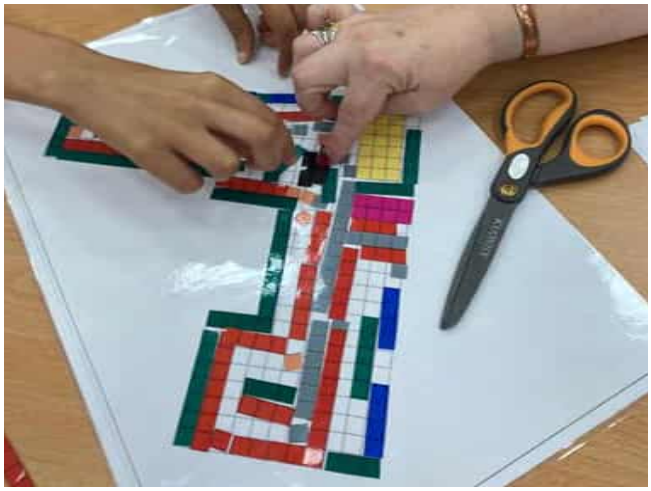


Figure 12: Masterplanning workshop for Grange Community Panel.

4. Community engagement

Ongoing engagement

4.107.
As part of our ongoing community engagement for the masterplan options for LG1, after the consultation period ended the team reached out to local schools about carrying out some youth engagement.

4.108.
The aim of this was to get the children involved in the creation of different aspects of the masterplan options for the site, such as possible improvements to the Grange Rec, Greenway or other features they would like to see.

4.109.
The project team are currently working with The Grange Academy, St Nicholas School, Northfields and North Herts College to host a series of workshops or sessions that tie into the curriculum and teach students about masterplanning in relation to LG1. However, the following local schools approached were as follows:

- Letchworth and Baldock Pre-School
- The Grange Academy
- St. Nicholas School
- St. Christopher School
- Stonehill School
- Icknield Infant and Nursery School
- Pixmore Junior School
- Wilbury Junior School
- Hillshott Infant and Nursery School
- The Highfield School
- Northfields Infants and Junior School
- Fearnhill School

Youth engagement

4.110.
As outlined in section 4.84, the team held a pop-up event at Standalone Farm. This consisted of a masterplanning activity for children there to design their own masterplans of the LG1 site and include any provisions they wished on the site e.g. homes, green spaces, a school etc.

4.111.
This enabled local children the opportunity to get involved with the masterplan options and create their own and also provided the project team the opportunity to receive feedback from them and their parents about the plans for LG1. Banners outlining the site and the masterplan options were also on display for people to read. Please see Appendix K2 for a copy of the activity sheet and images of the session.

4.112.
LGCHF also ran a session at The Grange Academy on Friday 19th April 2024 with the school council to talk about the Grange Rec, Greenway, how they travel to school and what they feel could be improved within that part of the town. 10 children attended, representing each year group (aged between 8-11 years old). A teaching assistant from year 6 was also in attendance and took part in discussion.

Feedback

LG1 early understandings

4.113.
The following section outlines feedback collected through the project website and hardcopy feedback forms from consultation events and the newsletter distributed to local addresses. The surveys include both qualitative and quantitative data.

Survey 1 – 'Share your views: the vision for LG1' (289 responses)

4.114.
Survey 1 invited respondents to share their views on the vision for LG1, this ran from 17 June to 23 July a total of 289 responses were collected.

4. Community engagement

4.115.
Question 1: What is the one place in your local area that you value and why?

Theme	Count	%
Greenery/countryside/green belt	140	19.31%
The Greenway	126	17.38%
Foot/cycle paths	114	15.72%
Sustainability	84	11.59%
Exercise	46	6.34%
Public space	42	5.79%
Wildlife/animals/farm	42	5.79%
Norton Common	30	4.14%
Mental health	24	3.31%
Entertainment (including leisure, restaurants, and shops)	21	2.91%
Recreation ground	17	2.34%
Views	15	2.07%
Anti-social behaviour	11	1.52%
Transport/highways	7	0.97%
Broadway gardens	4	0.55%

4.116.
Question one asked respondents to name a local place in Letchworth they valued and explain why they valued it. Four specific locations were highlighted repeatedly:

- The Greenway
- Norton Common
- The Grange Rec
- Broadway Gardens

Of these, the Greenway was the most popular by far with over 17% responses referring to this well-used path and green space. Likewise, the other three locations identified in the survey were other local green spaces such as Norton Common, the Grange Recreational Ground and Broadway Gardens. This illustrates the importance of publicly accessible green spaces to the local community and therefore their importance within the LG1 masterplan.

4. Community engagement

4.117.
This is supported by the most common theme, with over 19% of responses discussing greenery, countryside, and the greenbelt. This demonstrates the importance and valued nature of outdoor spaces to respondents. This is further evidenced by the fact that there have been over 40 direct references to public spaces being valued in the feedback collected.

4.118.
Furthermore, the cycle and footpaths were also a common theme in response to this question, having been mentioned in 15.72% responses, showing the significant value placed on accessibility and active travel routes to promote other key themes such as exercise. This is also reflected by transport and highways featuring in 7 responses to this question and the significant number of respondents who highlighted the importance of spaces for exercise. This reflected the conversations had at events that residents wanted better and safer routes to cycle around the Grange and town.

4.119.
Similarly other key themes of the feedback interlink with each other helping to build a better picture of what is valued locally. The incorporation of public spaces presents an opportunity to deliver other key themes that are valued such as greenery, sustainability, and wildlife, contributing to the mental health of local residents which was also referenced in over 3% of responses.

4.120.
Question 2: What community facilities or services would you like to see/see more of in the area and why?

Theme	Count	%
Public space	100	28.01%
Health services	61	17.09%
Restaurant/shops	39	10.92%
Youth entertainment and activities	33	9.24%
Leisure	11	3.08%
Transport/highways	24	6.72%
Sustainability	20	5.60%
Schools	23	6.44%
Exercise	17	4.76%
Housing	11	3.08%
Cleanliness	7	1.96%
Architectural design	6	1.68%
Anti-social behaviour	5	1.40%

4. Community engagement

4.121.
Question two asked what community facilities and services respondents would like to have or be increased in the area. As a result, the question identified a significant demand for increased public space after being included in over 28% of responses, reiterating their value, as also demonstrated by question one. Furthermore, other key themes that respondents would like to see in the local area included increased healthcare provision, new schools and improvements to local transport and highways.

4.122.
Medical facilities feature strongly in these responses, reflecting concerns of a lack of facilities of this nature both in the Grange and across the town. Their provision is also in the NHC planning policy for LG1. The delivery of medical facilities is complex with a number of statutory providers needed to work with LGCHF.

4.123.
A number of responses made reference to restaurants and retail space in relation to this question. Feedback also identified that there is a local demand for independently run restaurants and retail space, as well as specific outlets such as a café and grocery shop.

4.124.
Significantly, several key themes surrounded the need for facilities to provide entertainment, in particular youth entertainment and activities for local young people.

4.125.
Question 3: Which local transport links (e.g., buses, railways services, walking and cycle routes, roads) are most important to you and why?

Theme	Count	%
Exercise	142	21.81%
Walking Routes	131	20.12%
Train/railway	85	13.06%
Cycle routes	80	12.29%
Road	71	10.91%
Car	49	7.53%
Safety/overcrowding concerns	23	3.53%
Buses	19	2.92%
Sustainability	17	2.61%
Leisure	10	1.54%
Public space	10	1.54%
Mental Health	6	0.92%
Wildlife/Animals	6	0.92%

4. Community engagement

4.126.
Question three analysed the most important transport links for respondents and why this was the case. The most common theme from the feedback that we received was walking being the most important, having been mentioned in over 20% of responses, this was followed by train/ railway occurring in over 13% and cycle routes with over 12% of responses.

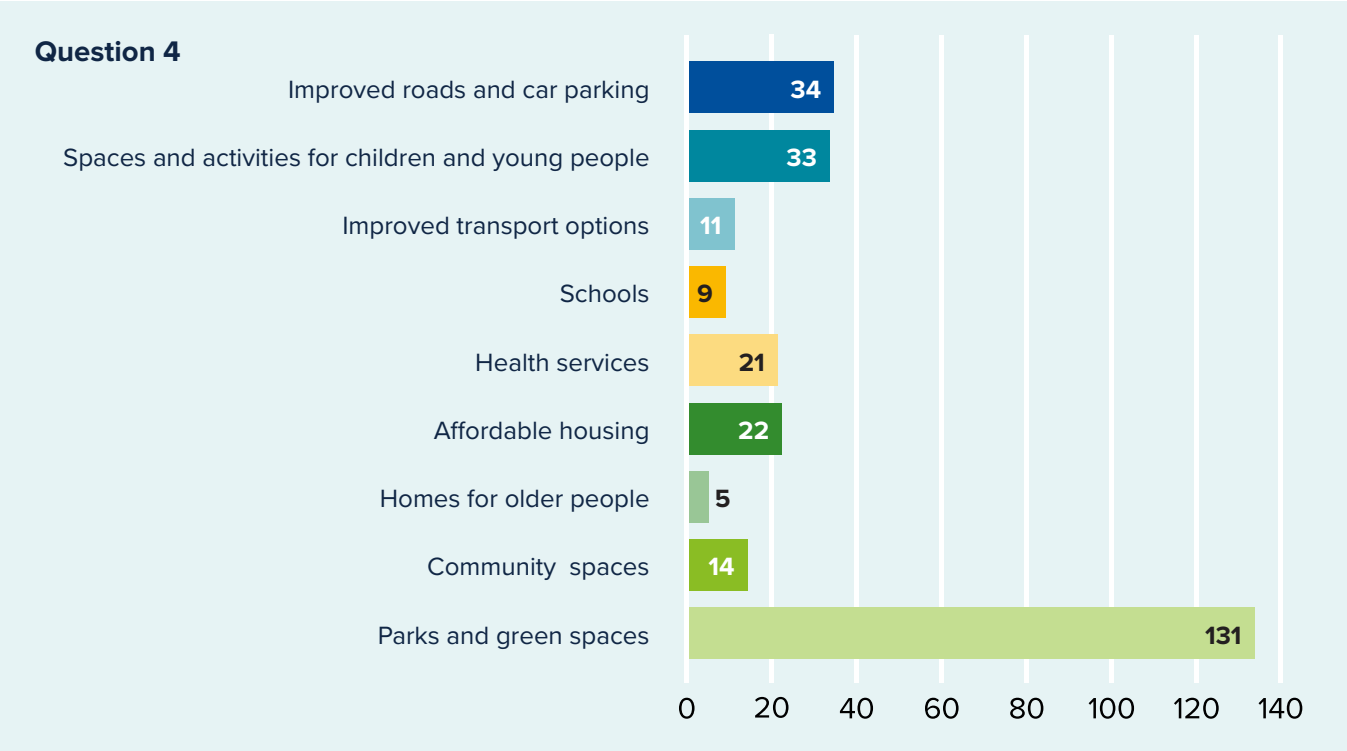
4.127.
The question also tried to establish why these modes of transport were important to respondents, the most frequent response was for providing exercise, occurring in almost 22% of responses. This is also reflected in the fact that the more popular modes of transport highlighted require exercise such as walking and cycling, therefore the masterplan should look to include sufficient facilities to promote active travel routes. This would also address other important themes that have been identified such as the sustainability of travel within Letchworth, whilst also being beneficial to residents' leisure, mental health, and local wildlife.

4.128.
Furthermore, an important part of travel in Letchworth that was identified by feedback was the concerns about safety and overcrowding. Investment is required to ensure that people feel safe using different transport modes.

4.129.
Notably, the least important mode of travel was also identified as buses which were only mentioned in 19 responses. This matches up with other feedback received.

4.130.
Roads were highlighted as a key transport link by over 10% of people, and over 7% specifically highlighted their reliance on a car as their primary transport.

4.131.
Question 4: What are your top three priorities for the masterplan for LG1? (Please pick three)



4. Community engagement

4.132.
Question four asked respondents to select which of the above options were their top three priorities for the masterplan. These options were taken from the previous engagement undertaken by the LGCHF.

4.133.
Almost half of the responses highlighted parks and green spaces, which is clearly the top priority for the masterplan in the eyes of the local community. The next most important priorities for respondents were improvements to roads and car parking as well as spaces and activities for children and young people – these options were both selected by approximately 12% of respondents.

4.134.
The priorities which were selected the least were homes for older people (1.79% of responses) and schools with only 9 responses or 3.21%. This may be because respondents are aware that the masterplan is already due to deliver school facilities.

4.135.
Question 5: What aspects of a masterplan at LG1 would you support?

Theme	Count	%
Sustainability	107	14.76%
Leisure	54	7.45%
Public space	43	5.93%
Transport/highways	40	5.52%
Housing	36	4.97%
Health services	11	1.52%
Exercise	8	1.10%
Restaurants/shops/cafes	7	0.97%
Architectural design	7	0.97%
Daylight / Sunlight / Views	6	0.83%
Anti-social behaviour	6	0.83%
Extra-curricular activities and community facilities	5	0.69%
Cleanliness	1	0.14%
Entertainment	1	0.14%

4. Community engagement

4.136.
Question five helps to better understand what local people would support within the masterplan. The most highlighted theme within this answer was sustainability, this occurred in 107 responses or 14.76%. This included a number of people who highlighted the need for sustainable housing on the site, but also those who were concerned more generally about the sustainability of the proposals and the impact of building on the greenbelt.

4.137.
The next most supported aspect was leisure facilities with a frequency of 54 or 7.45%. There was a similar level of support from respondents for new public spaces and transport improvements of around 6%.

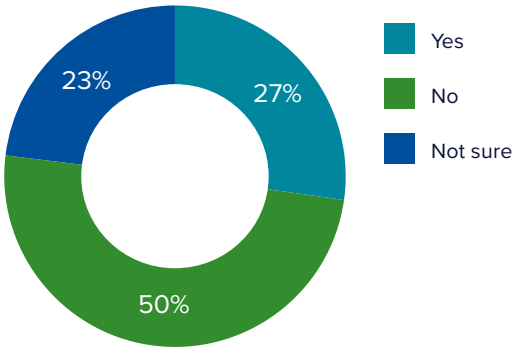
4.138.
Good architectural design was flagged by 7 people, who mainly highlighted the Garden City Principles and the need to develop in line with these. There were some suggestions that this should focus on houses rather than flats.

4.139.
In terms of the feedback around housing, affordable housing was flagged as a key issue, with many of these respondents keen to understand how affordable the new homes would be. This is reflective of many of the previous conversations the team have had with local people who now live in the surrounding areas, priced out of living in Letchworth.

Survey 2 – 'Share your views: what we have heard to date' (140 responses)

4.140.
Survey 2 sought to establish what respondents had heard about the project to date, this survey ran from 17 June to 23 July and received 140 responses.

4.141.
Question 1: Did you previously engage with the Future of Letchworth consultation in 2018 or 2019?

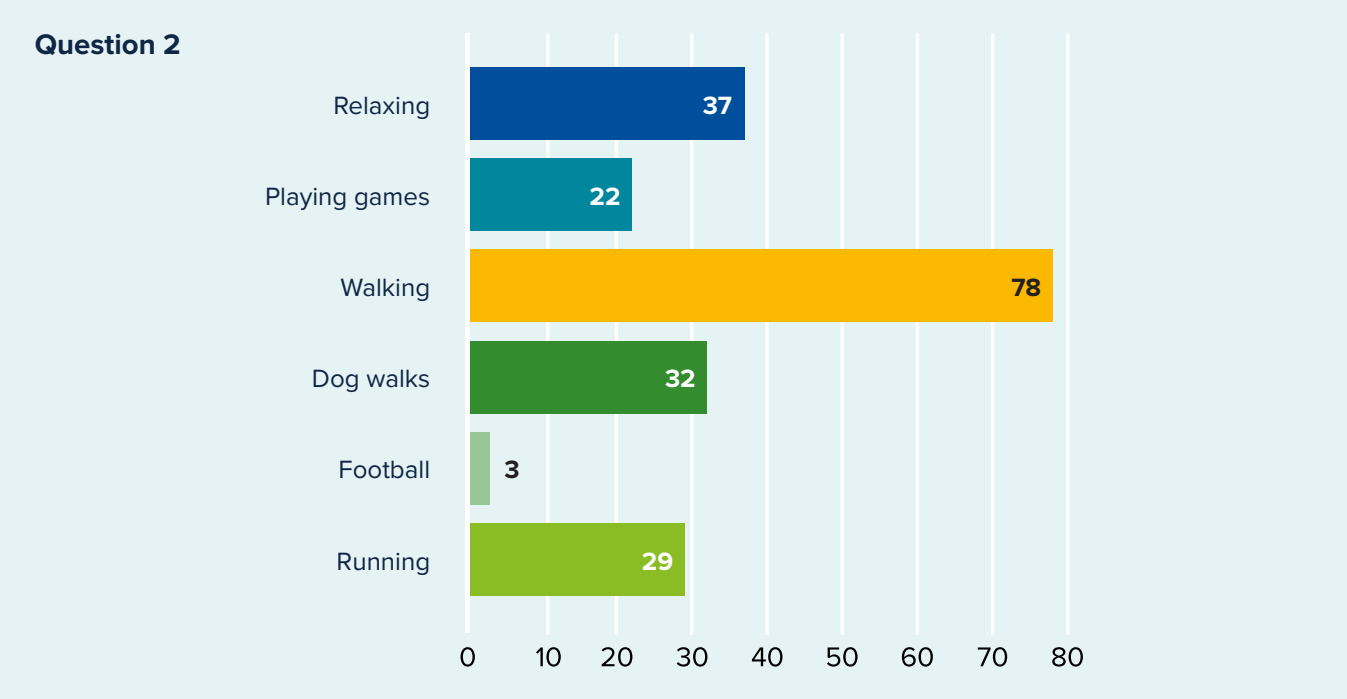


4.142.
Question one illustrates that the current engagement programme is engaging new members of the local community, with 49.62% of respondents saying that they had not previously engaged with the 'Future of Letchworth' community engagement programmes in 2018 or 2019.

4.143.
This clear majority of respondents saying that they had not previously engaged means that LGCHF is reaching new members of the local community and broadening the consultation audience.

4. Community engagement

4.144.
Question 2: Do you use the Grange Recreation Ground for...



4.145.
The responses to question two highlight that the Rec is mainly used for physical activity, with walking, running and dog walking being the main uses of the space.

4.146.
Despite this, a considerable 18.41% of all respondents said that they used the public space for relaxing, making it important that the masterplan caters for both physical outdoor activities as well as relaxation and improving mental health.

4. Community engagement

4.147.
Question 3: How has the Covid-19 pandemic affected how you live and/or work in Letchworth?

Theme	Count	%
Greenery	65	51.59%
Sustainability	3	2.38%
Working from home	22	17.46%
Public space	13	10.32%
Exercise	14	11.11%
Restaurant / Shops	8	6.35%

4.148.
Following the Covid-19 pandemic, question three enquired how respondents felt their life and work had been impacted. This provided evidence that, since the pandemic, outdoor green spaces have become more important with over 51% including the importance of greenery in their responses and a further 10.32% including access to public spaces. As expected, a significant number of responses cited that they now worked from home, being mentioned in a total of 17.46% of responses.

4.149.
Additional themes around exercise and restaurants/shops highlighted that people are now able to exercise more than previously and spend more time in Letchworth town centre.

4. Community engagement

4.150.
Question 4: What would you like to see in the proposals for the site?

Theme	Count	%
Greenery	139	40.52%
Sustainability	54	15.74%
Transport/highways	31	9.04%
Public space	30	8.75%
Restaurant Shops	10	2.92%
Architectural design	4	1.17%
Schools	18	5.25%
Café	6	1.75%
Foot/cycle paths	22	6.41%
Exercise	15	4.37%

4.151.
Question four asked respondents to highlight what they would like to see in the proposals for the site. Responses were reflective of the feedback received from Survey 1 with foot/cycle paths; greenery; sustainability; exercise and public spaces dominating the feedback.

4.152.
Notably, improving transport and highways were also mentioned in over 9% of responses making them one of the top three priorities for respondents.

4.153.
Question 5: Would you like to sign-up for the Grange Community Panel?

4.154.
Six people said they would like to sign up and have been contacted already with further information.

4. Community engagement

Survey 3 – 'Share your views: Sustainable Outdoor spaces' (42 responses)

4.155.
Survey 3 sought to establish what outdoor spaces respondents used and what could be improved, this survey ran from 28 July to 2 October and received 42 responses.

4.156.
Question 1: What is one outdoor space that you value and why do you value this outdoor space?

Theme	Count	%
Greenery/countryside/greenbelt	59	32.24%
The Greenway	21	11.48%
Foot/cycle paths	18	9.84%
Public spaces and play space	18	9.84%
Norton Common	13	7.10%
Sustainability	10	5.46%
The Grange Recreational Ground	9	4.92%
Exercise	7	3.83%
Wildlife/animals/farm	5	2.73%
Transport/highways	5	2.73%

4.157.
Question one asked respondents to name a local outdoor space in Letchworth they valued and explain why they valued it. Three specific locations were highlighted repeatedly (The Greenway, Norton Common, the Rec and Broadway Gardens), of these the Greenway was the most popular by far with over 11% of responses mentioning this popular path and greenspace that runs around the garden city.

4.158.
Additionally, other public green spaces were identified by respondents to this question such as Norton Common and the Rec. This clearly demonstrates the importance of publicly accessible green spaces to the local community and therefore their importance within the LG1 masterplan.

4.159.
Moreover, this is supported by the most common theme, with over 32% of responses discussing greenery, countryside and the greenbelt. This demonstrates the importance and valued nature of outdoor spaces to respondents. This is further evidenced by the fact that there have been over 12 direct references to public spaces, and a further 6 responses mentioning children's play spaces being valued in the feedback collected.

4. Community engagement

4.160.
Additionally, key themes that arose in the responses to this question about why these outdoor spaces were valued included access to foot/cycle paths (9.84%) and using them for exercise (3.83%). This illustrates how important facilities to support active travel and exercise are for the local community and thus should be looked to be included within the LG1 masterplan.

4.161.
Question 2: How can these spaces be improved? You might want to think about the Rec and the Greenway.

Theme	Count	%
Public space	3	6.67%
Sustainability	7	15.56%
Walking routes	5	11.11%
Cycle routes	1	2.22%
Road	3	6.67%
Wildlife/animals	8	17.78%
Mental health	2	5.26%
Exercise	6	13.33%
Leisure	4	8.89%
Extra-curricular activities	1	2.22%

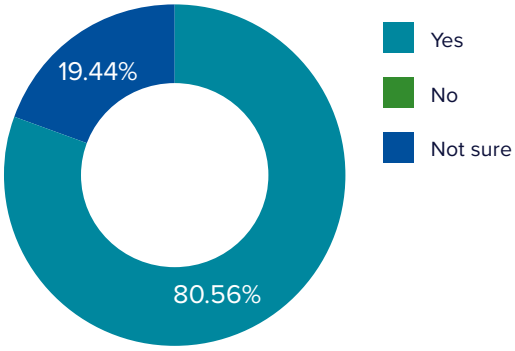
4.162.
Question two asked respondents how the outdoor spaces in Letchworth could be improved such as the Rec and Greenway. As a result, the question identified the key theme of sustainability, as it featured in over 15% of responses.

4.163.
This theme interlinks with the most common theme, as 17.78% responses highlighted the need for improvements to outdoor spaces to support wildlife/animals. This together these key themes help demonstrate how the local community would like to see sustainability, the environment and biodiversity at the heart of the planned open spaces for the LG1 masterplan.

4.164.
Building on the feedback in response to question one of survey three, respondents highlighted that they valued outdoor spaces that have facilities for active travel and exercise, this feedback can also be seen in response to question two. Over 26% of respondents wanted to see improvements to walking routes, cycling routes and exercise facilities.

4. Community engagement

4.165.
Question 3: Has the COVID-19 pandemic changed the way green spaces have been used?



4.166.
Following the Covid-19 pandemic, question three enquired if respondents believed that the way green local green spaces are used had changed. Notably, over 80% of respondents said that there had been a change, with the rest of respondents unclear if there had been a change in the way that green spaces in Letchworth had been used.

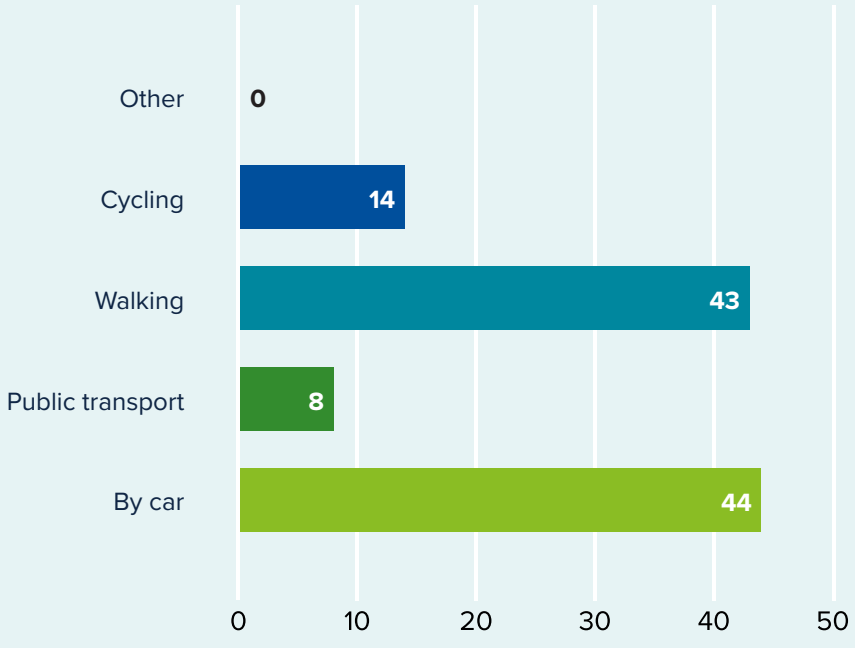
4.167.
Those who added additional comments on this question clarified that these spaces have become more used and busier following the pandemic. Respondents explained they feel lucky to live in a garden city with access to these spaces.

Survey 4 – 'Share your views: Getting around Letchworth' (50 responses)

4.168.
Survey 4 sought to establish what how respondents travelled in Letchworth and what could be done to improve local transport solutions, this survey ran from 28 July to 2 October and received 50 responses.

4.169.
Question 1: How do you travel around Letchworth at the moment?

Question 1



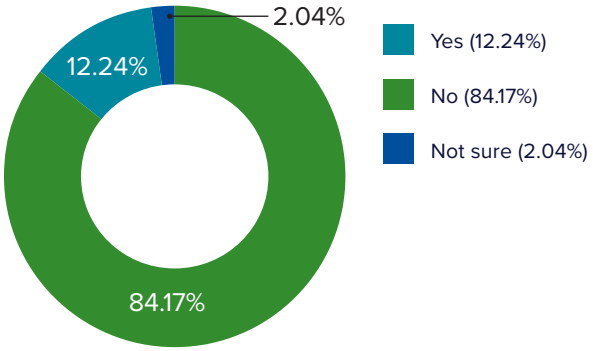
4. Community engagement

4.170.
Question one asked respondents to select which modes of transport they used when travelling around Letchworth. The most popular methods of transport were both the car and walking, both being referenced 87 times in the responses received. Therefore, this illustrates how the local community are reliant upon these modes of transport and the team will need to carefully consider how they can encourage further active travel within the masterplan.

4.171.
Moreover, the responses to this question also highlight that only 4.94% of respondents use public transport.

4.172.
As no respondents selected 'other', LGCHF is reassured that they have fully understood the main modes of local transport and will look to best integrate and deliver these when planning the LG1 masterplan.

4.173.
Question 2: Has the COVID-19 pandemic changed how you travel?

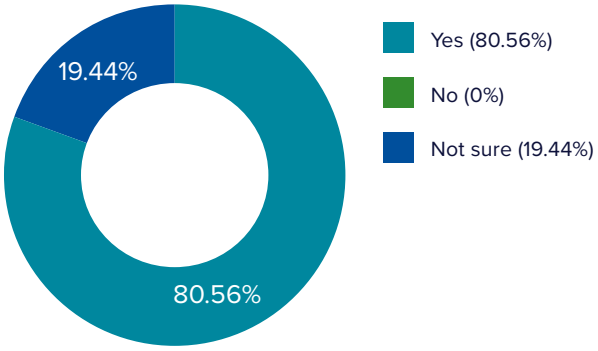


4.174.
Following the Covid-19 pandemic, question three enquired if respondents had changed the way that they travel in Letchworth. As over 84% respondents said that the pandemic had not changed the way that they travelled, LGCHF is reassured that there has not been a significant short-term shift in people's transport methods as they formulate the long-term LG1 masterplan. However, this will also be examined further through additional transport surveys.

4.175.
Whilst 12.24% of respondents said that the Covid-19 pandemic changed the way that they travelled and 2.04% of respondents were unsure, this might be due to less commuting to work as hybrid working has become more prevalent as mentioned in surveys two and five. One person provided further comments, highlighting that they now walk more than they did before the pandemic.

4. Community engagement

4.165.
Question 3: Has the COVID-19 pandemic changed the way green spaces have been used?



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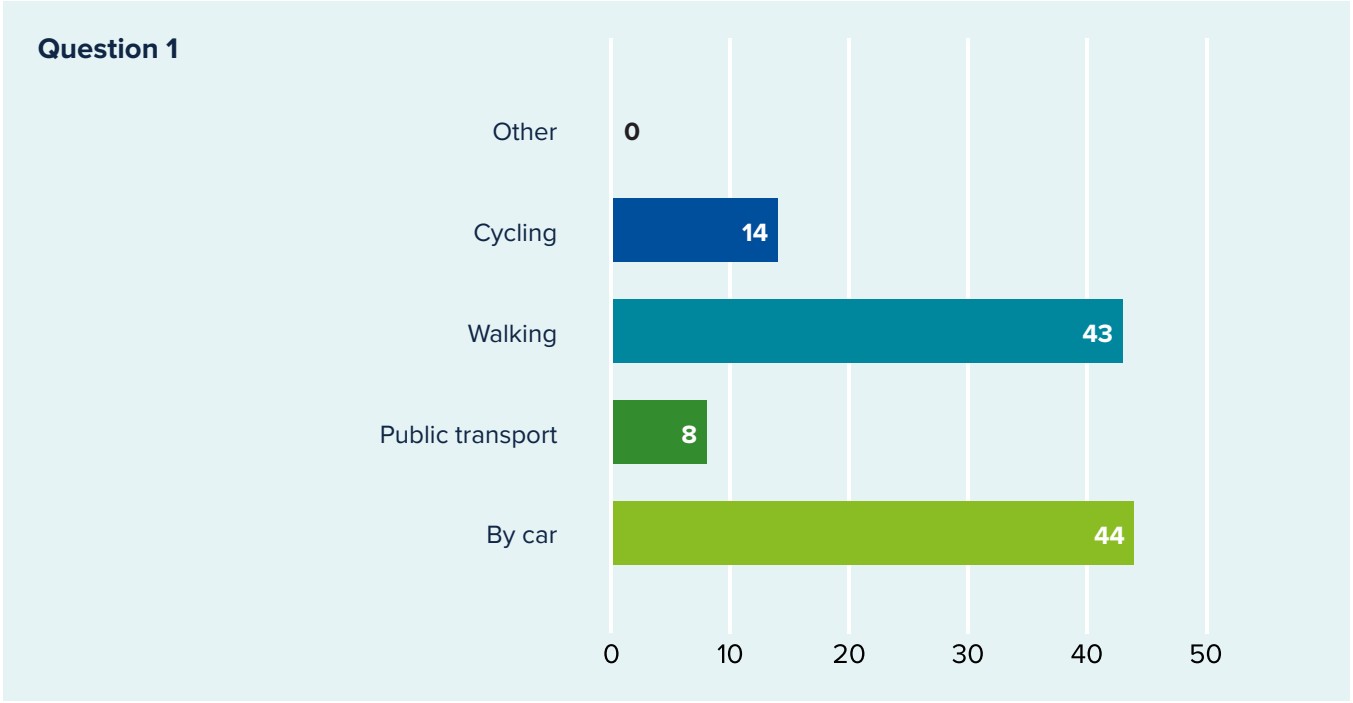
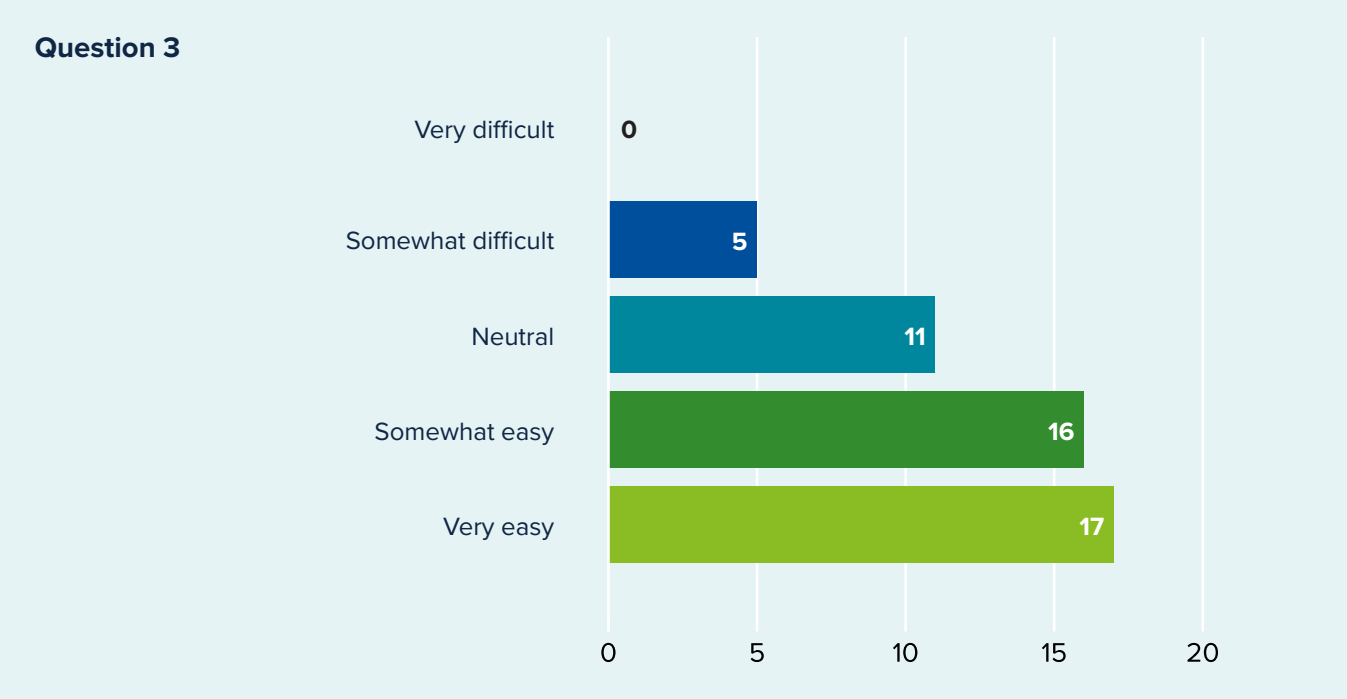


4. Community engagement

4.176.
Question 3: How easy is it to find your way and travel around Letchworth?



4.177.
Question three asked respondents to select how easy or difficult they currently find it to travel around Letchworth. Significantly, over 67% of respondents said that they found it 'somewhat easy' or 'very easy' to travel, with only 10.20% saying that it was 'somewhat difficult' and 22.45% remaining neutral.

4.178.
Two people provided additional comments, explaining that the bus services are not regular enough and the high street should be pedestrian only.

4. Community engagement

4.179.
Question 4: Which local routes (e.g., pedestrian routes, cycling routes, roads, etc.) do you like and why?

Theme	Count	%
Public space	2	1.34%
Broadway gardens	1	0.67%
Transport/highways	8	5.37%
Sustainability	6	4.03%
Greenery/countryside/green belt	30	20.13%
Norton Common	11	7.38%
Walking Routes	16	10.74%
Cycle routes	4	2.68%
The Grange Recreation Ground	6	4.03%
The Greenway	18	12.08%
Exercise	10	6.71%

4.180.
Question four helps to better understand what local routes people like and why. Four specific locations were highlighted repeatedly, as they have been in the other surveys:

- The Greenway
- Norton Common
- The Grange Recreational Ground
- Broadway Gardens

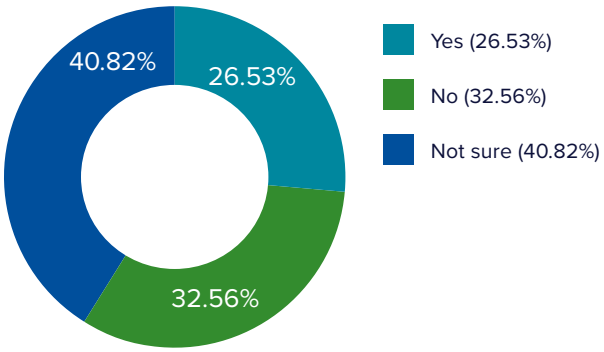
4.181.
Of these, the Greenway was the most popular occurring in 12.08% of responses. These are popular open spaces in Letchworth that are reoccurring in responses to the consultation surveys, therefore the project team will look to replicate the positive aspects of these sites in their development of the LG1 masterplan.

4.182.
Overwhelmingly the most common theme in the responses as to why local people liked local routes was due to the greenery, countryside, and greenbelt, occurring in 20.13% of responses. This forms part of the unique identity of Letchworth due to its Garden City principles, LGCHF is committed to a modern interpretation of these in keeping with the heritage of Letchworth.

4. Community engagement

4.183.
Additionally, respondents to this question highlighted the importance of local transport, highways, walking and cycle routes, together occurring in 18.79% of responses, highlighting these as the main types of transport routes that the local community use in Letchworth.

4.184.
Question 5: Would you use shared transport modes such as bike hire and car clubs if they were easy to access?



4.185.
Question five tried to understand if the local community would use relatively new concepts of transport methods of both bike hire and car clubs. The majority of respondents (40.82%) were unsure if they would use these types of shared transport, this might be due to a lack of detail about how these would work and what form these transport solutions would take.

4.186.
A number of people provided further comments, suggesting that bike and car hire would be helpful. This included those who have successfully used these services elsewhere and would recommend them to others.

4.187.
The project team will continue to explore a range of transport solutions as the LG1 masterplan develops in conjunction with the local community.

4. Community engagement

Survey 5 – 'Share your views: New homes for local people' (236 responses)

4.188.
Survey 5 sought to understand respondents' experiences in their homes and what could be improved on the LG1 site. This survey ran from 28 July to 2 October and received 236 responses.

4.189.
Question 1: Has the COVID-19 pandemic changed the way you use your home?

Theme	Count	%
Public space	4	2.23%
Working from home	52	29.05%
Transport/highways	5	2.79%
Sustainability	4	2.23%
Restaurant/shops	5	2.79%
Foot/cycle paths	8	4.94%
Greenery/countryside/green belt	36	20.11%
Mental health	4	2.23%
Wildlife/animals/farm	3	1.68%
Exercise	6	3.35%
The Grange Recreation Ground	4	2.23%
Leisure	8	4.47%
Norton Common	13	7.26%
The Greenway	21	11.73%

4.190.
Question one asked respondents how the Covid-19 pandemic had affected the way that local people in Letchworth used their homes. The most common theme in the responses received was to working from home. This occurred in over 29% of responses, with people explaining they now work from home with a hybrid arrangement or are entirely home-based.

4.191.
Linked to working from home and the pandemic, the importance of mental health became more prominent within society and was referenced in 2.23% of responses in the way that the local community used their homes. The project team will be looking at how to consider both of these factors when designing new homes as part of the LG1 masterplan.

4. Community engagement

4.192.
Notably, once more the importance of public spaces in Letchworth was evidenced in the responses to this question. Three locations were once again highlighted (The Greenway, Norton Common and the Rec), and together public spaces were referenced in 21.22% of responses. Out of these three locations the Greenway was the most popular, being mentioned in 11.73% of responses. Additionally, foot and cycle paths occurred in 4.47% of responses.

4.193.
Similarly to this, the importance of greenery, the countryside and greenbelt were also mentioned in 20.11% of responses as well as wildlife, animals and farms were mentioned in 1.68% of responses. Highlighting how the pandemic did not just affect how the local community used their homes, but the importance of the wider local environment.

4.194.
Question 2: How can homes be better designed to support changes? (You might want to think about size, layout, energy efficiency, private outdoor space)

Theme	Count	%
Solar panels	25	10.16%
Insulation	25	10.16%
Transport/highways	28	11.38%
Sustainability/energy efficient	64	26.02%
Affordable housing	3	1.22%
Schools	4	1.63%
Anti-social behaviour	6	2.44%
Wildlife/animals/farm	7	2.85%
Architectural design	17	6.91%
Foot/cycle paths	3	1.22%
Heat source pump	9	3.66%
Kitchen	8	3.25%
Garden	41	16.67%

4. Community engagement

4.195.
In the wake of the Covid-19 pandemic, question two asked local residents how homes could be better designed to adapt to possible changes in the way that individuals use their homes.

4.196.
The most common theme was around sustainability and energy efficiency, with over 26% of responses highlighting these topics. This is likely due to growing concerns about climate change and the national rise in energy bills.

4.197.
Moreover, 3.66% of responses suggested that heat source pumps should be explored, 10.16% referenced insulation and a further 10.16% referenced solar panels. Energy efficiency and sustainability are evidently key priorities for the LG1 site.

4.198.
A key theme in the responses received to this question was around how different rooms within a home are used, especially the kitchen. Efficient storage space and large enough bedrooms were also highlighted by respondents.

4.199.
Question 3: How do you use your outdoor amenity space (i.e., gardens, yards)?

Theme	Count	%
Public space	38	31.67%
Sustainability	10	8.33%
Walking Routes	8	6.67%
Wildlife/Animals	19	15.83%
Mental Health	4	3.33%
Exercise	22	18.33%
Leisure	11	9.13%

4.200.
Question three asked respondents how they used their outdoor amenity space. The most common response to this question was public amenity space, occurring in 31.79% of responses, with people explaining how they use local public spaces to complement their amenity spaces at home. Some respondents also highlighted that they don't have private amenity spaces.

4.201.
This further demonstrates the importance of public spaces in the planning of the LG1 masterplan but also highlights how the proposed new homes could look to improve private amenity space that is offered by current homes in Letchworth.

4. Community engagement

4.202.
People highlighted the way they enjoy their homes for exercise and looking after local wildlife, two things that have a positive impact on mental health. Growing fruit and vegetables was also highlighted as an activity that some people enjoyed due to the positive impact on their mental health.

Demographics

4.203.
Every survey for the early understandings consultation asked about the demographics of respondents, including age, gender, gender identity and ethnicity. A summary of demographics can be seen below. For more details on the demographics of the survey respondents, please see Appendix K1.

4.204.
Providing demographic data was not required, but some respondents did share this information with us. This only reflects those who answered the questions and not the conversation which we had with 1000s of residents at events and during door-knocking sessions across each consultation.

Survey 1 – 'Share your views: the vision for LG1':

- **Age**: Most respondents were between 35-64 years old, making up 76.25%. Those aged under 24 and those above 85 were the least well represented. In terms of one age bracket, those aged 45-54 were the most popular respondents, making up 30% of those who put their age down.
- **Gender**: 58.12% of respondents identified as female and 39.74% as male, with 2.1% identifying as 'other'. This is not in line with North Herts' population which splits the female-male demographics as 51%-49%.
- **Gender identity**: North Herts does not have robust data to estimate accurately the UK's and North Herts' transgender population. However, the UK government has previously estimated that 1% of people are trans. This data is broadly in line with that collected in other surveys.
- **Ethnicity**: A significant majority of responses (89.47%) are those from 'White or White British' people. This is the same as the percentage of people in North Hertfordshire who are white. However, significantly more people identified their ethnic majority as 'other' (4.82%) than the North Hertfordshire average (0.4%).
- **Disability**: Only 5.54% of respondents considered themselves to be disabled which is not representative of the North Hets population of which 15.1% considered themselves disabled in the last census.

Survey 2 – 'Share your views: what we have heard to date':

- **Age**: Most respondents were between the ages of 65-74 (25.93%) and all were between 35-74. This further demonstrated that during this consultation LGCHF should endeavour to explore methods of engaging with younger and older people.
- **Gender**: This was closer to the North Herts demographics as 55.56% were female and 44.44% were male.
- **Ethnicity**: This was also similar as the previous survey as 88.89% of respondents identified as 'White or White British'.
- **Disability**: This was closer to the demographics of North Herts as 12.12% identified as having a disability.

Survey 3 - 'Share your views: Sustainable Outdoor spaces':

- **Age**: Most respondents were again between the ages of 35-74. However, two respondents (4.88%) were between 25-34 and one (2.44%) was between 75-84. This demonstrates there was some success at engaging with younger and older people. However, there is still a lack of representation from those over 85 and those under 18.
- **Gender**: 68.42% identified as female and 31.58% of respondents identified as male. As was the case with survey 1, this is not in line with North Herts' population.

4. Community engagement

- **Gender identity**: The majority of people (93.75%) who responded to this question did have the same gender identity as what was assumed at birth. However, two respondents (6.2%) did not, which is more than the estimated 1% of North Herts' population as trans.
- **Ethnicity**: The majority of respondents, as has been the case in the other surveys, identified as 'White or White British' (73.80%), being broadly in line with the population of North Herts.
- **Disability**: This was more in line with the demographics of North Herts, as 9.25% of respondents identified as being disabled.

Survey 4 – 'Share your views: Getting around Letchworth':

- **Age**: Most respondents again were between the ages of 35-74 (87.76%) and the team looked to ensure other age groups were better represented in the future.
- **Gende**r: There was a more representative balance to this survey as 51.02% of respondents identified as female, 38.78% as male and 2.04% as 'other'.
- **Gender identity**: These results were largely in keeping with other survey results as 33 out of the 40 respondents did not identify differently to the sex they were assumed to be at birth and seven did.
- **Ethnicity**: A total of 61.22% of respondents identified as being white or white British, which is broadly representative of the population of North Hertfordshire, where the population is 89.5% white.
- **Disability**: The results indicate that 8.11% of respondents considered themselves to be disabled. As highlighted above, this is not representative of North Hertfordshire.

Survey 5: 'Share your views: New Homes for local people':

- **Age**: Compared to other surveys completed in this phase of community engagement, this survey had 2 respondents that identified themselves within the 18-24 category. Whilst this is an improvement, this only totalled 1.03% of responses, therefore making it unrepresentative of the local demographics of North Hertfordshire.
- **Gender**: Overall, 62.22% of respondents identified as female and 36.67% identified as male. This is not wholly representative of the North Herts demographics.
- **Gender identity**: These results are largely in keeping with the results from other surveys that approximately 70% of respondents say that they identified as the same gender they were given at birth.
- **Ethnicity**: A total of 90.90% of respondents identified as being white or white British, which is largely representative of the population of North Hertfordshire, where the population is 89.5% white.

LG1 masterplan options

4.205.
The following section outlines feedback collected through the project website and hardcopy feedback forms from consultation events.
As is the case with the early understandings consultation, the surveys include both quantitative and qualitative data.

4.206.
The questions were split into the three assessment criteria (green infrastructure, transport and movement infrastructure and land use & urban design). Please note the question order on the hardcopy and online feedback forms are different. The following questions are in the order of the online feedback forms.

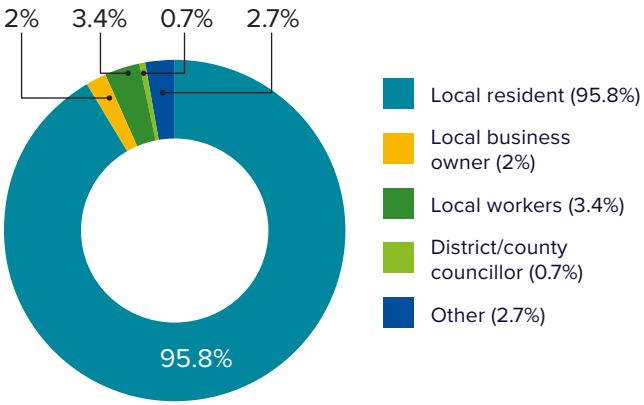
Survey 1 – 'Share your views: masterplan options for LG1'

4.207.
Survey 1 invited respondents to share their views on the masterplan options for LG1, which ran from 11th October to 17th November and a total of 135 responses were collected. A further 11 hardcopy

4. Community engagement

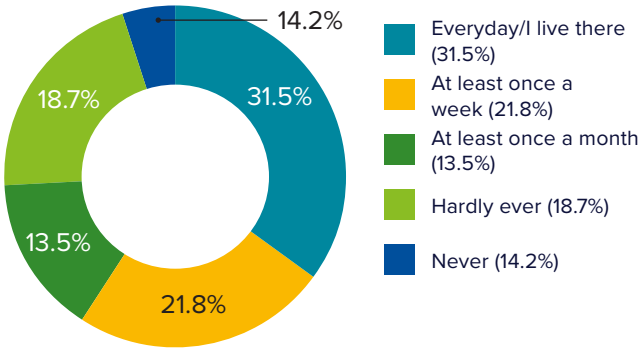
feedback forms were submitted. However, multiple respondents did not answer every question. As such, percentage for the answers given is that of those who answered the question.

4.208.
Question 1: How would you best describe yourself?



4.209.
Question one sought to understand the demographic of respondents and their relationship with the site. Some people picked two of the options, but of the 146 responses, 95.8% (140) identified as being a 'Local resident'. Therefore, LGCHF are confident that feedback received is well informed and is broadly representative of the views of the local community. As a further 6.1% are either local workers, local business owners or a district/county councillor, it is likely that these respondents will also be familiar with the site and the local area.

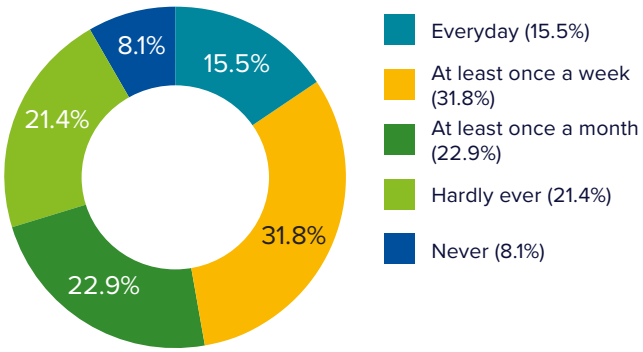
4.210.
Question 2: How often do you visit the Grange Estate?



4.211.
Question 2 aimed to find out how many respondents live on the Grange Estate or frequently visit. This gives us a useful insight into how well respondents know the local area immediately bordering the site and thus can provide their local expertise of the local area.

4.212.
In total, 31.5% of those who answered this question either live on the Grange Estate or visit there every day, whilst 35.3% of respondents visit there at least once a week or once a month. This demonstrates most respondents were familiar with the land immediately next to the LG1 development and can therefore provide their local expertise for the rest of their feedback.

4.213.
Question 3: How often do you walk around/ through the Grange Rec?

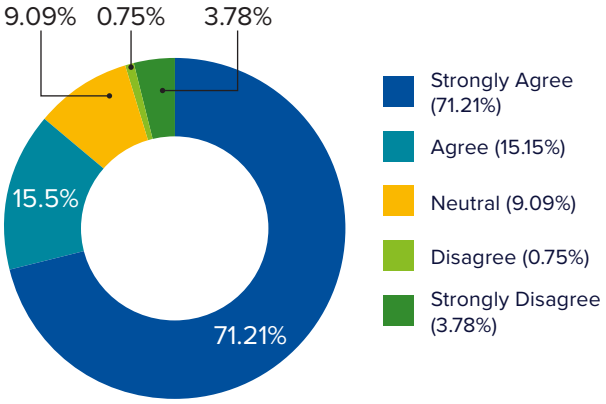


4. Community engagement

4.214.
Question 3 asked how many respondents were familiar with the Grange Rec, which borders LG1. 70.2% either visited the Rec every day, at least once a week or at least once a month. This further demonstrates a familiarity among respondents and the local context around LG1.

Green infrastructure

4.215.
Question 4: 'I support including a green buffer around the edge of the LG1 site'. To what extent do you agree with this?



4.216.
Question 4 looks to see if respondents are supportive of a green buffer around LG1, which is included in each masterplan option. 71.2% of the 132 answers to this question strongly agreed with the statement and a further 20 agreed (15.1%). This indicates strong support for the landscape buffer around the site.

4. Community engagement

4.217.
Question 5: As part of the proposals, we are looking to facilitate significant improvements to the Grange Rec, what would you most value?

Theme	Count	%
Green spaces/maintaining Greenway	21	21%
Children play areas/facilities	15	15%
Toilet facilities	10	10%
Seating	7	7%
Sports facilities	6	6%
Rubbish/dog bins	6	6%
Lighting	5	5%
Wildlife areas	5	5%
Cycle paths	4	4%
Drinkable water fountain	4	4%
Water features	2	2%
Drainage improvements	1	1%

4.218.
LGCHF received 100 responses covering a wide range of themes. Some of the key themes mentioned frequently were maintaining green spaces (21%), children's play areas (15%), improved lighting (5%), more toilet facilities (10%) and improved sports facilities which extend beyond football (6%).

4.219.
Therefore, people value the Grange Rec and want to see enhancements to it, as well as maintaining green spaces on LG1. More sports facilities would also be welcomed but there is a desire among respondents for these to not cater for sports other than football. Furthermore, safety was a common topic that was mentioned regarding the Grange Rec and improved lighting within it would help people feel safer, especially whilst using it at night.

4. Community engagement

4.220.
Question 6: What activities would you like to be able to do on the Rec? How would you like to use that space?

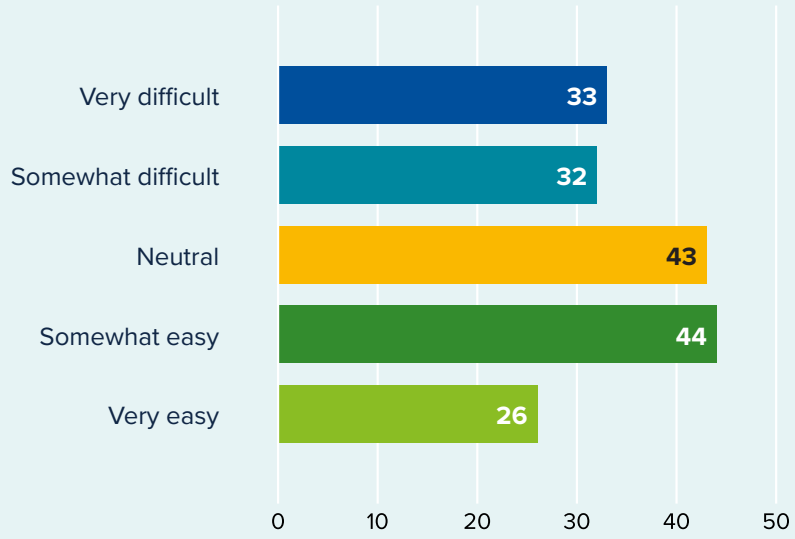
Theme	Count	%
Sports pitches/facilities (inc. running)	33	37.9%
Routes for dog walkers	17	19.5%
Access the Greenway	3	3.4%
Keep as a green space	2	2.2%
Youth Centre/Youth clubs	2	2.2%

4.221.
Question 6 aimed to discover what activities people would like to do on the Rec if improvements were made, which are part of the proposals for the project.

4.222.
Sports pitches/facilities were by far the most popular theme of an activity for how respondents would use the space as 37.9% of respondents mentioned this. Their examples include football, tennis, basketball, skateboarding, Multi Use Games Areas (MUGAs), running and more. Providing a route and space for dog walkers was also popular.

4.223.
Question 7: A number of new play areas are shown in the masterplan, where should these go? Pick as many as you like.

Question 7



4. Community engagement

4.224.
Question 7 aimed to scope the respondents' views on the location of the new play areas, which form part of the proposals. Respondents were able to select options for where they thought was best for the location of the play areas.

4.225.
Each location was quite popular, the most being on/near the Rec (24.7%) and closely followed by having smaller play areas spread across the site (24.2%). Therefore, there was a fairly even split between the options, but it was clear that the play areas being spread out and therefore accessible was a key priority to respondents.

4.226.
Question 8: Is there anything else you think we should consider regarding landscaping and green spaces?

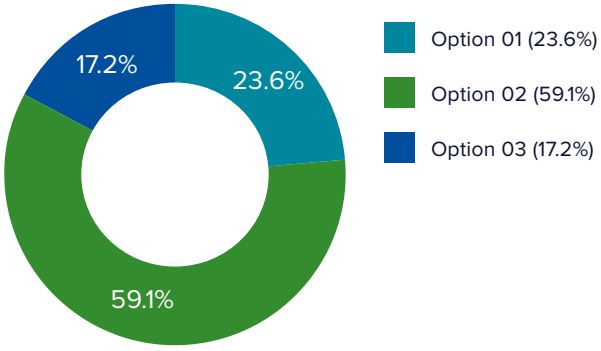
4.227.
This question provided respondents with the opportunity to provide a freeform qualitative response to the landscaping strategy of the masterplan options. Of the **146** respondents, **85** provided an answer to this question.

4.228.
The most frequent topics that arose in answers given to this question include:

- Planting and protecting trees were mentioned in **18** responses
- Ensuring that wildlife was safeguarded was mentioned in **10** responses
- Provide adequate car parking was mentioned in **5** responses
- Improved cycling routes and footpaths was mentioned in **4** responses

Transport and movement infrastructure

4.229.
Question 9: The masterplan options include a number of road layouts, which do you think would work best?



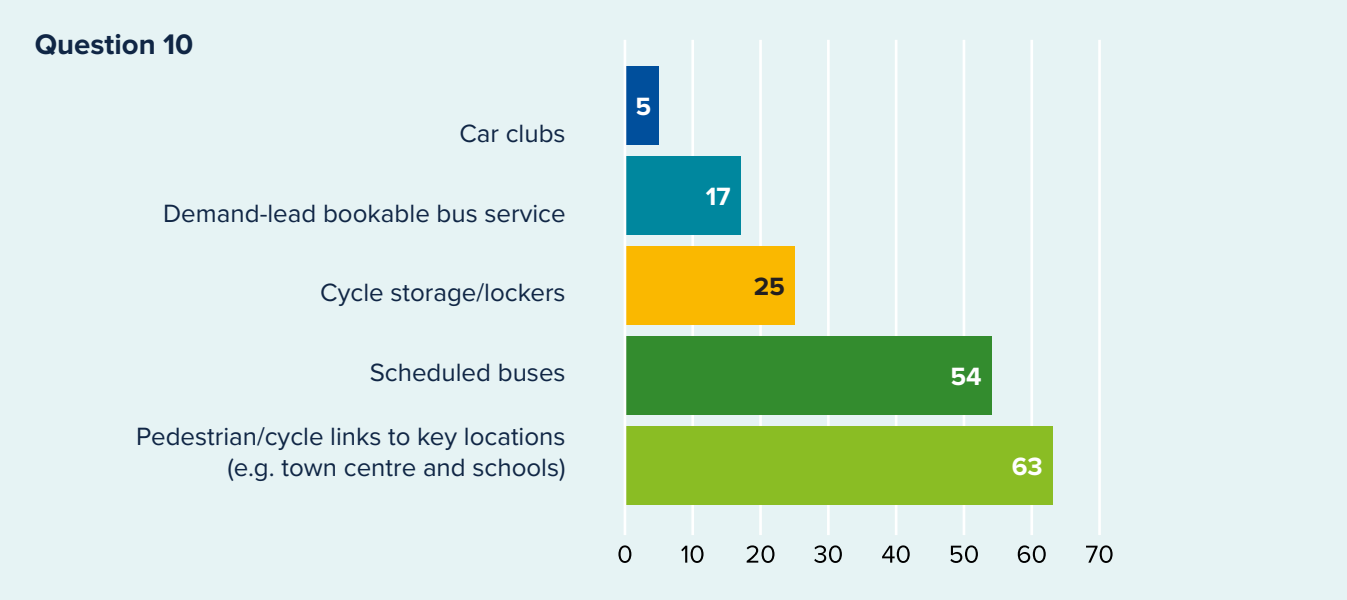
4.230.
Question 9 aims to see what respondents think of the road layouts in the different masterplan options. The road layout in option 2 was comfortably the most popular option (59.1%), largely due to the containing bends and therefore discouraging speeding and rat running. Of the 93 respondents to the initial question, 27 provided a free-form answer to this question.

4.231.
The most frequent topics that arose in answers given to this question include:

- Implementing traffic-calming measures, such as a 20mph speed limit, was mentioned in **3** responses
- Safe pedestrian and cycle routes were mentioned in **3** responses
- A link road to Stotfold was mentioned in **2** responses
- The road being close to the Rec in option 3 is bad was mentioned in **1** response

4. Community engagement

4.232.
Question 10: There are a number of ways that we could increase opportunities for travel that are not made by private car. Which do you think we should prioritise? Choose up to three.



4.233.
Question 10 aimed to discern which modes of transport people thought were best that was not by car. Of the 90 answers received, pedestrian/cycle links to key locations (38.4%) and scheduled buses (32.9%) were the most popular options. Therefore, many respondents will likely be pleased with the proposals to extend and encourage cycle and walking routes in the masterplan option, as well as implementing alternative modes of travel.

4.234.
When residents asked for this in the consultation, it was stated that conversations are ongoing with Herts County Council to see possible solutions.

4.235.
Question 11: Is there anything else you think we should consider regarding transport and movement?

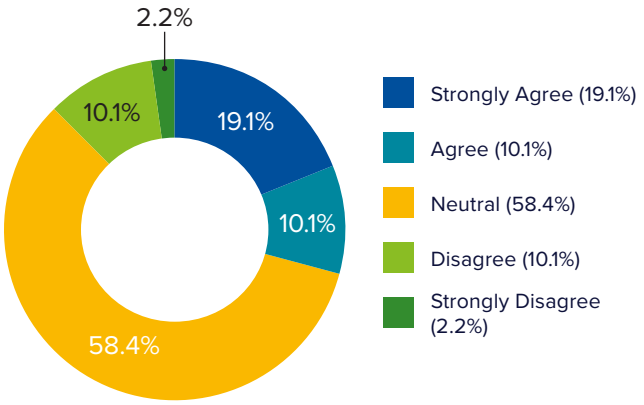
4.236.
This question provided respondents with the opportunity to provide a freeform qualitative response to transport and movement infrastructure of the masterplan options. Of the 146 respondents, 92 provided an answer to this question.

4.237.
The most frequent topics that arose in answers given to this question include:

- Recognising the need to reduce traffic and congestion was mentioned in **30** responses
- An improved bus service with appropriate and safe routes into the site and into Letchworth was mentioned in **17** responses
- The access routes into LG1 were mentioned in **16** responses
- Improved cycling infrastructure was mentioned in **15** responses
- Better links to the train station was mentioned in **3** responses

4. Community engagement

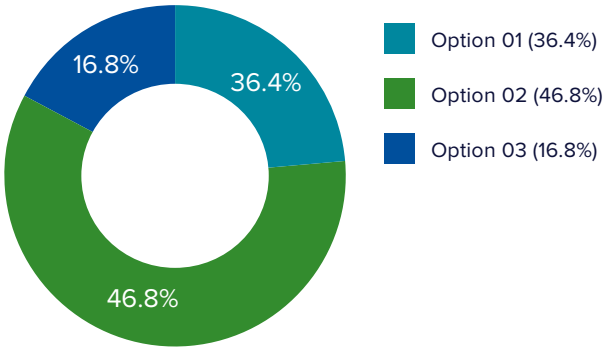
4.238.
Question 12: The views of St Nicholas Church and towards Biggleswade to the North-West have influenced the masterplan options. To what extent do you agree?



4.239.
As can be seen, 58.4% of the 89 respondents were neutral or had no view on the influence of the key views towards Biggleswade and St Nicholas Church. However, 29.2% either agreed or strongly agreed that they were influential, and only 12.3% either disagreed or strongly disagreed.

4.240.
Therefore, more respondents were aware of the influence of the key views of St. Nicholas Church and towards Biggleswade than were not.

4.241.
Question 13: Which masterplan do you think best places the school? (This is marked by the light blue star on the plans).



4.242.
Respondents were asked to choose which option they preferred regarding the location of the school and 77 answered the question. Option 2 was again the most popular choice as it was chosen by 46.8% of respondents, but a significant 36.4% of respondents chose option 1 as the best option for the location of the school.

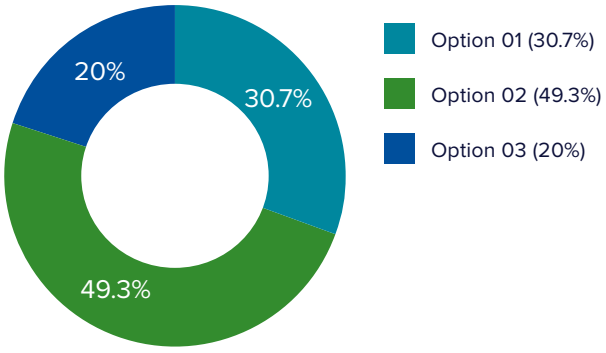
4.243.
The location of school being situated away from the retail provisions on the site were therefore a priority for respondents.

4.244.
This question provided respondents with the opportunity to provide a freeform qualitative response regarding the location of the school on the masterplan options. Of the 77 respondents, 23 provided an answer to the question.

4.245.
The most frequent topics that arose in answers given to this question include:

- The need for a secondary school was mentioned in **3** responses
- The need for a car-free zone near the school was mentioned in **2** responses
- The layout and shape of the school was mentioned in **1** response

4.246.
Question 14: The location of the local centre and the primary school are different in each masterplan option. Which option do you think works best?

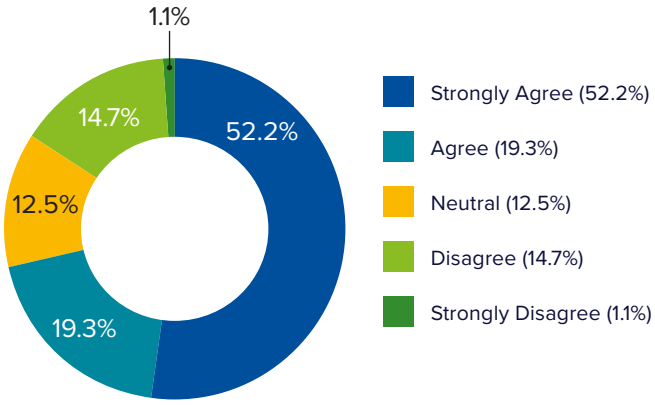


4. Community engagement

4.247.
As seen in the above graph, option 2 was the most popular option chosen (49.3%), closely followed by option 1 (30.7%) regarding the location of the local centre and primary school. Notably, there was significant support for option 1 that co-locates the school and childcare facility. Option 3 was the was the least popular location for the school in the local centre with only 20% of respondents picking it as having the best location of the local centre and school.

4.248.
This demonstrates that options 1 and 2 are often the most popular with respondents when asked to choose between the three masterplan options for the site.

4.249.
Question 15: Do you agree that there should be a car-free zone around the school?



4.250.
Respondents answered this question by overall either strongly agreeing (52.2%) or agreeing (19.3%) that there should be a car-free zone around the school, demonstrating significant support. Only 13 respondents disagreed and 1 strongly disagreed with the statement, demonstrating that a vast majority of those who answered this question were in favour of the car-free zone by the school.

4. Community engagement

4.251.
Question 16: Do you have any particular thoughts on the look of the type of buildings you would like to see? Would you prefer more modern design or those which appear similar to earlier homes built in the Grange or elsewhere in Letchworth?

Theme	Count	%
Historic/similar to what is already on the Grange	36	42.3%
Modern/unique design	19	22.3%
Mixture	10	11.7%
Low carbon/sustainable	8	9.4%
Affordable	2	2.3%
Good design	1	1.1%
Good sized gardens	1	1.1%

4.252.
The free-form answers for this question mentioned wanting the homes on the site to be similar to what is on the Grange Estate or elsewhere in Letchworth in nearly a quarter of survey responses. However, there was a desire for modern homes to be built by some respondents. Other key details mentioned were the sustainable and environmentally friendly nature of the homes and that the site could contain a mixture of traditional and modern homes.

4. Community engagement

4.253.
Question 17: Is there anything else you think we should consider regarding layout, land use, and urban design at LG1?

Theme	Count	%
Maintaining green spaces/inclusion of village green	10	14.4%
Health facilities	8	11.5%
Keep car provisions	3	4.3%
Homes in-keeping with local character	1	1.4%
Secondary school	1	1.4%
Ensure Parkrun routes do not cross over roads	1	1.4%
General infrastructure	1	1.4%

4. Community engagement

4.254.
These responses outline the community's desire to maintain green spaces on the site, as well as support for a landscape buffer around the site and the inclusion of landscaped areas that are in keeping with the garden city principles.

4.255.
The comments under these themes also frequently mentioned health facilities, which are not on the three masterplan options, as well as provisions for cars and there being enough parking. However, some residents were discouraging of on-road provisions for car parking as it aids congestion. There is therefore a definite demand for maintaining green spaces, healthcare facilities on the site and adequate car parking provisions, further demonstrating the need for both active and vehicular travel.

4.256.
Question 18: Working with settle and North Herts Council, LG1 may enable investment into the Grange Estate to provide improvements which could include cycle parking, tree planting, environmental improvements, play space, and more. What would you most like to see?

Theme	Count	%
Tree planting/flower beds (landscaping & biodiversity improvements)	26	35.6%
Improved roads & car parking	13	17.8%
Walking & cycle routes	8	10.9%
Cycle infrastructure	8	10.9%
Play areas	7	9.5%
Improvements to green spaces/greenway	7	9.5%
Community allotments	4	5.4%
Lighting	3	4.1%
Dog park	2	2.7%
Retail/café	1	1.3%
Community spaces for all ages	1	1.3%
Redevelopment of shops on Grange Estate	1	1.3%

4. Community engagement

4.257.
This question saw the option of tree planting and other landscaping and biodiversity improvements be the number one priority for LGCHF when providing improvements to the Grange Estate, with 35.6% of respondents answering as such. This was accompanied by improved roads, parking and active travel routes also being popular (28.7%), demonstrating that transport and traffic are also key priorities for local residents.

4.258.
Question 19: Please let us know any more thoughts or comments regarding the masterplan options.

4.259.
This question provided respondents with the opportunity to provide a freeform qualitative response regarding the masterplan options for the LG1 site. Of the 146 respondents, 70 provided an answer to the question.

4.260.
The most frequent topics that arose in answers given to the question included:

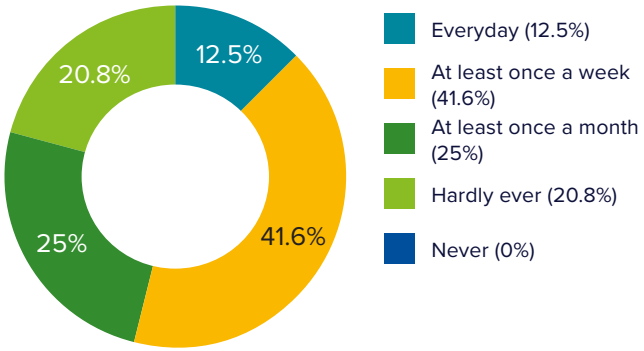
- **14** responses mentioned traffic and access routes and the need to include traffic-calming measures and include appropriate access routes
- **8** responses mentioned the need for a GP surgery/health facilities
- **8** responses mentioned a school being needed, especially a secondary school
- **8** responses also regarded green spaces important as well as providing adequate habitat provisions and biodiversity
- **3** responses stated to keep the affordable housing target of 40% and ensure the homes are genuinely affordable
- **3** residents mentioned the need for adequate parking for the homes on the site
- **2** responses mentioned maintaining existing trees on the LG1 site

Survey 2 – 'Share your views: improvements to the Grange Recreation ground'

4.261.
Survey 2 invited respondents to answer questions about what improvements they wanted to see done to the Grange Rec as a result of the LG1 development. This was its own online survey, but the questions were also included in the hardcopy feedback forms. The order of the questions in this report is that of the online survey.

4.262.
The survey had 26 respondents and a further 11 hardcopy feedback forms were filled out answering these questions. The answers to the demographic questions were included in the responses to survey 1 and as such are not considered in the demographic questions below.

4.263.
Question 1: How often do you use the Rec and what for?



4. Community engagement

4.264.
This question, like question 3 in survey 1, aimed to find out how often respondents use the Rec and why they use it. 41.6% of respondents use it at least once a week and a further 12.5% use it every day. This demonstrates a strong familiarity with the Grange Rec but a significant number of respondents, even if 25% of respondents, only use it once a month. Notably, all respondents said that they had visited the Rec at some point.

4.265.
Question 2: As part of the proposals, we are looking to facilitate significant improvements to the Grange Rec, what would you most value?

Theme	Count	%
Walking/cycling/running routes	6	40%
Play areas/equipment	5	33.3%
Improved biodiversity/wildlife	3	20%
Football pitches & sport facilities (inc. skate park)	2	13.3%
Toilet facilities	2	13.3%
Benches to sit and eat	2	13.3%
Lighting	1	6.6%
Re-fill water bottle station	1	6.6%
Wheelchair accessible paths	1	6.6%
More bins	1	6.6%
Community garden	1	6.6%
More parking spaces	1	6.6%

4.266.
There were a range of answers given to this question. The most popular centred on the inclusion of play areas, especially for children, in the Rec. Routes for walking, cycling and running being improved and enhanced were also mentioned often and reinforced from our pop-up on the Grange Rec.

4.267.
Many parkrunners in particular were concerned that their routes could not cross over roads, and as such wanted this to be maintained if their route had to be changed to facilitate future access to the site.

4. Community engagement

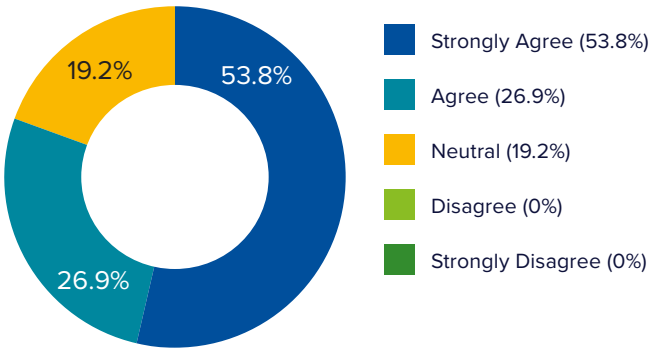
4.268.
Question 3: Are there any aspects that you feel could be improved? Does it feel like a safe and inclusive space?

Theme	Count	%
Doesn't feel safe	5	29.4%
More bins (for litter & dogs)	3	17.6%
Lighting	2	11.7%
More toilets	2	11.7%
Skatepark improvements	2	11.7%
More accessible paths for walking and running	2	11.7%
The equipment is reasonably maintained	1	5.8%
Limit car access to grass	1	5.8%
More benches	1	5.8%
Play areas	1	5.8%

4.269.
Answers from respondents again covered a range of themes. 11.7% of respondents thought more lighting would make the Rec safer and more inclusive as 29.4% of responses referenced not currently feeling safe on the Rec, particularly at night. This has also been raised in discussions at Grange Community Panel meetings, during which attendees have mentioned that more lighting would be welcomed and encourage people to walk through the Rec at night.

4.270.
The request for more rubbish bins was also popular (17.6%), as well as more toilet facilities (11.7%) and improvements to the skatepark (11.7%).

4.271.
Question 4: 'Improvements to the Rec should include more planting and landscaping to encourage more biodiversity and wildlife'. To what extent do you agree with this statement.



4. Community engagement

4.272.
This question aimed to find out whether respondents wanted to see more planting and biodiversity on the Grange Rec. Unsurprisingly, no respondents disagreed or strongly disagreed with the statement, demonstrating a strong desire to maintain and include more biodiversity and landscaping on the Rec.

4.273.
Overall, 80.7% either agreed or strongly agreed that more planting and landscaping should be brought about to improve the Rec, further highlighting a preference for more biodiversity and wildlife on the Rec.

4.274.
Question 5: Is there anything new you would like to see? For example, new play equipment, facilities for young people, or cycle parking?

Theme	Count	%
Range of play equipment for those of all ages	9	45%
Cycle parking	6	30%
More seating	2	10%
More parking	2	10%
Dog/rubbish bins	1	5%
Climbing wall	1	5%
More toilets	1	5%
Community garden	1	5%
Water refill station	1	5%

4.275.
This question asked what new additions respondents would like to see on the Rec and providing some prompts. 45% respondents wanted to see new play equipment for people of all ages and 30% wanted more cycle parking facilities. Other options were previously mentioned in other questions, such as more seating, more rubbish bins, and a water refill station.

4. Community engagement

4.276.
Question 6: What prevents you from using the Rec more than you currently do? How can we address this?

Theme	Count	%
Already use it regularly	5	26.3%
Distance from home	3	15.7%
Lighting and not feeling safe	2	10.5%
More play equipment	2	10.5%
Parking	1	5.2%
Cycle route from town centre to Grange Rec is quite challenging	1	5.2%
Lack of interest in the Rec	1	5.2%
Time	1	5.2%
Slippery and muddy in Winter	1	5.2%
Not enough buses go to it	1	5.2%

4.277.
This question sought to discern how the Rec can be made more accessible to the local community. As can be seen, there is a variety of answers, and many people already use it regularly (26.3%).

4.278.
However, what prevents people from using it more often are factors such as its distance from where they live (15.7%) and not feeling safe due to a lack of lighting (10.5%). A lack of parking is also a repetitive theme that has often been mentioned regarding the Rec and making it more accessible and attractive for local residents to use.

Demographics

4.279.
Both surveys asked about the demographics of respondents, including age, gender, gender identity and ethnicity. A summary of the demographics can be seen below. For more details on the demographics of the survey respondents, please refer to Appendices L2 and M2.

4.280.
Providing demographic data was not required, but some respondents did share this information with us. Please note this only reflects the forms which were filled in, for which these questions were answered. It does not reflect the conversations which were had with 100s of respondents at events and during door-knocking sessions.

4. Community engagement

Survey 1: 'Share your views: masterplan options for LG1'

- **Age**: The most popular age bracket of respondents was 55-64 years old (24.4%), closely followed by ages 65-74 (21.2%). There were no respondents who completed a survey who indicated that they were 85 or above or under the age of 17. It is possible that parents filled in the forms for children under the age of 17.
- **Gender**: 48.3% of respondents were women and 43.8% were male, suggesting quite an even split between men and women which can be expected. However, this is not in line with North Hertfordshire's population of 51% identifying as female and 49% identifying as male. The team will continue to try and engage more male respondents in future engagement activities.
- **Gender identity**: 77.6% of respondents identified as the same sex they were assumed to be at birth, whereas 15% did not. Unfortunately, North Herts does not have robust data to estimate the UK's and North Herts' population in this respect. However, the UK government has previously estimated that around 1% of people are trans. This data is broadly in line with that collected in the other surveys during our engagement.
- **Ethnicity**: A significant majority of responses (88.6%) were provided by people who identify as 'White or White British', fitting in with Letchworth and North Herts' overall 'White British' population of 84.9%.

Survey 2: 'Share your views: improvements to the Grange Recreation ground'

- **Age**: In contrast to Survey 1, most people who filled in this survey were either between the ages of 35-44 (25%) or 25-34 (25%). Furthermore, 8.3% of respondents were between 16-17 years old. A significant proportion of the feedback on the Grange Rec was obtained by speaking to people there, as these are the people who are most likely to continue using it in the future.
- **Gender**: 58.3% of respondents identified as female and only 25% as male. This does not suit the broader demographics of North Herts in which 48.3% identify as male. The suggests more women than men are concerned with the Rec and wish to see it improved.
- **Gender identity**: Almost 70% (69.2%) of respondents are the same gender identity as they were assumed to be at birth and 23% are not. This is not dissimilar from the 15% who did not in survey 1.
- **Ethnicity**: As was a similar case in survey 1, 84.6% of respondents identified as 'White or White British' in this survey, reflecting the broader demographics of Letchworth and North Herts.

LG1 preferred masterplan

4.281.
The following section outlines the feedback received from the online surveys and hardcopy feedback forms completed during the consultation period. The surveys include both quantitative and qualitative data.

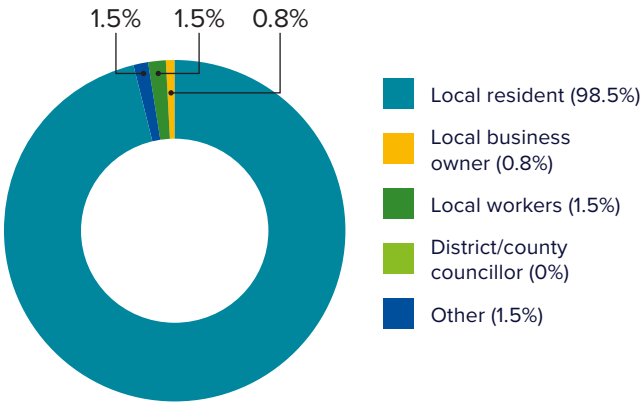
Survey – 'Share your views: preferred masterplan for LG1'

4.282.
The survey invited respondents to share their views on the preferred masterplan for LG1. A total of 117 responses were submitted online, and a further 16 hardcopy feedback forms were submitted. Therefore, a total of 133 feedback forms were completed regarding the LG1 preferred masterplan.

4.283.
Multiple respondents did not answer every question, therefore, the percentage for the answers given is that of those who answered the question. Please note that the questions on the digital and hardcopy feedback forms are in a different order. The order for the purposes in this report follow that of the digital feedback forms.

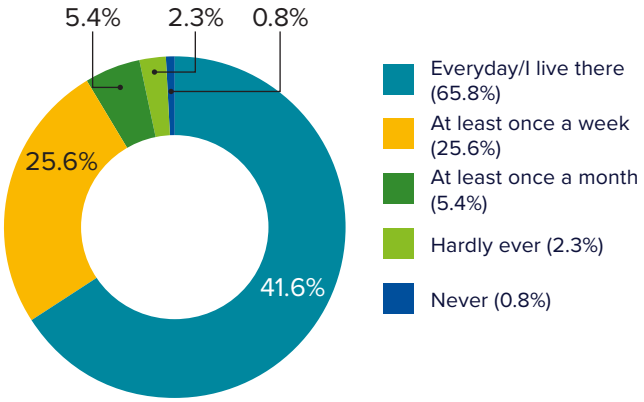
4. Community engagement

4.284.
Question 1: How would you best describe yourself?



4.285.
Question one sought to understand the demographic of respondents and their relationship with the site. Some people picked two options, but of the 133 responses, 98.5% (131) identified as being a 'Local resident'. Therefore, LGCHF are confident that feedback received is well-informed and is broadly representative of the views of the local community.

4.286.
Question 2: How often do you visit the Grange Estate?



4.287.
Question two aimed to find out how familiar respondents were with the Grange Estate by discovering how often they visited. This provides the project team with useful insights into how well respondents know the local area and therefore demonstrate their local expertise. The range of responses also indicates that LGCHF were able to engage with a wide audience of people who differed in familiarity with the Grange Estate and the proposals for LG1.

4. Community engagement

4.288.
Question 3: Which elements of the masterplan do you support?

Theme	Count	%
Retaining or maintaining green spaces/Greenway	21	28.0%
The need for more housing	10	13.3%
Housing mix	7	9.3%
Access points/road layout	7	9.3%
Inclusion of primary school	5	6.7%
Supportive of infrastructure	5	6.7%
Walking/cycling routes	4	5.3%
Traffic-calming measures	3	4.0%

4.289.
Question three asked which elements of the masterplan people supported, having been developed from their feedback previously during the consultation on the three options for the LG1 masterplan. Overall, 28% of respondents, the largest contingent, supported the provision of green spaces and planting. The Greenway was also mentioned multiple times in association with this answer. This has continued to be a common theme in engagement activities about the he proposals for LG1.

4.290.
Other popular features of the masterplan, according to these answers, were the recognition of the need for more housing and that there should be a mix of different types of housing, particularly affordable. As such, it is encouraging that local residents are seeing the need for North Herts and Letchworth to have more homes. Some respondents were also supportive of the road layout and the access points, though there were also calls for there to be more. There was also support for implementing traffic-calming measures, whether that be speed bumps, speed cameras or low speed limits.

4. Community engagement

4.291.
Question 4: Are there any elements you do not agree with?

Theme	Count	%
Traffic/roads/access points	37	54.4%
Building on green belt	18	26.5%
Need for a primary school	12	17.0%
Sufficient infrastructure	9	13.2%
Sufficient affordable housing provisions	5	7.4%
Sufficient water pressure for an increase in homes	2	2.9%
Pathway across the Rec	1	1.5%

4.292.
Question four aimed to discover what aspects of the LG1 masterplan respondents disagreed with. Of those who answered, over half, referenced traffic, roads or the access points in their answers. They often stated that the roads will not be able to cope with an increase in cars as much of Letchworth is congested currently. There was also anxiety about the increase in congestion in the Grange Estate, this is likely to come from existing Grange residents.

4.293.
Other concerns predominantly focused on the development of the green belt, which has been an ongoing concern throughout our consultation activities for LG1 site. Despite the site being allocated in the North Herts Local Plan 2011-2031, some residents remain concerned about the principle of development on the site whilst sometimes acknowledging the need for more homes in the area. Respondents were also concerned about the lack of provisions for a secondary school in the plans and questioned the need for a primary school. In the feedback survey and in conversations the project team had, when it was suggested that the school would have SEN provisions, there was more support.

4. Community engagement

4.294.
Question 5: Have we overlooked anything or would further clarification on any specific aspects of the preferred masterplan be helpful?

Theme	Count	%
Traffic/roads/access points	15	25.9%
Parking provisions	10	17.2%
Greenway and green spaces retention and maintenance	8	13.8%
Infrastructure	6	10.3%
Garden sizes	1	1.7%
Drainage/flooding	1	1.7%
Noise	1	1.7%
Traffic-calming measures	1	1.7%

4.295.
This question was not answered as widely by respondents as other questions, but nevertheless provided important information regarding what LGCHF may have overlooked or missed, and what residents would have liked further clarification on regarding LG1.

4.296.
Answers to this question outlined similar concerns to the previous question with traffic, roads and access points into LG1 being mentioned over 25% of the time. However, 17.2% of responses citing concerns about parking provisions, particularly regarding the width of roads to avoid congestion with parked cars. Some respondents wanted more information about this aspect of the preferred masterplan.

4. Community engagement

4.297.
Question 6: Do you have any comments or queries regarding the initial thoughts on character areas that will form part of the masterplan for LG1?

Theme	Count	%
Mixed housing throughout	3	11.1%
Green spaces	2	7.4%
Parking is a priority	1	3.7%
Small houses on the street. Bigger towards the outskirts	1	3.7%
Not like Fairfield	1	3.7%

4.298.
This question also received less responses, but those who answered were supportive of the mix of housing throughout the development, understanding that there would be smaller housing on the street towards the centre of the site, that becomes bigger on the outskirts of the site. The integration and functionality of green spaces was also mentioned as a priority and a consistent mention of it not being like Fairfield which is seen as being too cramped.

4. Community engagement

4.299.
Question 7: As we start to develop the design principles for the proposed new buildings on the site, what do you think should most influence the design? Please choose up to three.

Theme	Count	%
Homes with private gardens	34	61.8%
High sustainability standards, including efficient and future-proofed flexible buildings	24	43.7%
Design reflecting early Garden City homes and our early heritage, such as traditional materials and details	20	36.4%
A tenure blind design approach where there is no difference in appearance between private and housing association homes	15	27.3%
Diverse housing mix with a range of houses and apartments	12	21.8%
Inclusion of clusters of housing association homes in all parts of the development	12	21.8%
Design of homes found in the Grange Estate	11	20%
Modern design interpretation of early Garden City buildings	9	16.4%
Smaller private gardens with greater communal space	6	10.9%
Modern buildings creating a new design approach for Letchworth	4	7.3%
Design similar to Fairfield Park	4	7.3%

4.300.
Question seven aimed to gather respondents' thoughts on the design principles for the proposed new buildings on the site. Although it asked respondents to choose up to three, some chose more than three and some only one or two.

4.301.
As can be seen in the table above, the most popular design principle that respondents think should influence the design of the buildings on site is that homes should have private gardens (61.8%). This matches with the existing character of Letchworth which many respondents wish to preserve.

4. Community engagement

4.302.
The next most popular suggestion was the buildings having high sustainability standards (43.7%), demonstrating how environmentally conscious the local community are and the importance of prioritising the sustainability of the proposals. Other popular suggestions were the inclusion of clusters of housing association homes in all parts of LG1 and that there should be a diverse housing mix on site (both 21.8%). This furthers the demand for a mixture of housing types on site which has been reflected in answers to other questions on this survey.

4.303.
The design being similar to Fairfield was the least popular option. This is unsurprising and was a sentiment reflected in our conversations with local residents. Respondents to the surveys were keen to point out that they did not a Fairfield backing onto Letchworth due to the cramped feel and roads being too narrow that make it difficult to drive through.

4.304.
Question 8: Are there any aspects of our first ideas on potential improvements to the Grange Estate in the Grange Opportunities Plan that you support?

4.305.
This question sought respondents' views on the Grange Opportunities Plan and how that could lead to improvements on the Grange Estate. Only 44 respondents answered this question, and the most themes mentioned are outlined below:

- Improved footpaths (5)
- Improved roads (4)
- Improved infrastructure (3)
- More off-road parking (3).
- Lighting (1).
- More play areas (1).
- More benches (1).
- Improvements to the Grange Rec and to the community centre (1).

4.306
Question 9: Do you have any further suggestions on how the Grange Estate could be improved if funding is available?

Theme	Count	%
More parking	17	33.3%
Improve infrastructure	13	25.5%
Stop parking on green verges	5	9.8%
Revamp play areas	4	7.8%
More dropped kerbs	3	5.9%
Improve roads	2	3.9%
Keep community area well-kept	2	3.9%
Improve lighting	2	3.9%
Improve footpaths	2	3.9%

4. Community engagement

4.307.
This question asked respondents for how they would improve the Grange Estate if funding were available. As was the case with previous questions, respondents requested that there be more parking (33.3%) or at least that Grange Estate residents received discounted parking permits. This highlights the current issues many residents experience parking in Letchworth and their concerns that the proposals for LG1 would exacerbate this.

4.308.
Other key topics demonstrated a desire to improve existing infrastructure, such as shops and community centres (25.5%) as well as improving lighting, roads and footpaths (3.9% each).

4.309.
Question 10: Please let us know if you have any more thoughts or comments about the preferred masterplan for LG1 in the box below:

4.310.
This question provided respondents with the opportunity to provide a freeform qualitative response regarding the preferred masterplan for the LG1 site. Of the 133 respondents, 42 provided an answer to the question.

4.311.
he most frequent topics that arose in answers provided included:

- 5 responses concerning traffic, traffic-calming measures and access routes.
- 2 responses recognising the need for more homes.
- 2 responses regarding the end for private front and rear gardens for each house.
- 1 response on wanting more independent living for elderly residents.
- 1 response on using local businesses.
- 1 response highlighting the need for a GP surgery.
- 1 response on parking.

Demographics

4.312.
The survey also asked about demographics of respondents, including age, gender, gender identity and ethnicity. A summary of the demographics can be seen below. The results of the demographics questions can be seen in Appendix I3.

Survey – 'Share your views: preferred masterplan for LG1'

- **Age**: The most popular age bracket was 45-54 years old (31.6%). This was different to the most popular age range from the masterplan options consultation, which was 55-64 years old (24.4%). The second most popular was 35-44 years old (22.8%), demonstrating that this round of consultation appealed to a slightly younger demographic than our previous round of consultation.
- **Gender**: Overall, 69.6% of respondents were female and 32.1% were male suggesting quite a split between men and women which can be expected. This was not the case last time which saw a much more even split between men and women. However, 76 respondents did not answer the question and therefore assumptions made from this data may not be wholly reflective of the conversations we held with local residents.
- **Gender identity**: A total of 91.3% of respondents identified as the same sex they were assumed to be at birth, more than the 77.6% who did so from the previous consultation on the LG1 three masterplan options. However, 10.9% preferred not to say whether they were or not, suggesting a broader demographic was reached.
- **Ethnicity**: A significant majority of responses (88.9%) were provided by people who identify as 'White or White British', very similar to those who identified as such in the last round of consultation (88.6%). This fits Letchworth's and North Herts' overall 'White British' population.

4. Community engagement

Response to feedback

Response to feedback - LG1 early understandings consultation

4.313.
LGCHF is grateful to all those who provided feedback throughout the community engagement to inform the development of the masterplan options for the LG1 site. The table below sets out the main points raised and LGCHF's responses to them.

Theme	Feedback	Response
Green public open spaces	A common theme of feedback was the importance of green open spaces such as the Grange Recreational Ground and Norton Common.	LGCHF is committed to ensuring that the developing LG1 masterplan landscape strategy will be strongly influenced by Garden City Design Principles. These principles will remain central to the plans as the options are developed. The team already has a landscape architect on board at this early stage. It is envisaged that the LG1 site will retain as much of the established hedgerow and existing trees as possible, together with new hedge planting and over 2,000 new trees to increase the level of biodiversity across the site.
Active travel routes	Respondents also raised the importance of active travel routes such as cycle and footpaths, there were also numerous references to the Greenway.	LGCHF has already committed to ensuring that there will be no loss to the Greenway; a linear park approach is proposed for the part of the Greenway adjacent to the new development. In addition to this, the team is proposing to create an additional route to provide access to the countryside.
Transport	The feedback received from this phase of consultation highlighted how local residents were concerned about the additional pressure that the LG1 development would place on the surrounding road networks and transport infrastructure.	LGCHF is conscious that transport is an important consideration and recognises the concern of the local community regarding this, particularly in relation to traffic and car parking. To date they have commissioned transport consultant, Steer, to work with the project team and they have been working closely with the County Council who are responsible for highways. This has included proposals for a new road to the north of the LG1 site as well as traffic modelling for the LG1 development. We have also been looking at alternatives to the car which may benefit the whole town, in particular, cycling and public transport. We understand there are concerns about the new access routes to the site and will continue working on our plans to ensure that the impact on local residents is minimised.

cont. on next page.

4. Community engagement

Theme	Feedback	Response
Shared transport solutions	Feedback from survey four highlighted how the concept of shared transport solutions would be welcomed by the local community.	As a result, the project team are exploring shared transport solutions that are reliable alternatives to the private car. Believing that these are a key part of the masterplan for the LG1 site but should also benefit the rest of the town. The team are currently considering sustainable and more environmentally friendly transport, including electric charging points, bike hire and car clubs.
Sustainability	Sustainability was also cited as a common theme, including the importance of ensuring homes are energy efficient and built with a long-term plan for the site and the rest of Letchworth.	The team are exploring a variety of ways to ensure that homes are energy efficient. This includes deliverables such as heat source pumps, solar panels, and insulation. This will continue to be a key focus for the development, and we will continue to engage with local people to develop these plans.
Supporting infrastructure	Respondents often cited their concerns about the associated infrastructure required to support the proposed development, for example schools were a common theme.	As part of the development process, LGCHF will make contributions to local infrastructure. This will include local medical infrastructure. Although LGCHF is not responsible for GP provision in Letchworth, they have been working with GPs and the Primary Care Network to explore the feasibility of establishing a town centre health hub to cope with our growing population, and to make GP recruitment more attractive and feasible. There will also be opportunities for the local community to make recommendations and suggestions on how community reinvestment funding is linked to this development, for example through new landscaping or community spaces. Finally, much of the supporting infrastructure for the development will be provided on the site. For example, we will provide a two-form primary school on the site as part of the masterplan. Other facilities will also be provided, with the details of these shaped by further engagement with the local community. We understand there is some concern about whether a new primary school is required in the area. The delivery of a new school on the site is required by the local education authority, the county council. We will continue to liaise with them about the need, and ensure the provision is based on the most up-to-date statistics such as birth rates.

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4. Community engagement

Theme	Feedback	Response
Environment	In response to surveys protecting and enhancing the local wildlife and natural environment was highlighted as a prominent concern.	LGCHF have been undertaking on-site surveys for more than two years and has conducted expert research into environmental and ecological considerations for LG1. They will continue to work with ecologists in setting the strategy for the development, with an overall aspiration that there will be a net gain in terms of biodiversity.
Retail provision	Feedback also identified that there is a local demand for independently run restaurants and retail space, as well as specific outlets of these such as a café and grocery shop as part of the LG1 masterplan.	The team is keen to provide a neighbourhood centre which complements the existing commercial offer on the Grange and in Letchworth town centre. We will use this feedback in conjunction with retail studies to develop the approach for commercial and retail space.
Mental health	In the wake of the Covid-19 pandemic, respondents to the consultation consistently raised the importance of promoting positive mental health in the design of the LG1 masterplan, especially through access to open spaces.	We will ensure that the wellbeing of new and existing residents is prioritised as we develop the masterplan options for the site. This will include prioritising access to open spaces, wellbeing-led design of homes, and leisure activities.
Increased engagement	The survey two responses demonstrate that a significant number of local residents who had not previously engaged, did so during this round of community engagement about the site.	The team is pleased to see that their engagement is reaching new audiences and broadening participation. This will continue to be a key focus throughout all the stages of engagement, and we welcome comments and feedback from people about how we can continue to build on this.

4. Community engagement

Response to feedback - LG1 masterplan options consultation

4.314.
LGCHF is grateful to all those who provided feedback throughout the community engagement on the masterplan options for the LG1 site. The table below sets out the main points raised and LGCHF's responses to them.

4.315.
This feedback informed the preferred masterplan for the LG1 site, for which details of the consultation you can find in section 3.304.

Theme	Feedback	Response
Natural infrastructure		
Green public open spaces (see below for Rec)	A common theme in the feedback was the importance of including and maintaining open spaces on the site.	LGCHF is committed to ensuring that there are green open spaces as part of the development. This is enhanced by including a landscape buffer around the site, enhancing the Greenway with 3 Local Equipped Play Areas (LEAPS) in the development and enhancements to a village green in options 2 and 3. These commitments, along with planting over 2,000 new trees on the site, will enable us to adhere to our modern interpretation of the Garden City Principles. LGCHF also received positive feedback regarding improving the Greenway and additional countryside link along the Stotfold Parish boundary.
Grange Rec	In our questions, and individual survey, dedicated to the Rec, residents were keen to provide their feedback on how the Rec can be enhanced and improved, as well as what is wrong with it currently.	LGCHF is committed to improving the Rec, in partnership with NHC, as being part of the proposals of LG1. The feedback covers a range of interesting and insightful additions and solutions to problems for NHC to consider, such as more play areas, as part of a Neighbourhood Equipped Area of Play, are needed for children of all ages, more sports facilities beyond football, and more lighting to ensure local residents feel safe to walk through the Rec when it is dark. The feedback we have received regarding the footpath through the Rec has been useful and we will continue to develop the masterplan with it in mind, as we will with all the feedback we have received.

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4. Community engagement

Theme	Feedback	Response
Natural infrastructure		
Biodiversity & landscaping	There was much support for more planting and landscaping to encourage more biodiversity and wildlife on the Rec and on LG1. This was also seen in residents' desire for the Greenway to be maintained.	These comments regarding the Rec will be forwarded to NHC and be part of the discussion about improvements funded by the development. As part of the plans, LGCHF are providing a net gain of over 2,000 new trees on the site. This will follow our commitment to a net gain in terms of biodiversity on the site and follows on from previous feedback we have received on the masterplan options for LG1. We also received much interest in the habitat/ biodiversity measures proposed on the site with support for increase in wetlands and native grasslands. This will contribute to the net amount of greenspace proposed for the scheme (c.40%).
Drainage	There were concerns over the flood risk and surface water management as well as some of the SUDs features/ attenuation basins can offer little amenity or ecological value.	LGCHF will ensure that the correct drainage and flood risk assessments take place, and all surface water is properly managed as part of the proposals for the masterplan of LG1. Initial technical reports have been undertaken leading to a surface water strategy that incorporates a series of attention basins seen in the masterplan. Dialogue with HCC has commenced, and further work will be undertaken.

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4. Community engagement

Theme	Feedback	Response
Movement and transport infrastructure		
Traffic & access routes	There were concerns about traffic both on LG1 and further into the Grange Estate. This was often mentioned in conjunction with the access points and whether two out of the site are enough.	LGCHF is fully aware that traffic is an important consideration for existing residents on the Grange Estate and Letchworth. Their transport consultant, Steer, has been working closely with Hertfordshire County Council who are responsible for highways, to deliver the safest and most effective solution to limit traffic to the largest extent. This has led to the main road being delivered in the three masterplan options, which has a primary access from Norton Road and a secondary access into Western Way. As part of a modern Garden City, we are looking at alternatives to car travel which will benefit the whole town. This has resulted in proposals for enhanced and improved walking and cycling routes through and around the site, further into Norton Common and Letchworth town centre, and to neighbouring villages such as Stotfold. Funded by the development, working in partnership with HCC, NHC and settle, we are also looking at public transport improvements to provide further alternatives to car dependency. This includes how to best incorporate bus services, cycle storage and repair facilities and car clubs as part of a mobility hub. We fully understand traffic concerns and that these measures alone will not address many of the concerns raised and LGCHF will continue to work with HCC to agree a series of measures in line with their requirements, supported by the masterplan.
Active travel	Residents were supportive of new and enhanced active travel routes but were concerned that there would not be enough provision for cars.	LGCHF received much feedback on the different modes of transport planned for LG1. Balancing car dependency with provisions for active travel is difficult, but these masterplan options have been developed with these considerations in mind, and in accordance with NHC parking standards, to enable car travel whilst providing enhanced opportunities for more sustainable modes of transport. Working in partnership with NHC and HCC, the development will fund improvements for enhanced walking, cycling and running opportunities. The proposed mobility hub on the site will aid active travel and alternative travel methods. This was positively received when discussed at consultation events.

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4. Community engagement

Theme	Feedback	Response
Land use & urban design		
Supporting infrastructure	Local residents had a lot of feedback on the supporting infrastructure, particularly on the primary school and the lack of GP surgery in the masterplan options.	LGCHF is aware of the need for different types of schools in the local area. When the site was allocated in North Herts Council's local plan, the policy includes the provision of a primary school. Therefore, the masterplan for LG1 must ensure that a reserve site is included for HCC to meet this requirement. The provision of a GP surgery is outside the jurisdiction of LGCHF, but such a facility would be supported and accommodated in the masterplan and LGCHF will work with the NHS and NHC to support flexible space that can be used for this purpose and other community activity.
Sustainable homes	The energy-efficiency of the homes on the site were a frequent topic in feedback received.	The team are exploring a variety of ways to ensure that homes are energy efficient and renewable energy is incorporated into the development. This will be explored with the appointed development partner and continue to be a key focus in the scheme's evolution, and we will continue to engage with local people to develop these plans.
Key views	Maintaining the key views from the site towards Biggleswade, Stotfold, Fairfield and St Nicholas Church is a priority for respondents and helped to inform their opinion on which option they preferred.	The masterplan options have been designed to provide variety. However, all three contain the views towards Stotfold, St. Nicholas Church and towards the North-East. However, in option 1, the view towards the North-West to Biggleswade is not maintained due to the layout of the school and blocked by existing trees on the northern boundary of the site.
Affordable housing	Residents were supportive of the commitment to 40% affordable housing on the site but questioned what 'affordable' actually meant and whether the homes would genuinely be so.	LGCHF are committed to providing 40% of affordable housing on the site, as is policy of North Herts Council regarding large scale development. NHC will have nomination rights for these homes. LGCHF is also working with Eastern Community Homes to grasp opportunities for local self-build, co-operative and community land trust homes for local people. This will help provide the potential for local people to have access to affordable housing opportunities.

4. Community engagement

Response to feedback - LG1 preferred masterplan consultation

4.316.
LGCHF is grateful to all those who have provided feedback throughout the community engagement on the preferred masterplan for LG1. The table below sets out the main points raised and LGCHF's response to them.

Theme	Feedback	Response
Green public open spaces	From the feedback survey and conversations with local residents, the retention and enhancements of the Greenway were strongly supported as well as providing green open spaces	LGCHF is committed to ensuring that there are green open spaces as part of the development. This is enhanced by including a green landscape buffer around the site, enhancing the Greenway with 3 Local Equipped Play Areas (LEAPs) in the development and including possible improvements to the Grange Rec within the proposals. This ensures a landscape-led approach to the LG1 site, enabling LGCHF to adhere to our modern interpretation of the Garden City Principles. A number of respondents were concerned about building on the greenbelt and their reflected this in their feedback form responses. However, in conversations held with local residents, once it was explained that the site is allocated as part of the adopted North Herts Local Plan (2011-2031) to address the local housing need, this was accepted and their feedback on the preferred masterplan for LG1 became more constructive.
Biodiversity and landscaping	There was much support for more planting and landscaping to encourage more biodiversity and wildlife on the site.	As part of the plans, we are committed to planting over 2,000 new trees on site and retaining mature trees and a net gain of hedgerows. This will lead to a significant biodiversity net gain on the site and is reflective of the priorities of the local community from the previous feedback collected. Increasing wetlands and native grasslands was also supported in previous consultations and these areas will contribute to the net amount of greenspace proposed for the scheme (c. 40%).

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4. Community engagement

Theme	Feedback	Response
Traffic, access and road layout	At each stage of the consultation, there have been concerns about traffic both on LG1 and further into the Grange Estate. This was often mentioned in the access points, particularly if two is enough, and the layout of the road.	LGCHF's transport consultants, Steer, have been working with Hertfordshire County Council (HCC) to deliver the safest and most effective solutions. Traffic-calming measures were frequently asked about during our consultation and, as part of our measures to manage speeding, we are planning to implement a speed reduction through design and a 20mph speed limit throughout the primary road which has two access points at Norton Road and Western Way. There will also be measures in place to reduce rat running. As part of a modern Garden City, we are looking at alternatives to car travel which will benefit everyone. This has resulted in proposals for improved walking and cycling routes, further into Norton Common and Letchworth town centre down the NCN12 route. We are also looking at public transport improvements to provide better alternatives to car dependency. This includes how to best incorporate bus services, cycle storage and repair facilities and we are including car clubs as part of a mobility hub within the LG1 proposals. Ensuring that there different modes of transport available and encouraging the use of these will take the emphasis off car travel, easing traffic and congestion in the site and further into the Grange Estate. Road design will include dedicated cycle ways and shared spaces. Widths will accommodate main uses and help manage speed and make suitable parking provision where needed. We also understand that residents of the Grange estate would like to see opportunities for additional formal parking on the estate to be explored, which NHC can consider using financial contributions from the development. LGCHF will continue to work with HCC before submitting the final masterplan to ensure all measures are robust enough to ease traffic as much as possible.

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4. Community engagement

Theme	Feedback	Response
Sustainability	In our survey question on what respondents think should influence the design the most, many chose high sustainability standards as one of the top three most important design influences.	LGCHF are committed to ensure that the site will encompass a range of sustainability aspects, such as ecology, biodiversity, landscaping and travel. Homes will be energy efficient and renewable energy incorporated into the development, a sentiment that is shared with the local community. This will be explored with the developer partner once appointed, which will happen after the masterplan is approved by North Herts Council. Even after this, we will continue to engage with the local community to further develop these proposals.
Key views	Respondents were keen to see key views maintained from what was outlined in the masterplan options.	LGCHF recognise that local residents consider key views as important to the local area. As such, the preferred masterplan maintains key views towards Fairfield, Stotfold, St Nicholas Church, Biggleswade and Norton and maximises the opportunity for residents and visitors to enjoy these views.
Housing mix & affordable housing provisions	Local residents wanted to see a diverse housing mix and an inclusion of clusters of housing association homes in all parts of the development. They were also supportive of the commitment to affordable housing.	LGCHF is committed to providing 40% of affordable housing on the LG1 site. Two-thirds of this will be designated as social housing and managed by a housing association, the remainder being discounted as below market value. Therefore, LGCHF is adhering to the residents' desire for a mixture of housing types on the LG1 site and for affordable housing on site. As was outlined during the previous consultation for the masterplan options, and reiterated during that for the preferred masterplan, we are continuing to work with Eastern Community Homes to grasp opportunities for local self-build, co-operative and community land trust homes for local people.
Supporting infrastructure	It was often brought up that the site will need supporting infrastructure to accompany the homes built on LG1. Concerns were particularly made regarding the land reserved for a primary school and doctors' surgeries.	It is part of North Herts Council policy to provide medical facilities and LGCHF will continue to work with statutory bodies to explore the delivery of either a flexible space or a dedicated medical facility. Regarding a school, LGCHF are aware of concerns regarding a secondary school from feedback received during the consultation. However, it is council policy to provide a primary school on the site. LGCHF are therefore required to reserve a site as part of the LG1 proposals. We continue to seek dialogue with the local education authority to discuss this further as the proposals progress.

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4. Community engagement

Theme	Feedback	Response
Appearance of homes	The most popular answer on the design influences was ensuring that the homes on the site had private gardens. There was also desire for the design reflecting early Garden City homes and some for the homes having a similar design to those on the Grange Estate.	LGCHF is committed to ensuring that the character of the buildings on the LG1 site respects the surrounding context and a modern interpretation of Garden City Principles is applied. Homes will have gardens with a combination of private gardens for houses and a range of communal spaces.

Figure 13: Illustrative sketch of the approach to LG1 from Norton Road

5. Conclusion

5. Conclusion

5.1.
Public consultation is a vital element of the planning and development process. Good pre-application engagement offers local communities the opportunity to get involved and help shape proposals so that the subsequent planning application takes into consideration, where appropriate and possible, their opinions.

5.2.
The consultations outlined have sought to engage members of the community, and LGCHF is fully committed to continue to work with local people. LGCHF believes that the best development will happen with input from local stakeholders and those who understand the local area best.

5.3.
The programme of stakeholder engagement and public consultation has provided interested stakeholders and local residents with an opportunity for constructive engagement with leading members of the development team – a dialogue that the Applicant hopes to continue throughout the planning and build-out process.

5.4.
Over the course of each consultation (early understandings, LG1 masterplan options and LG1 preferred masterplan), we engaged extensively with key stakeholders and members of the local community. This also occurred in between defined consultation periods through the Grange Community Panel and other website blog posts on key updates. These panels, and other engagement, enabled LGCHF to carry out continuous engagement to constantly be a transparent and prominent presence in the community and answer any questions at any time about the proposals for LG1.

Who we engaged with

5.5.
The engagement processes outlined in this report sought to engage with a broad audience of local people, including both those who live near the LG1 site on the Grange Estate and those who live elsewhere in Letchworth.

5.6.
These sentiments were continued into the community engagement for every stage of engagement, culminating in that for the preferred masterplan for the LG1 site consultation. The engagement programmes provided interested stakeholders and local residents with multiple opportunities for continuous engagement with the project team and proposals for the site.

5.7.
Engagement was carried out both online and in-person to enable as far wide a reach as possible to local people and stakeholders about the LG1 masterplan. Across the three rounds of consultations, 5,089 people viewed the project website, viewing the pages over 27,759 times. In total, over 1,765 people engaged with members of the project team at events.

5.8.
We received a total of 1,062 people completed online or hardcopy feedback surveys across the three consultations. The engagement process was advertised by a flyer that we distributed across 16,427 addresses (the most at any one time) and social media adverts which reached a total of 50,334 people with 112,294 impressions. The team also notified key stakeholders, those signed up to the project mailing list, Grange Community Panel members, and LGCHF trustees and governors of the consultation events for the LG1 masterplan.

5. Conclusion

5.9.
LGCHF would like to thank everyone who took the time to engage with them about the masterplan for LG1. The feedback received covered a variety of topics and have been outlined in this report. The key themes covered were:

- Importance of green open spaces and retaining and enhancing the Greenway
- Traffic throughout the LG1 site and into the Grange Estate, as well as access points and road layout and traffic-calming measures
- Infrastructure on the site
- A diverse housing mix and affordable housing provisions
- Landscaping and biodiversity
- Appearance of buildings/homes on the site

Next steps

5.10.
This SCI demonstrates that the LCGHF has involved the community and local stakeholders in the development of a preferred masterplan for the site. The LGCHF is keen to continue working with North Herts District Council, Hertfordshire County Council, key stakeholders and the local community. This consultation process will therefore continue throughout the determination period of the masterplan application.

5.11.
We are still dedicated to continuous community engagement and being present in the community. This is demonstrated by our Grange Community Panel meetings; the next one planned is for early summer 2024. This enables those living on the Grange Estate to have continuous and regular opportunities to talk to members of the project team about the masterplan for LG1.

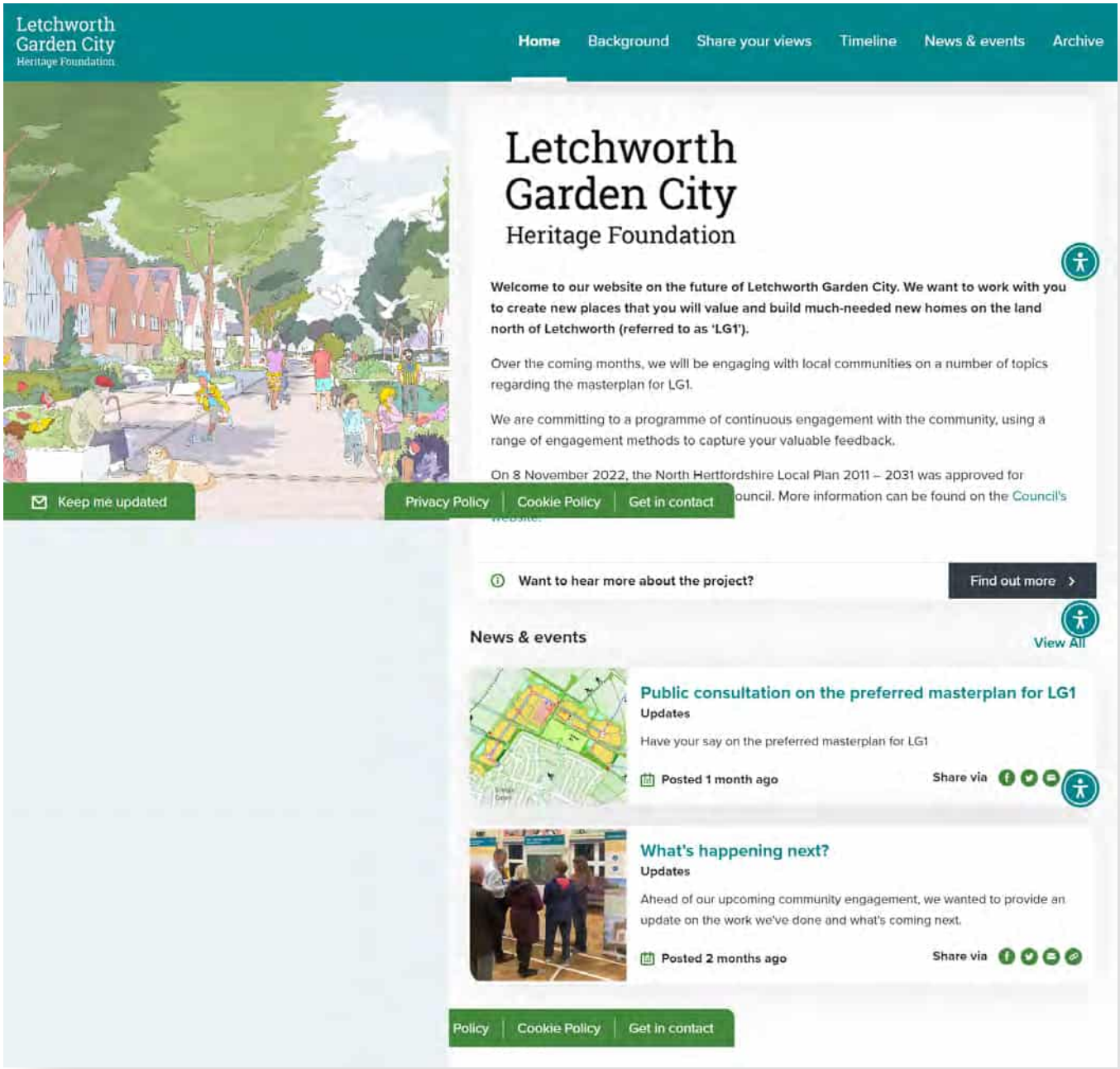
5.12.
LGCHF remains available for anyone who wishes to ask questions or provide feedback.

5.13.
LGCHF are looking to submit the preferred masterplan to North Herts Council by Summer 2024 and pending approval will look to begin the partner selection process in the Winter.

6. Appendices

6. Appendices

Appendix A1 – Project website



6. Appendices

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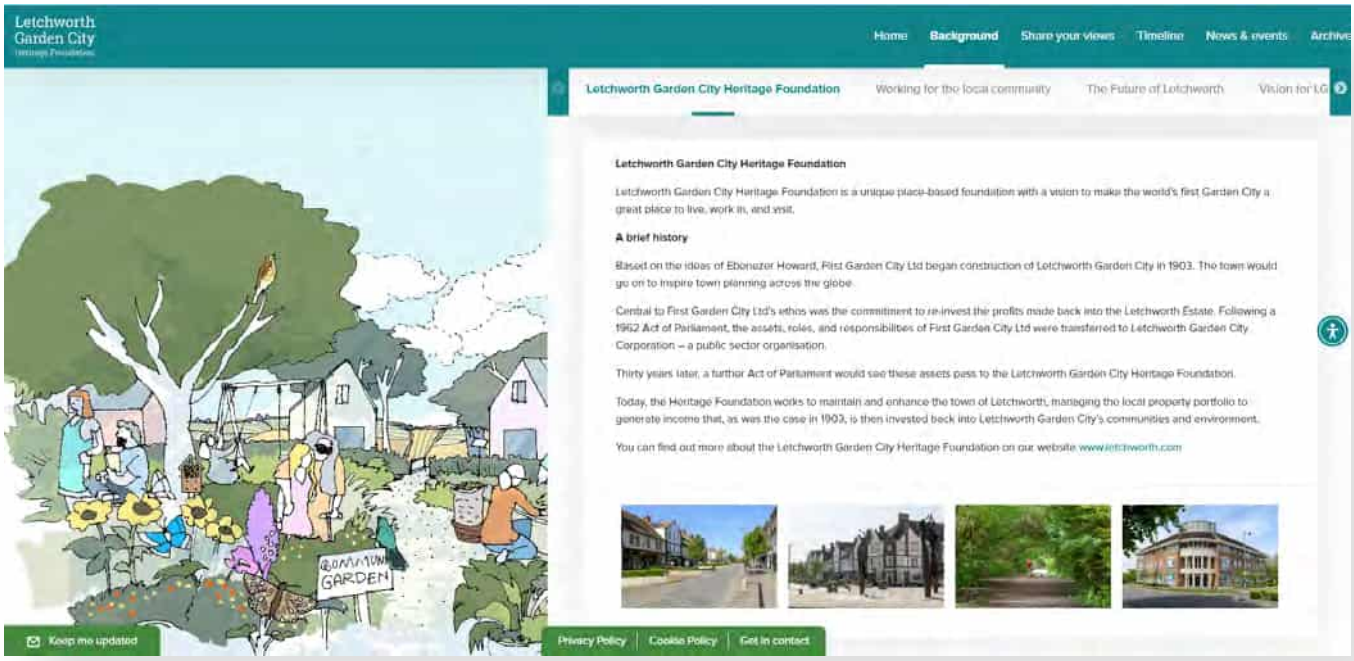

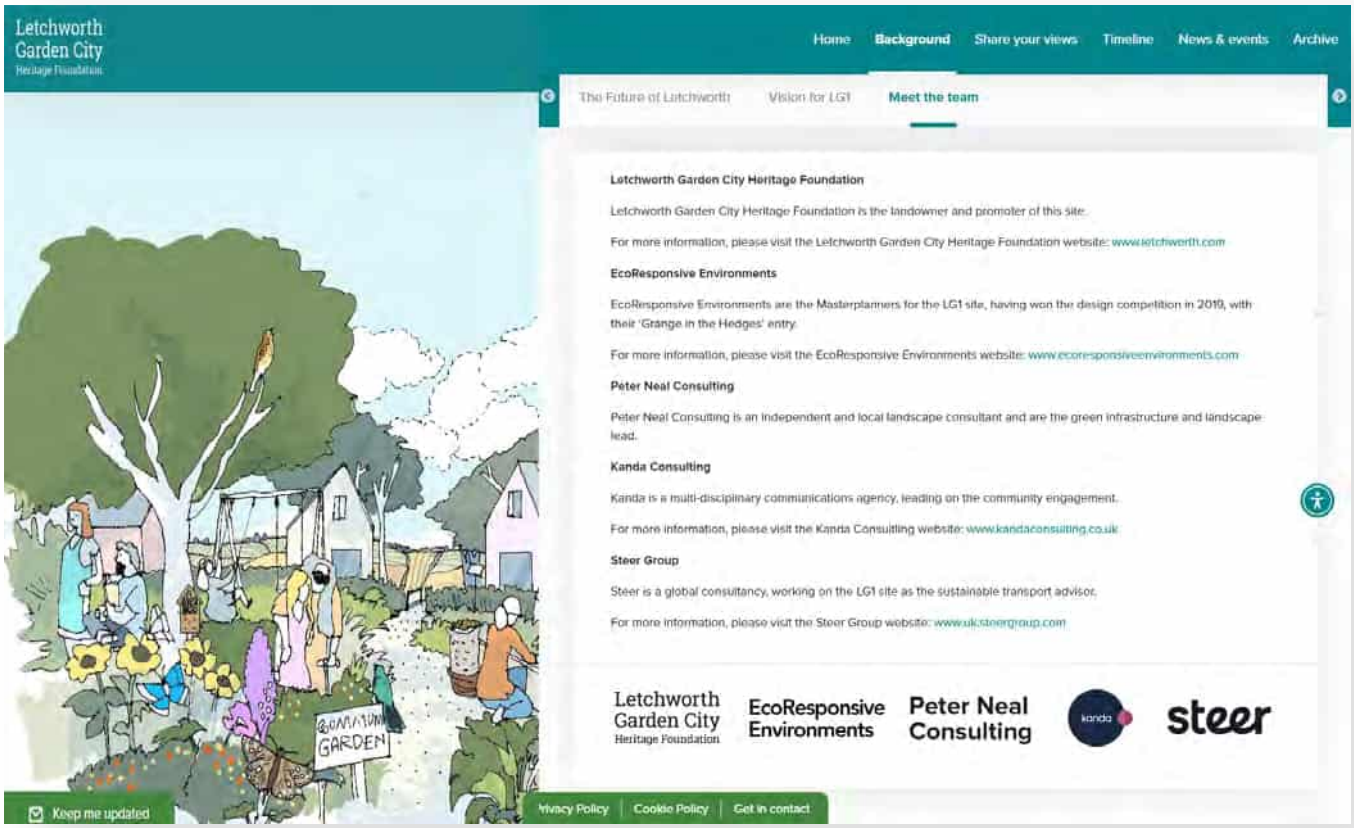

6. Appendices

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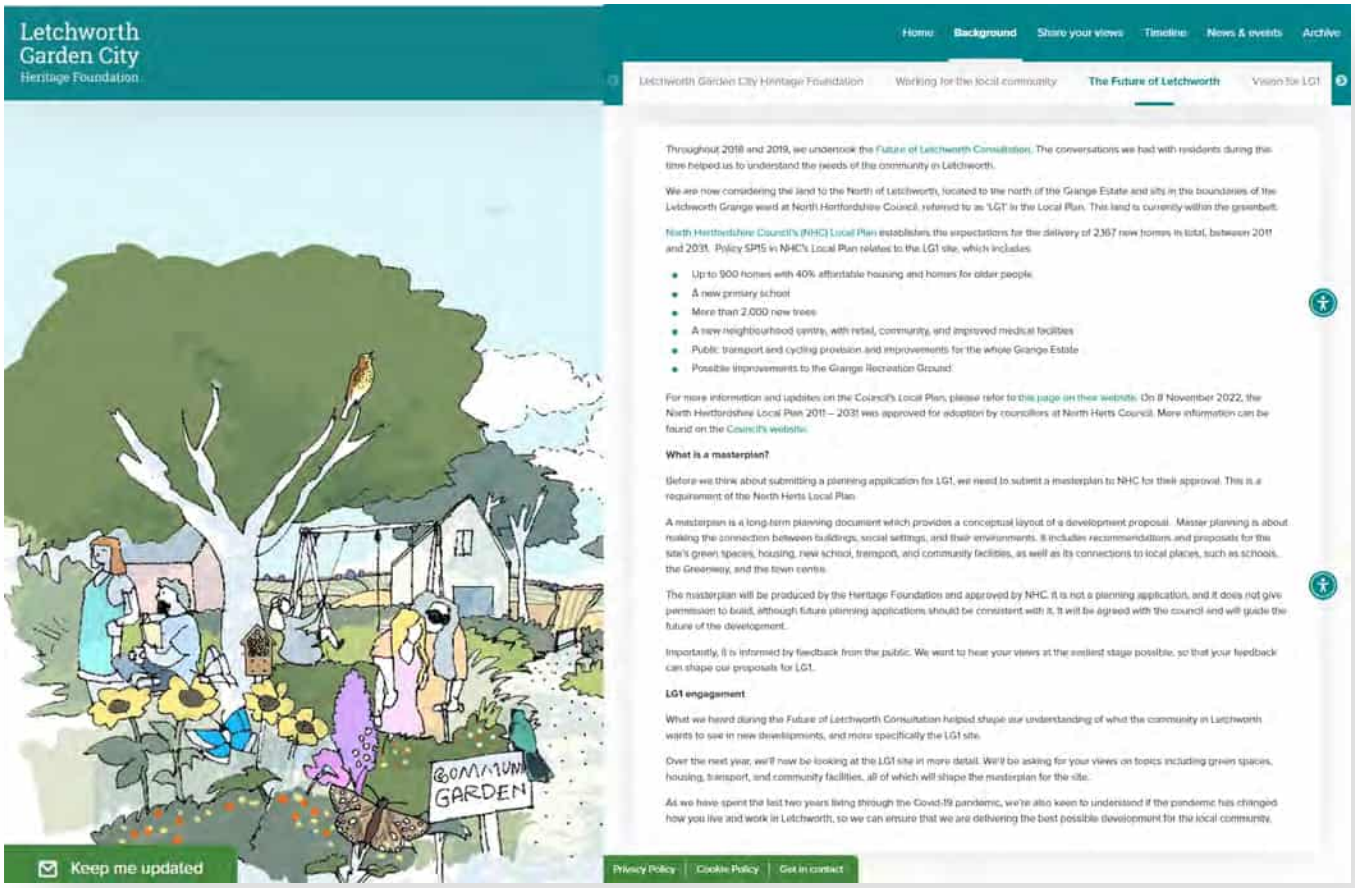

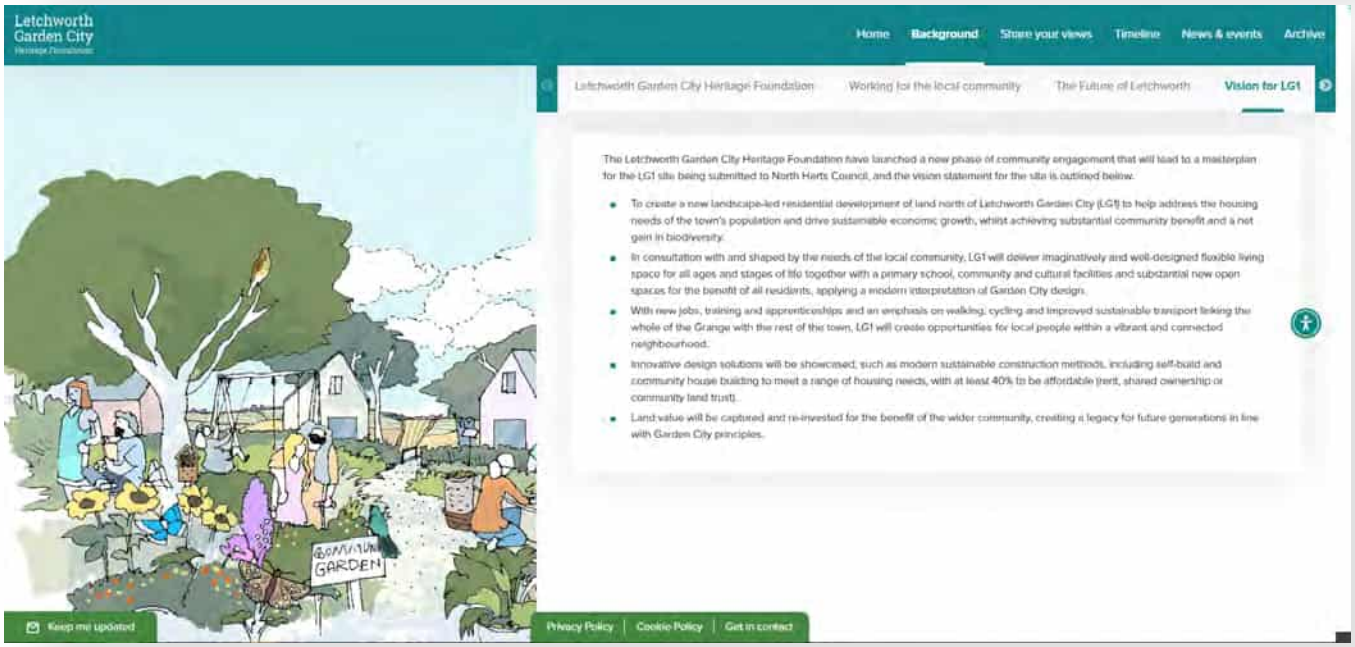

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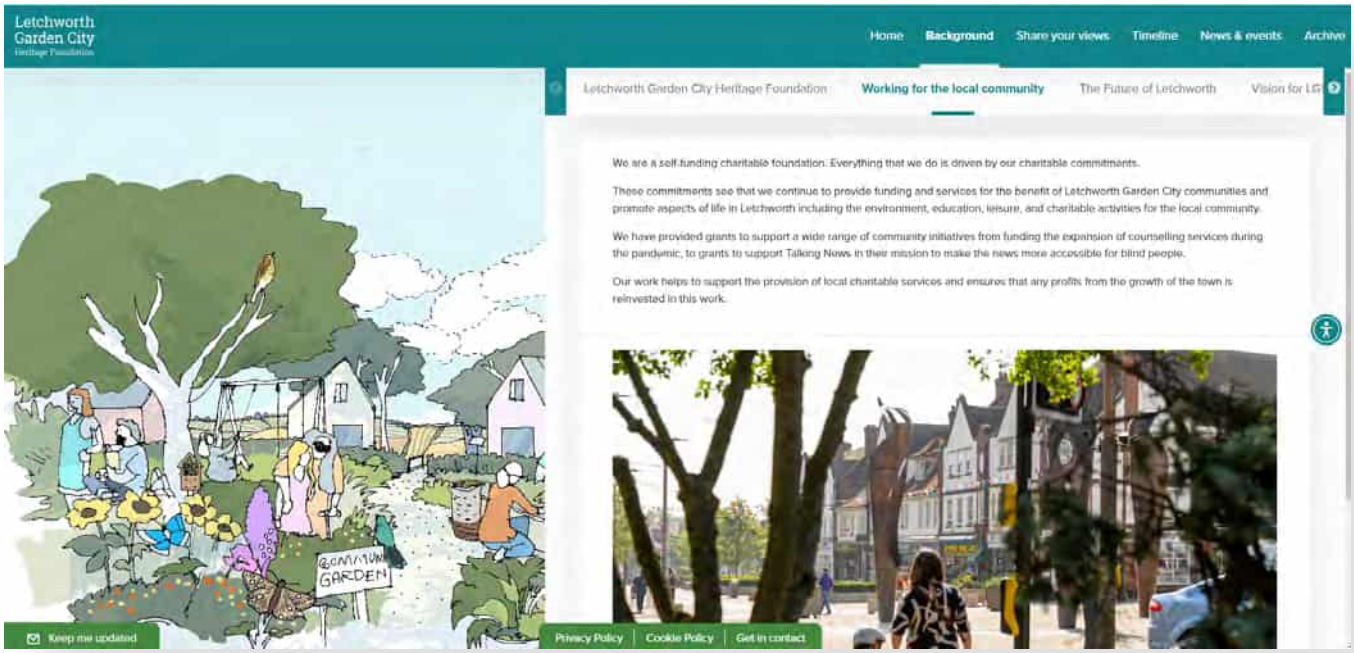

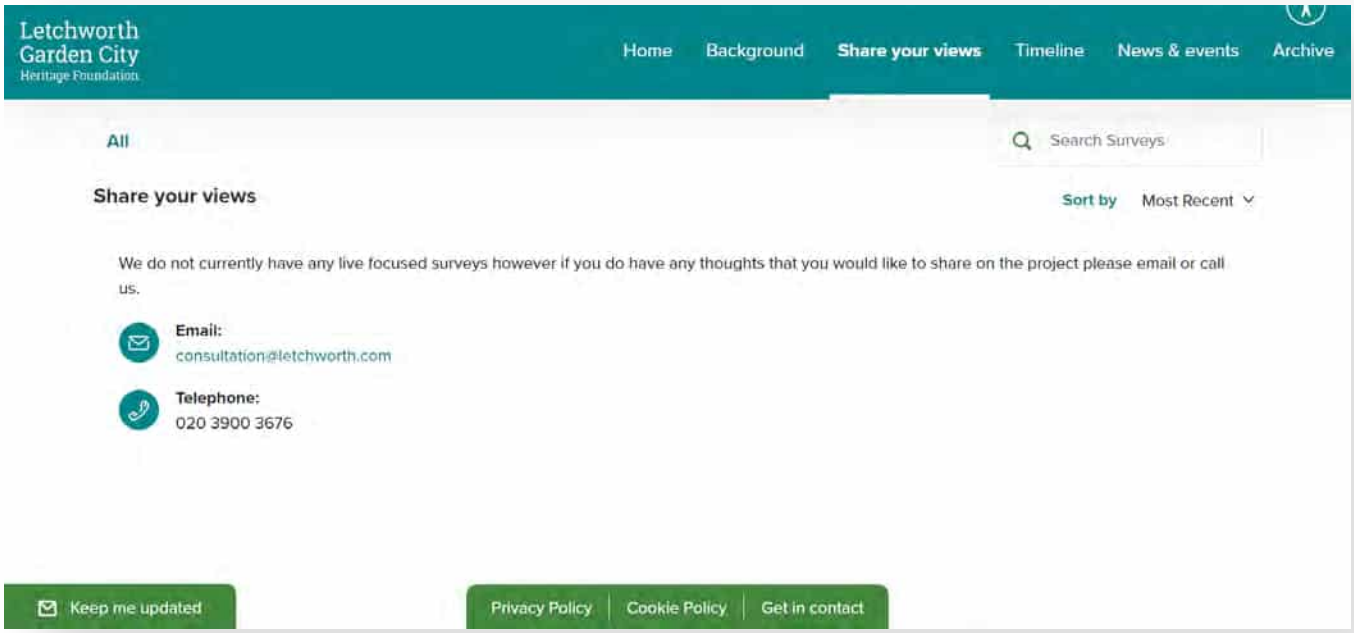

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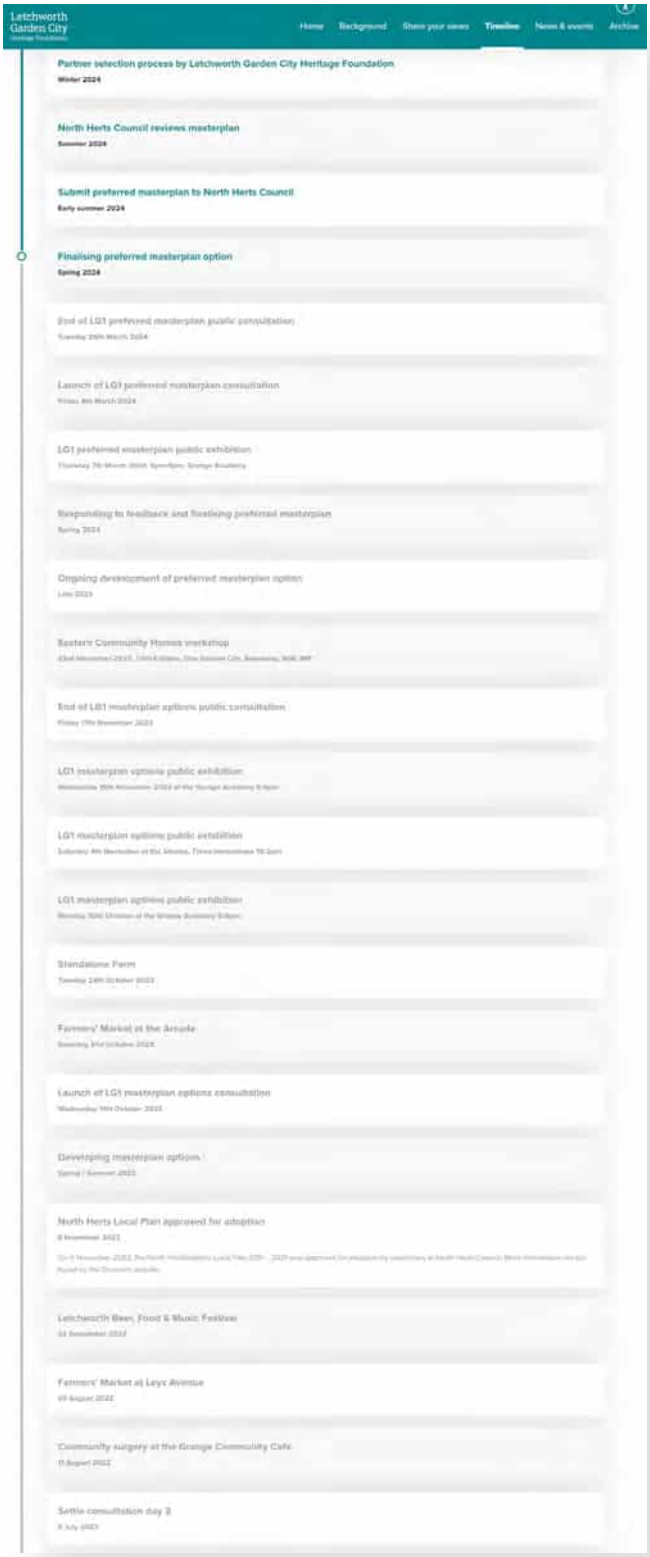

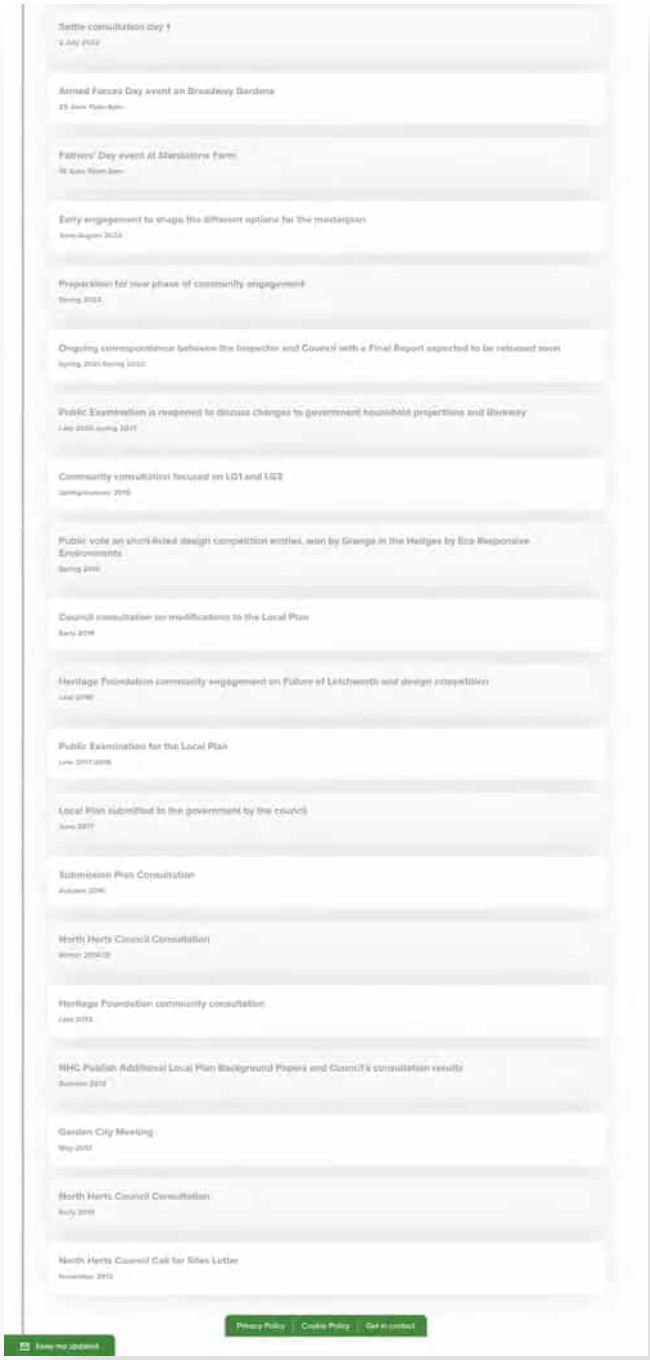

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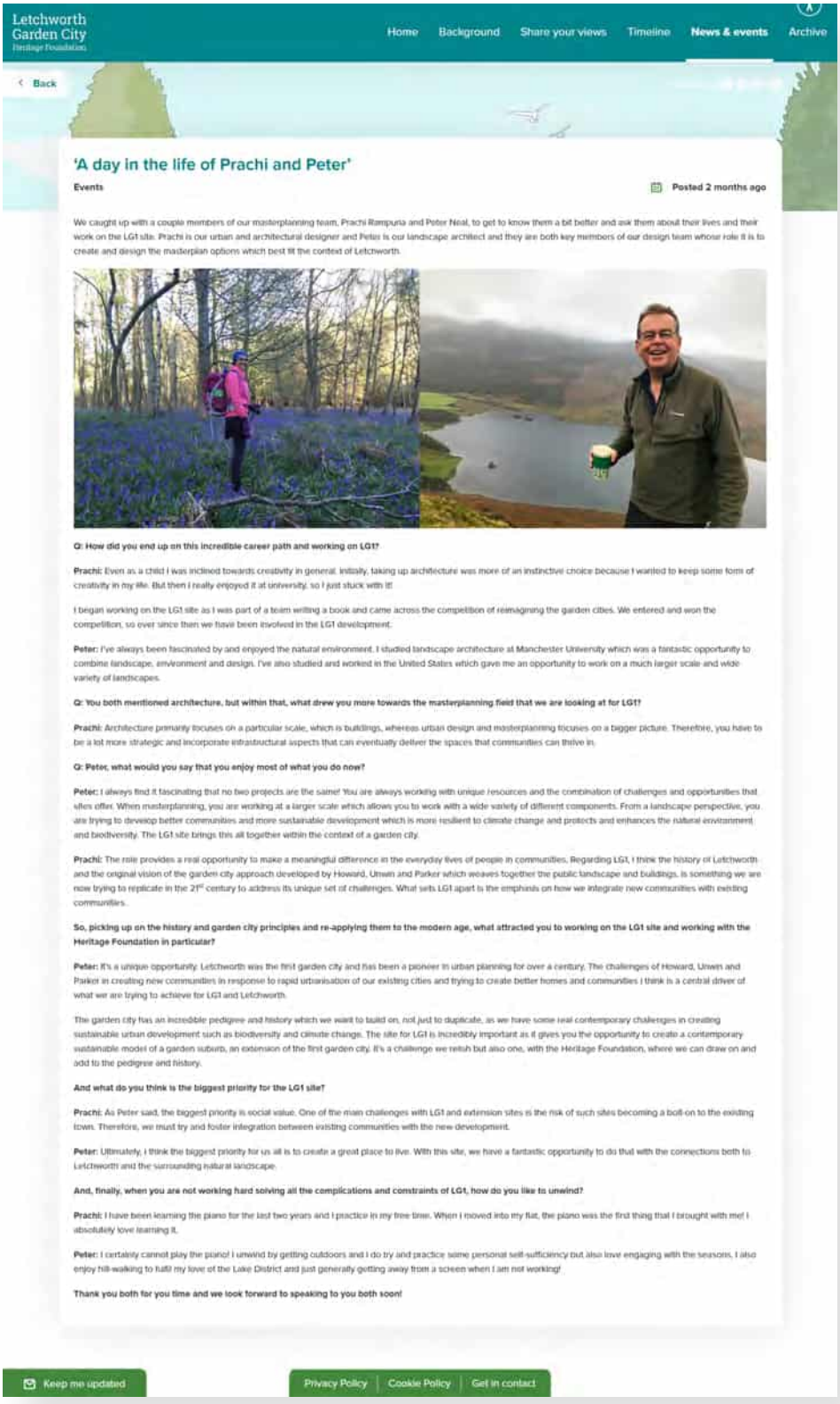

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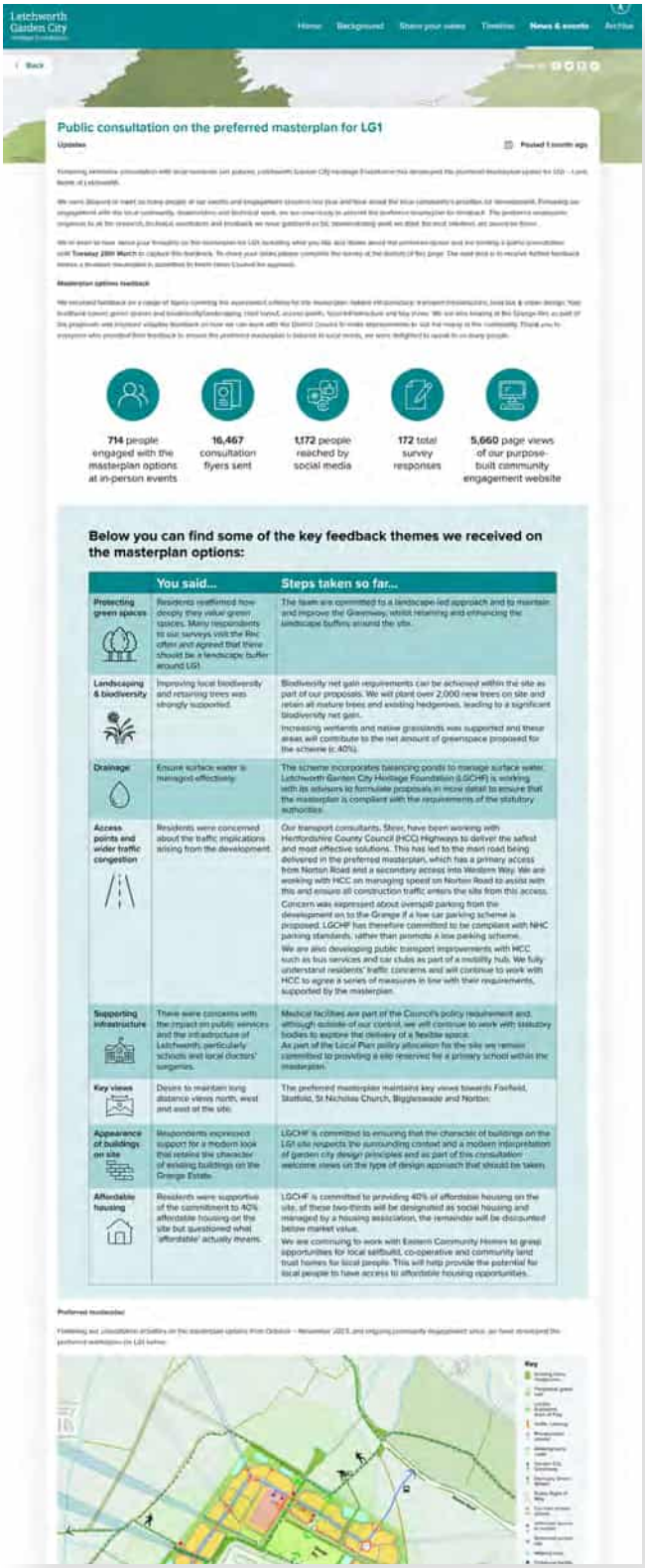

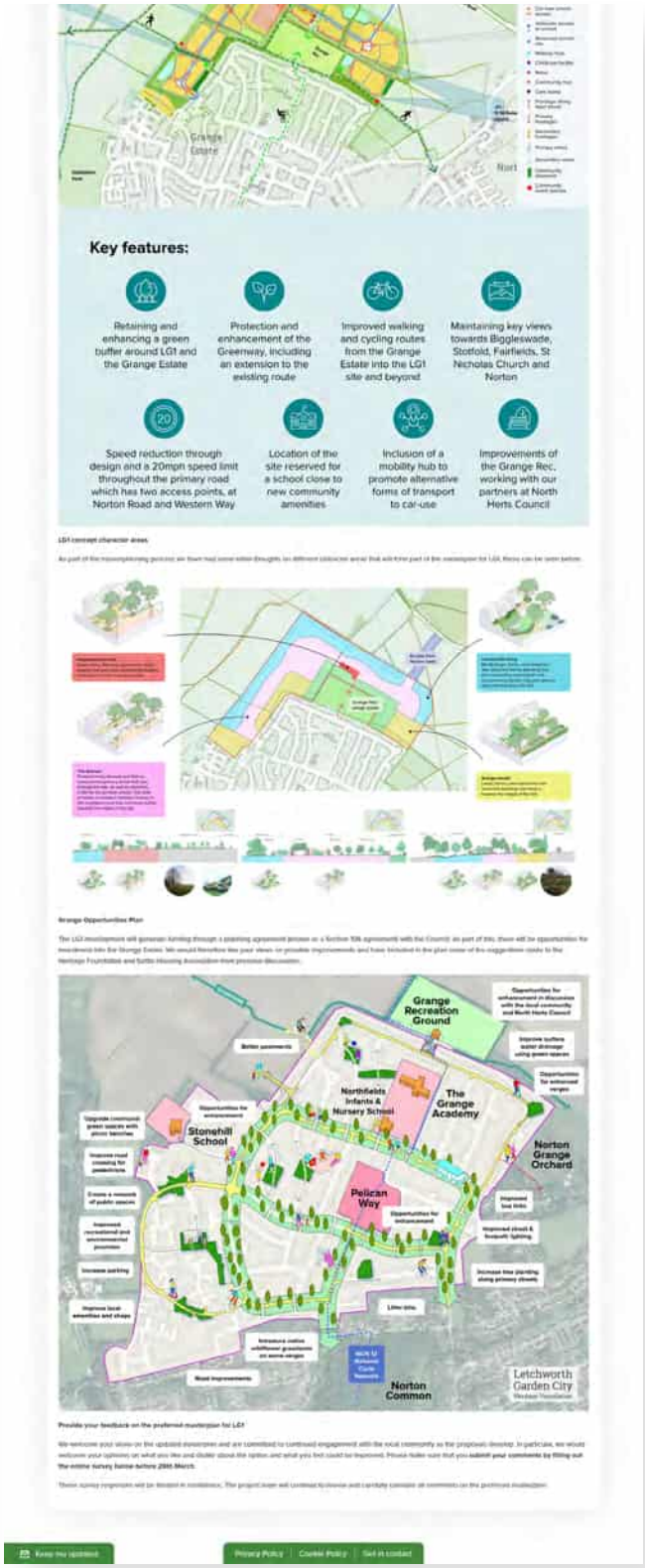

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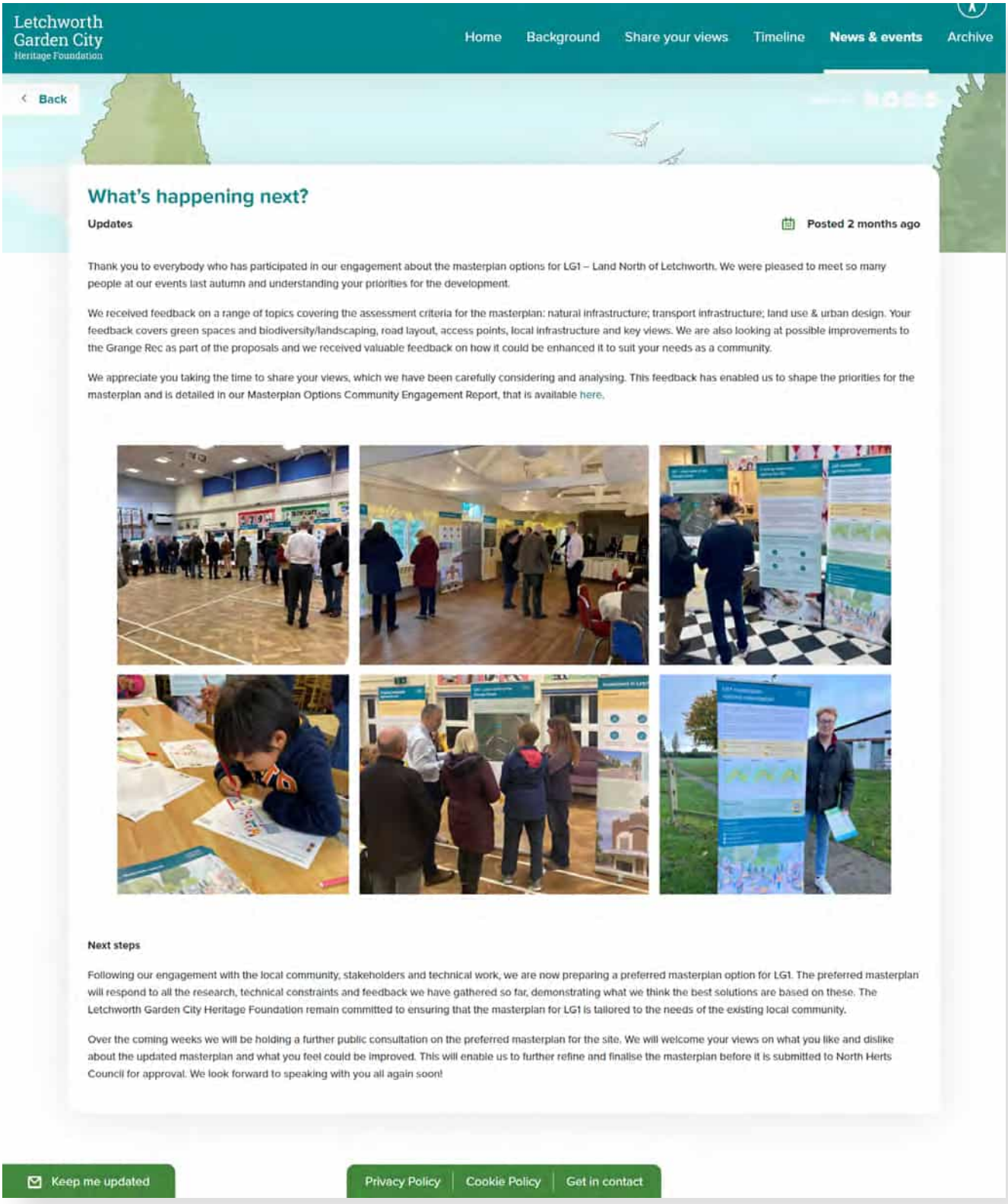

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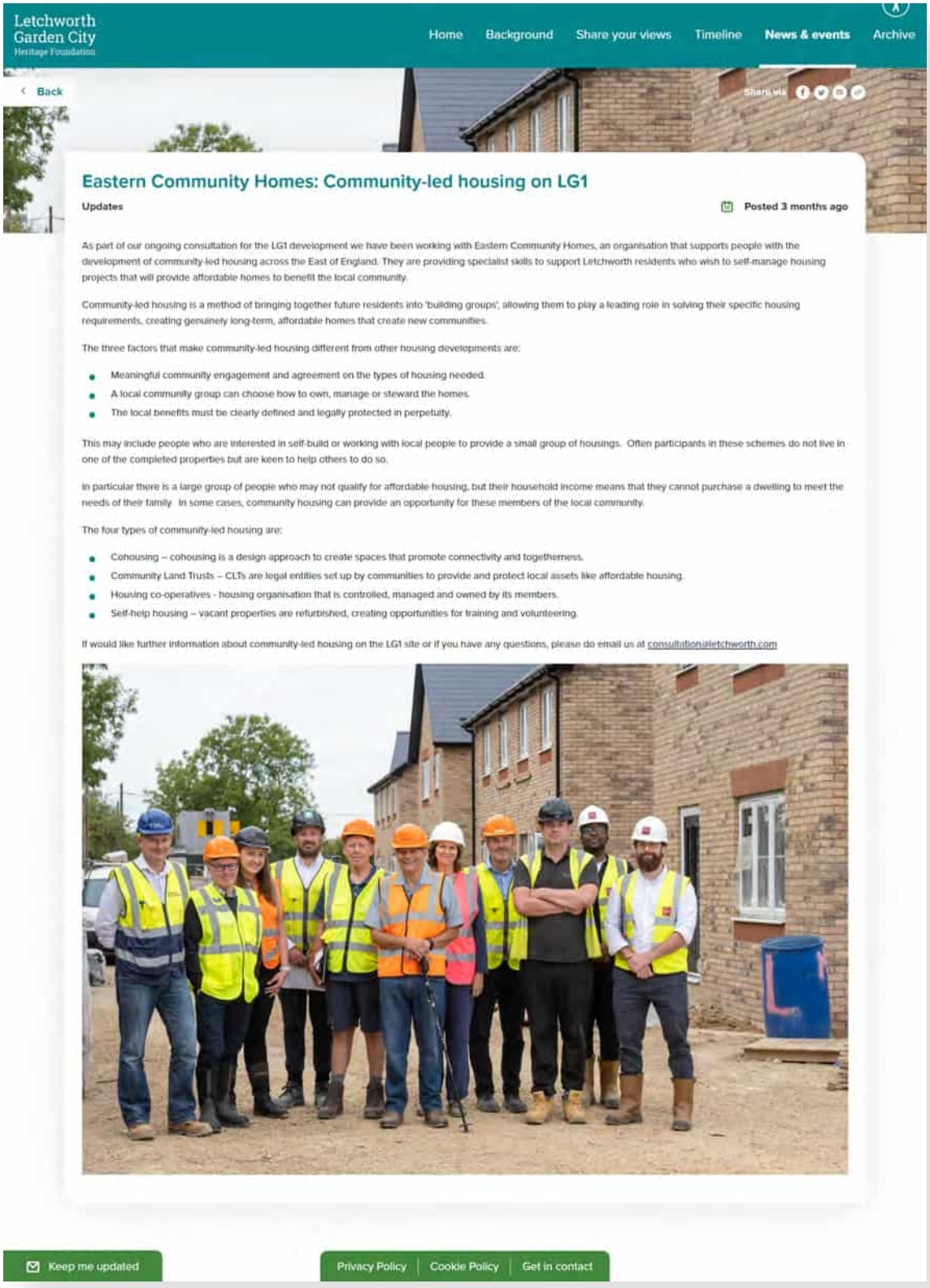

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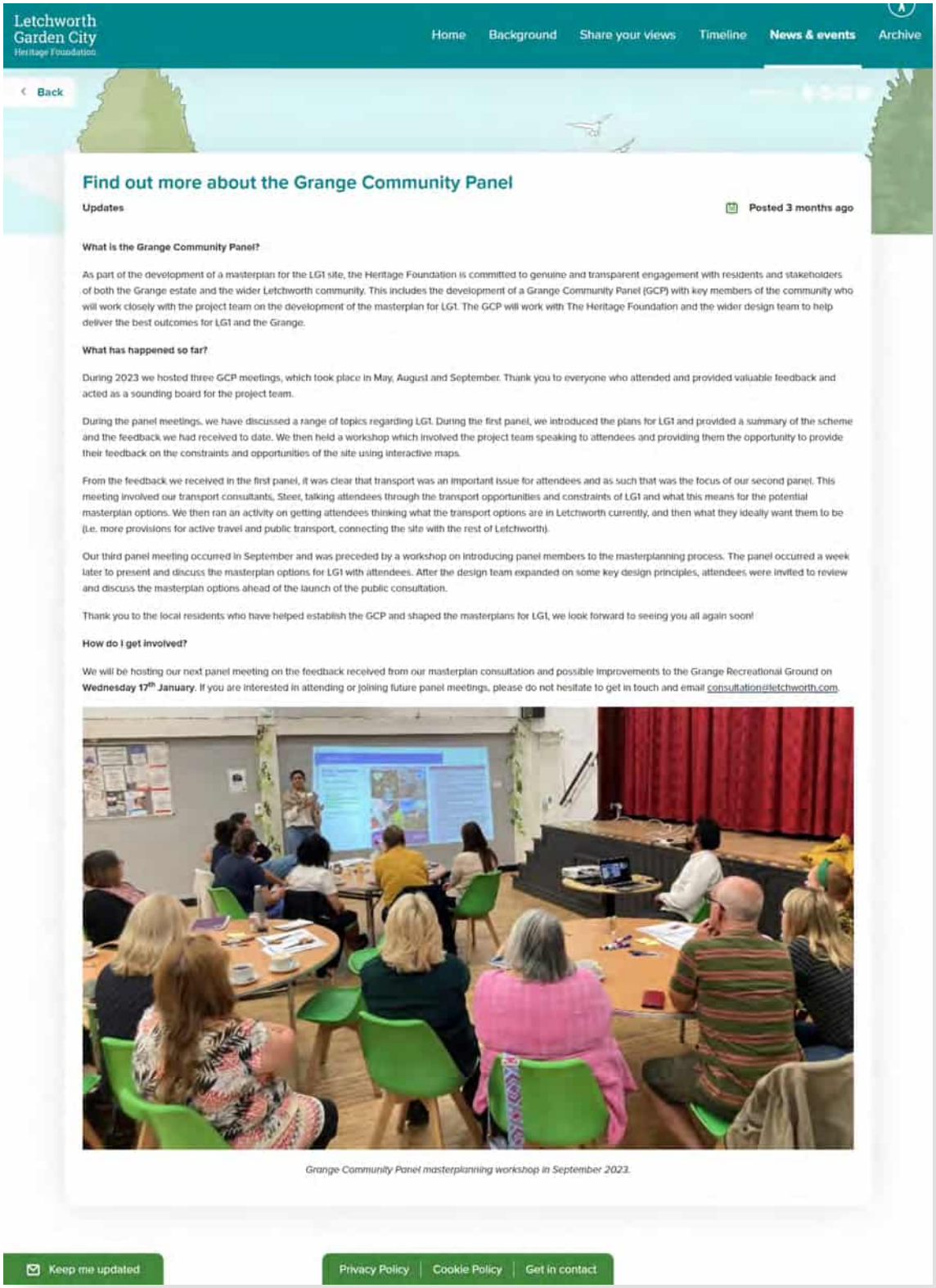

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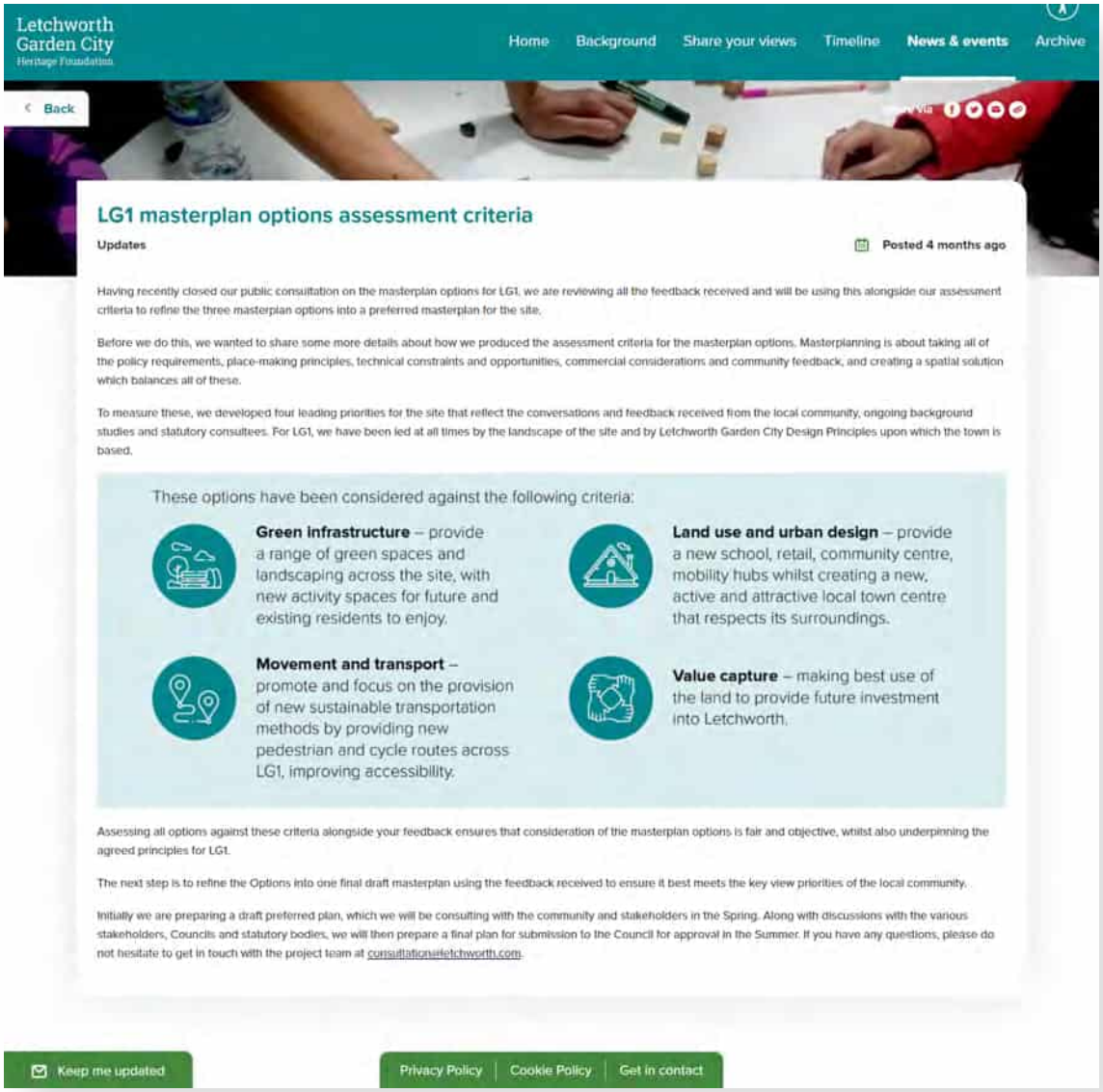

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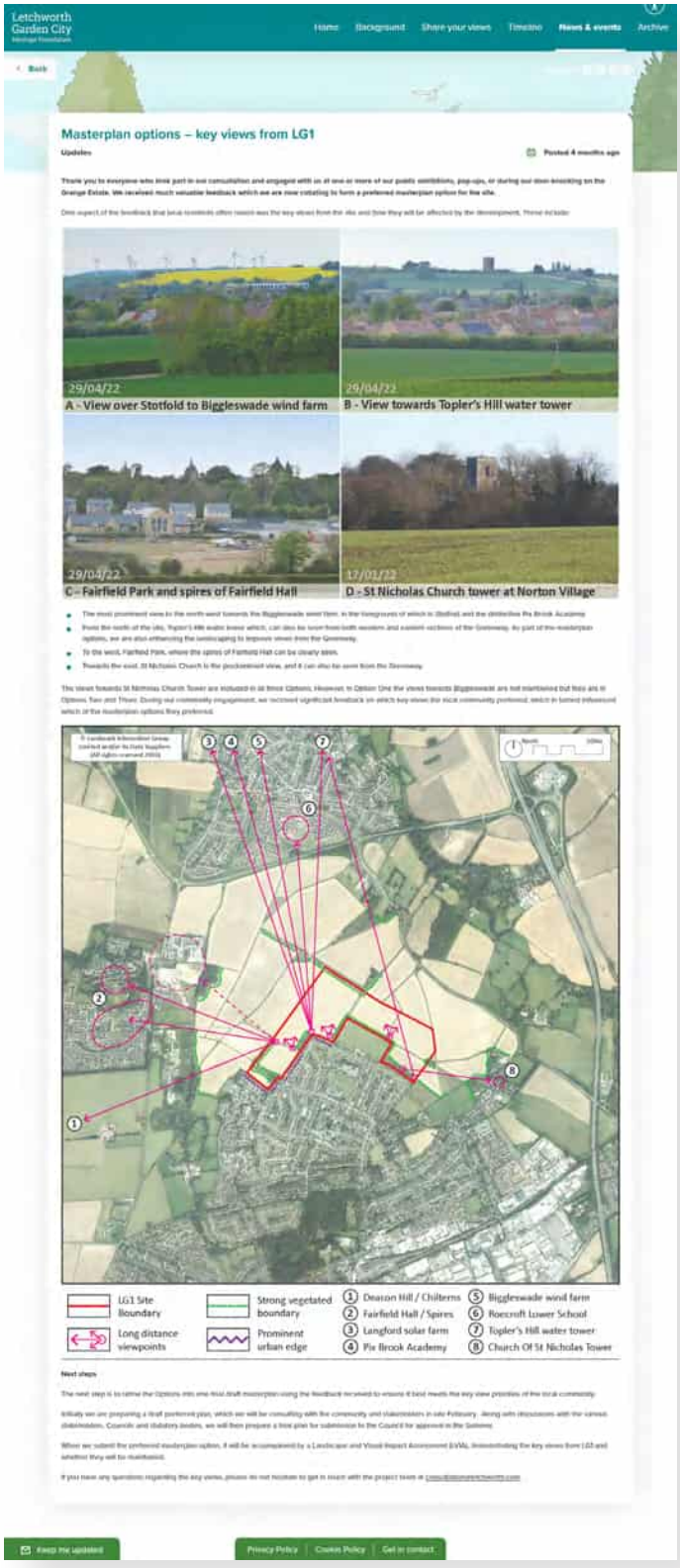

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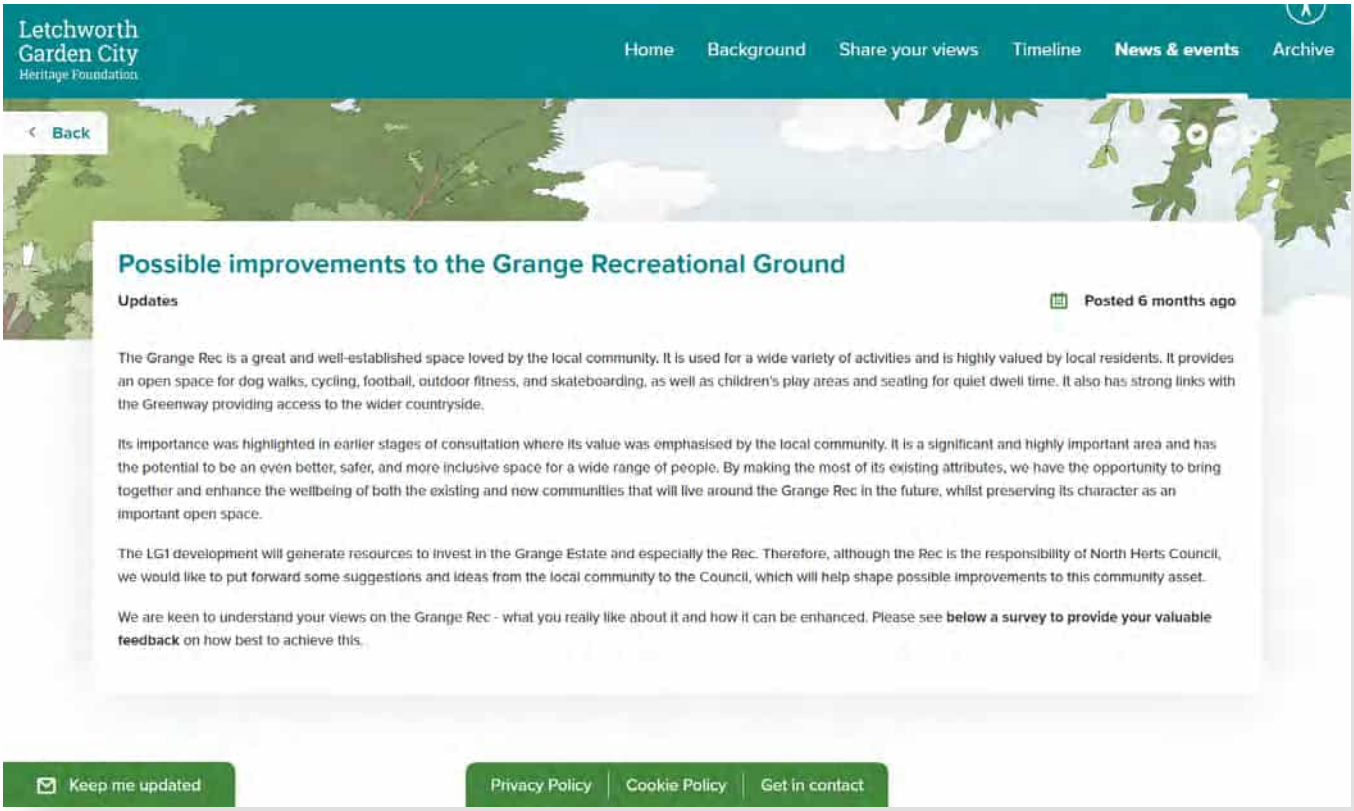

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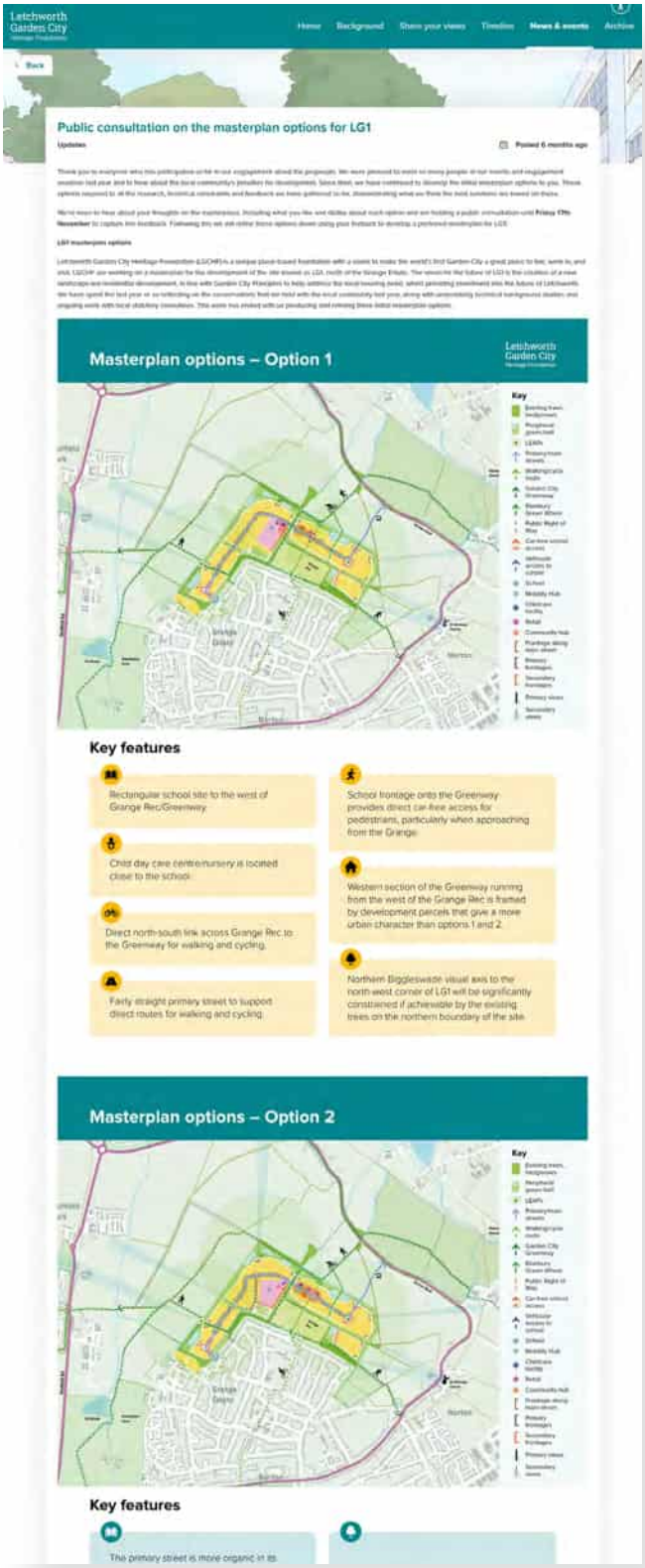

6. Appendices

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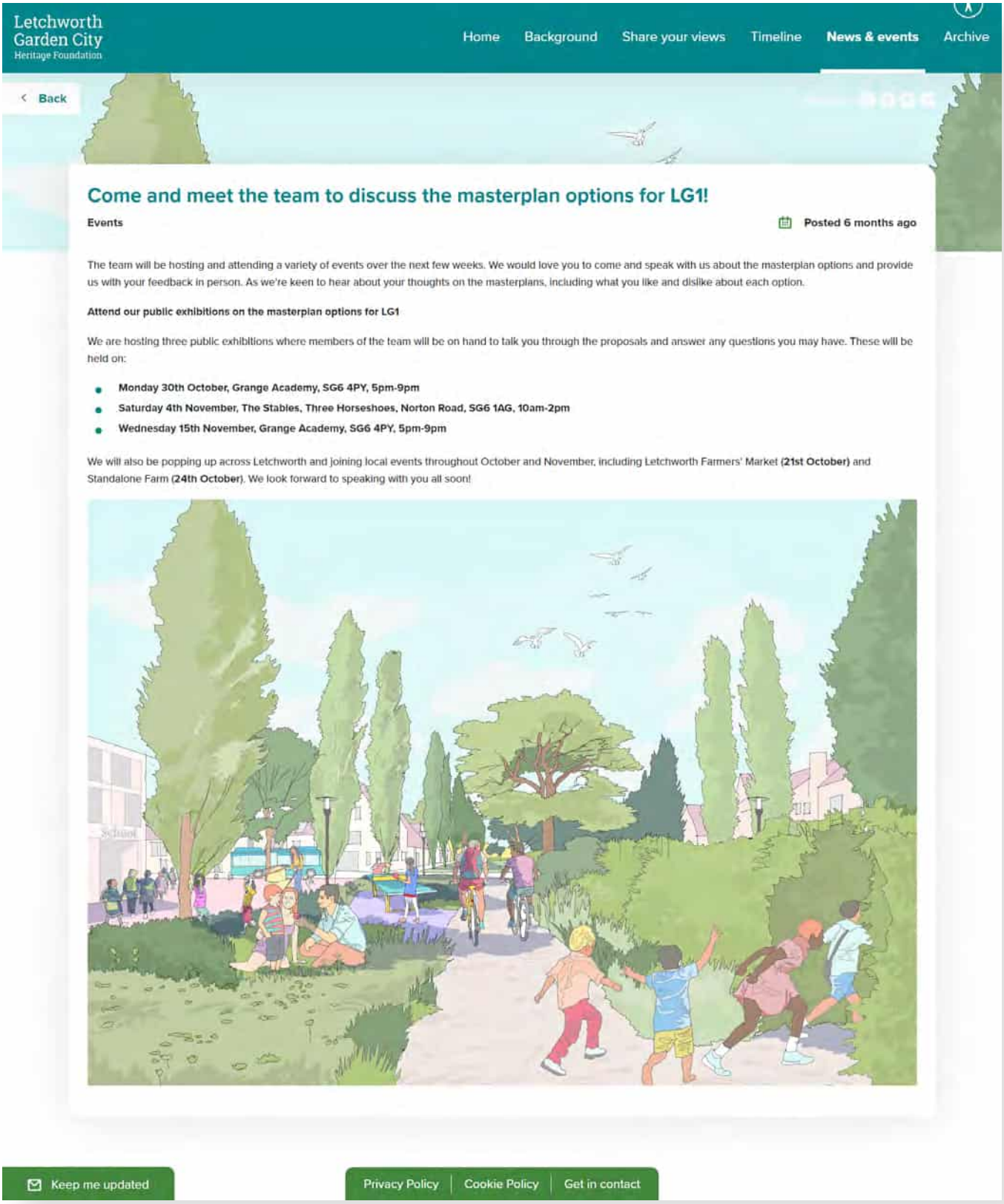

6. Appendices

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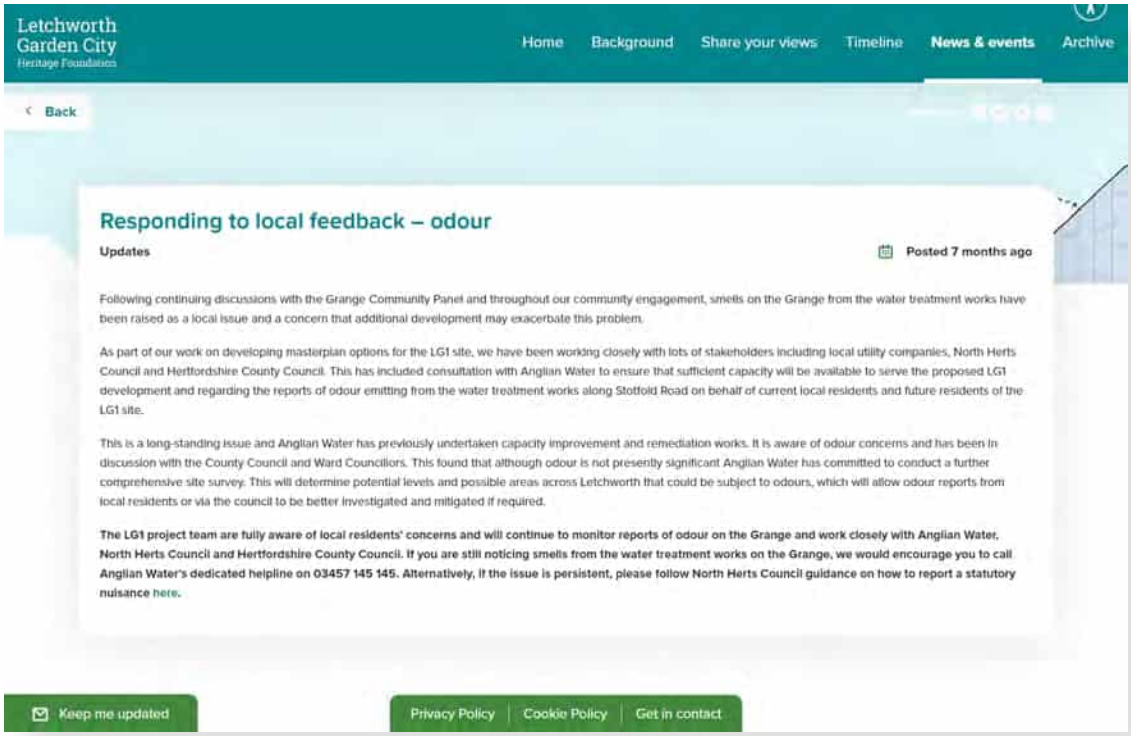

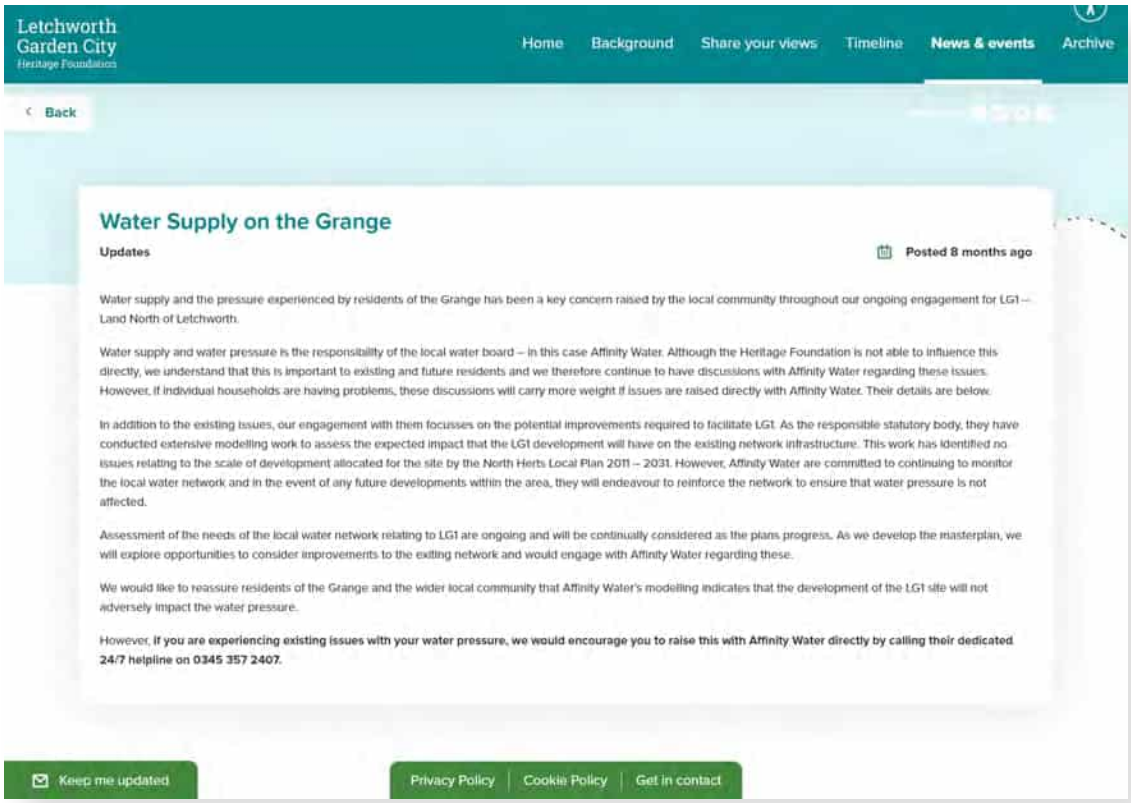

6. Appendices

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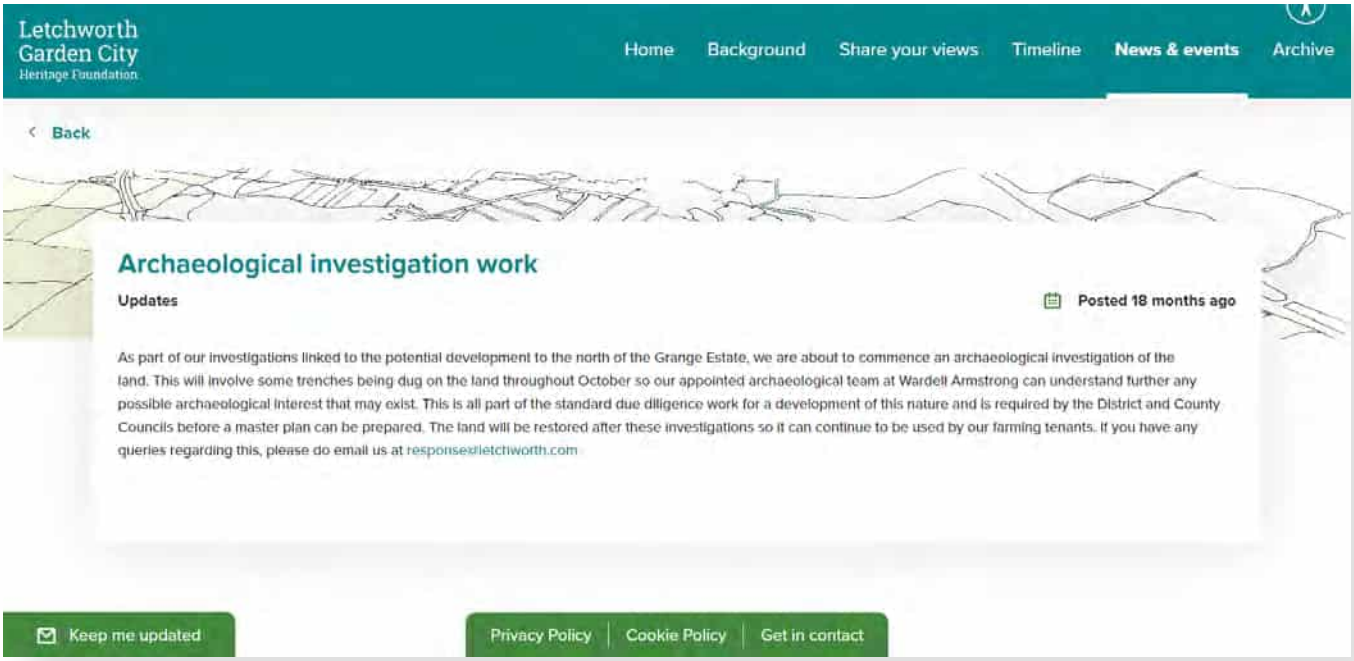

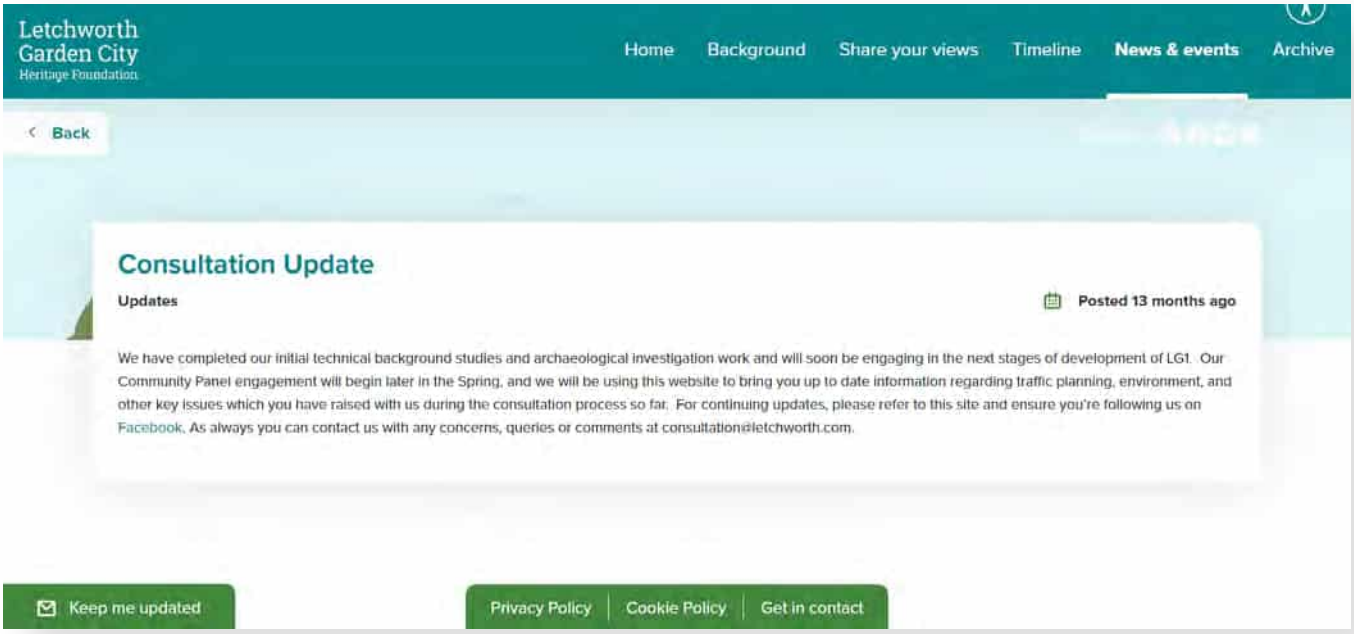

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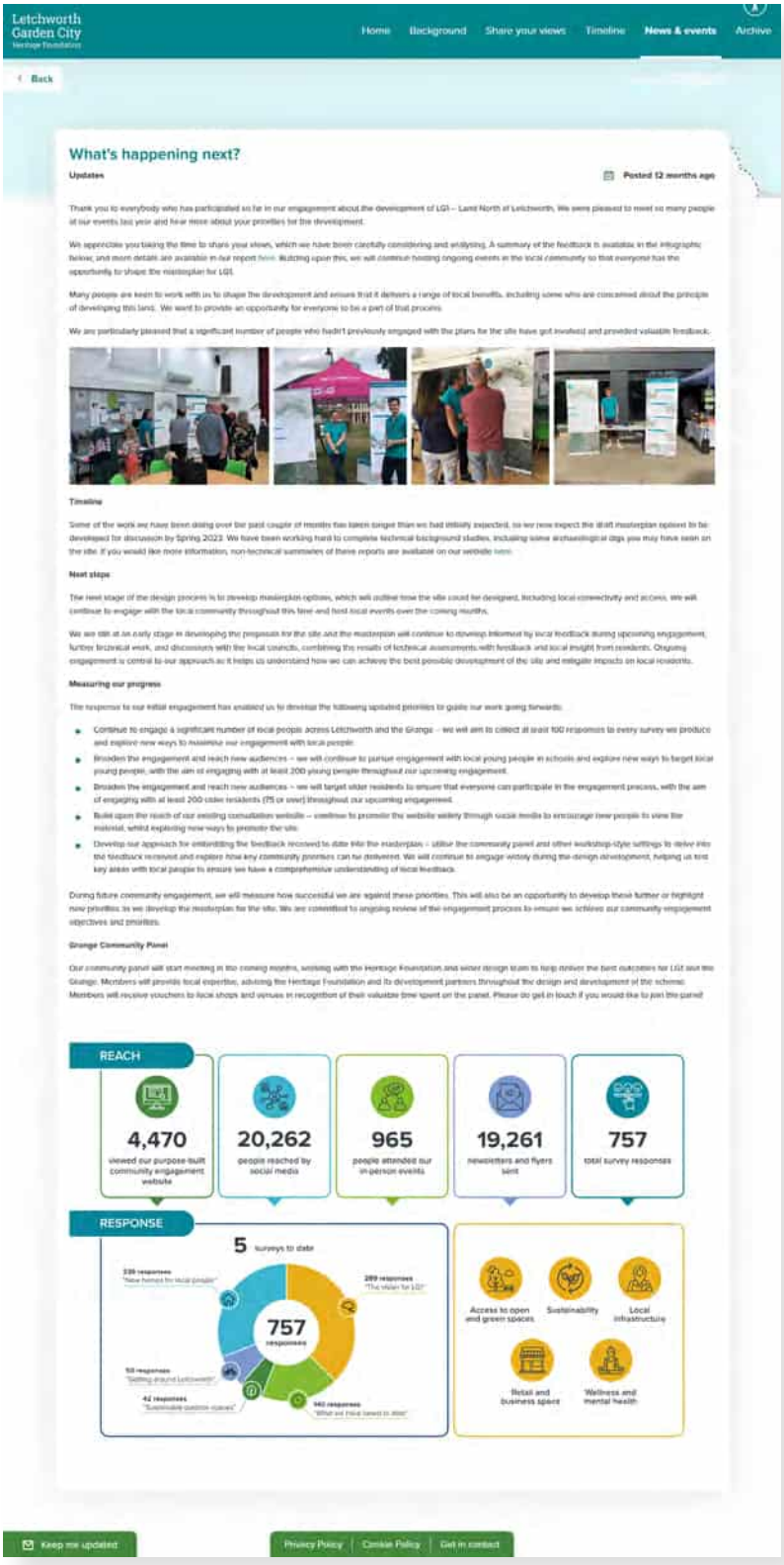

6. Appendices

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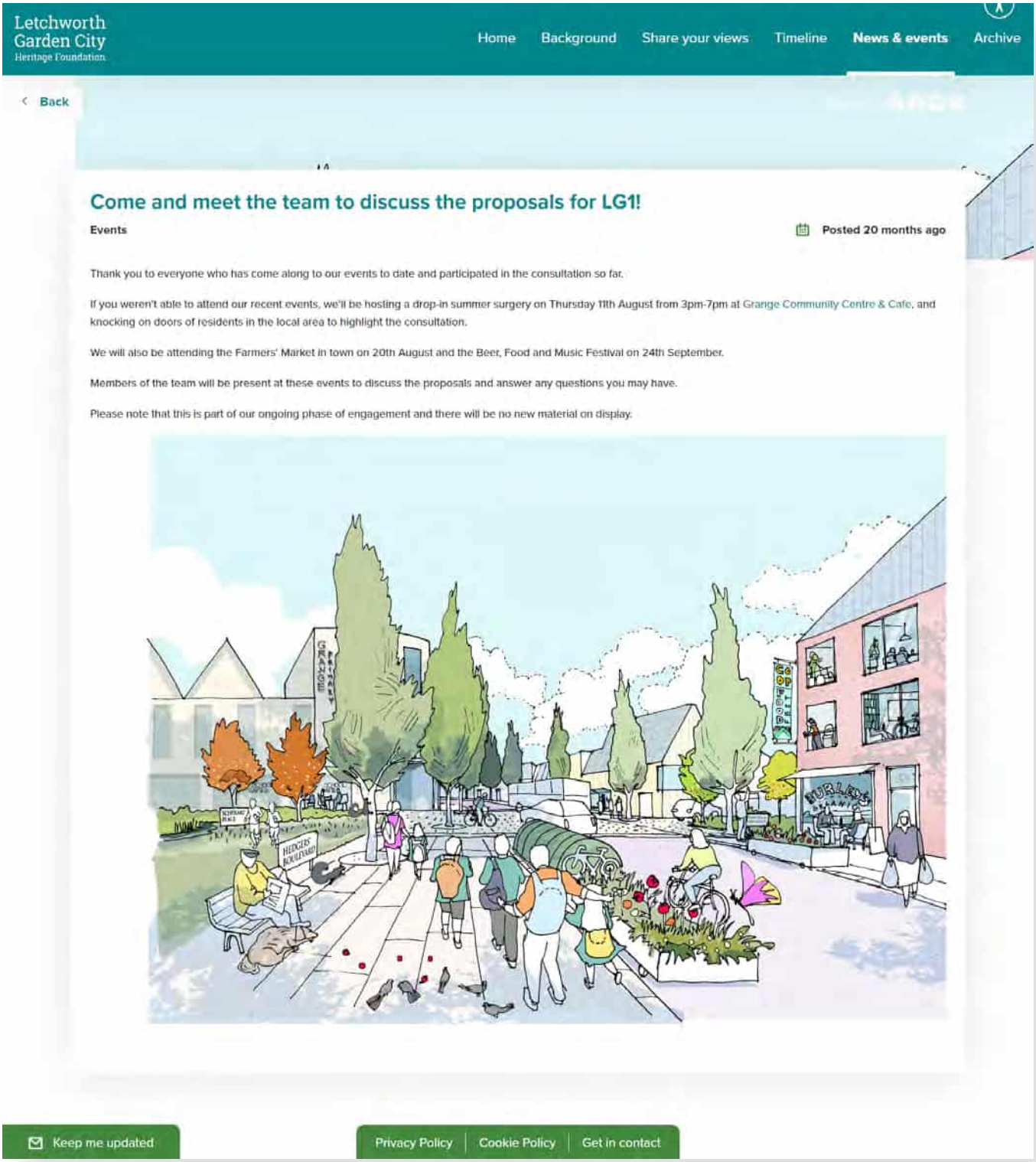

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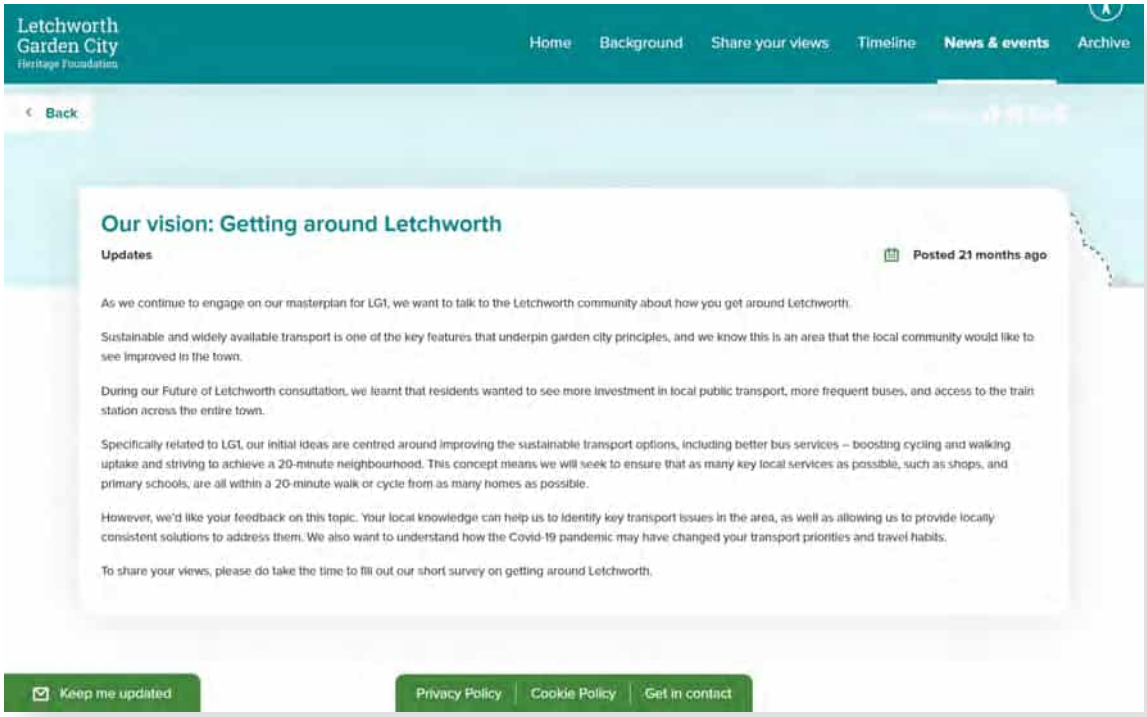

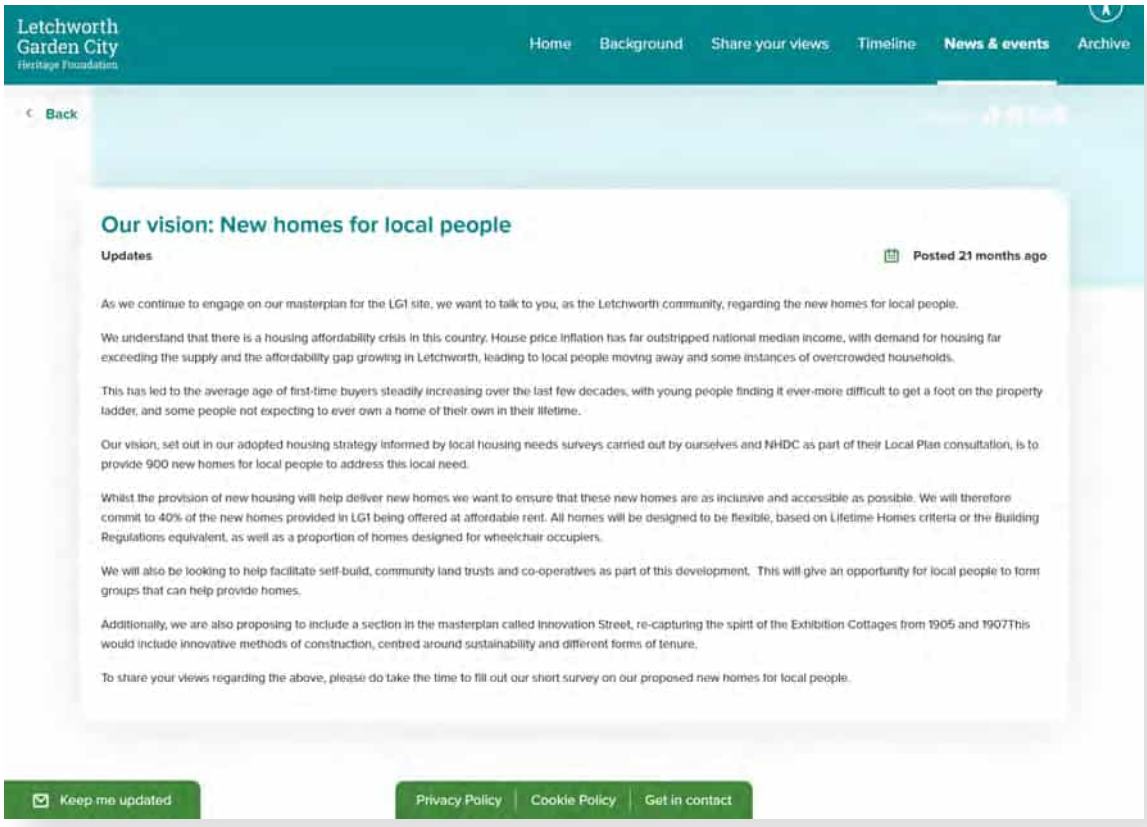

6. Appendices

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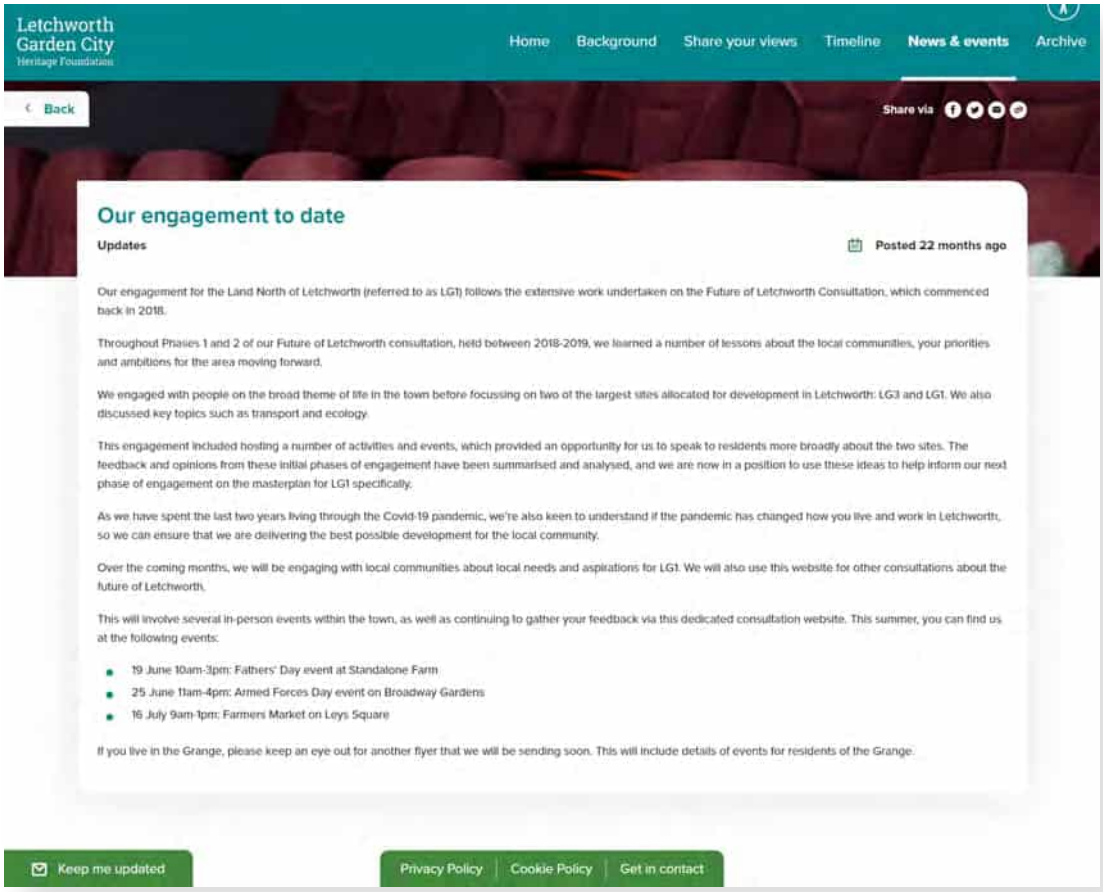

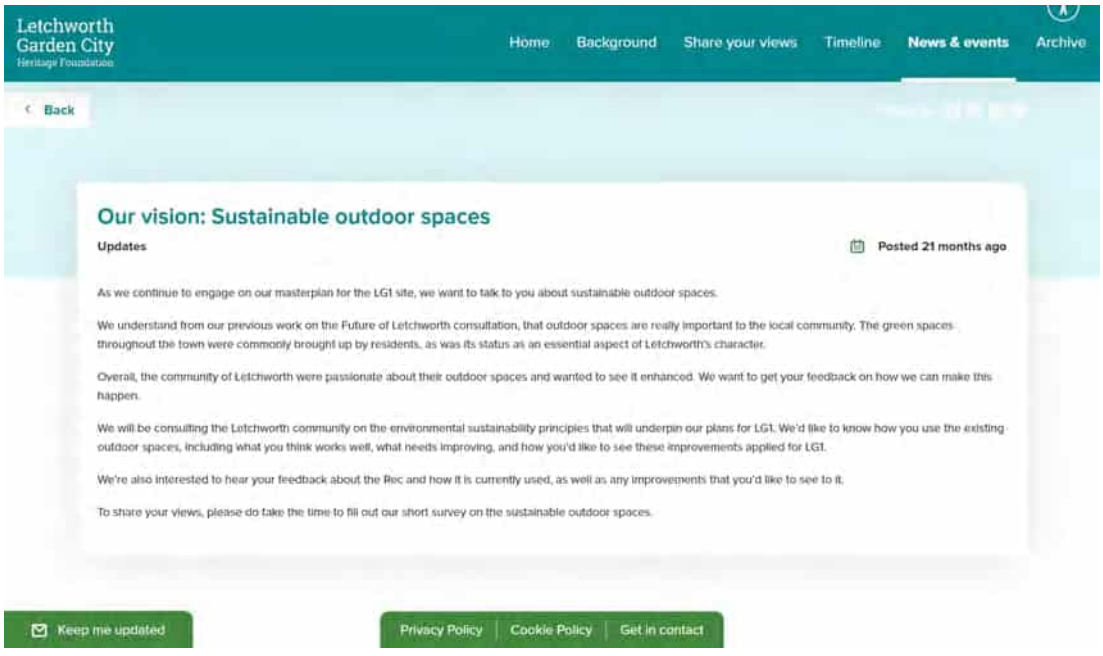

6. Appendices

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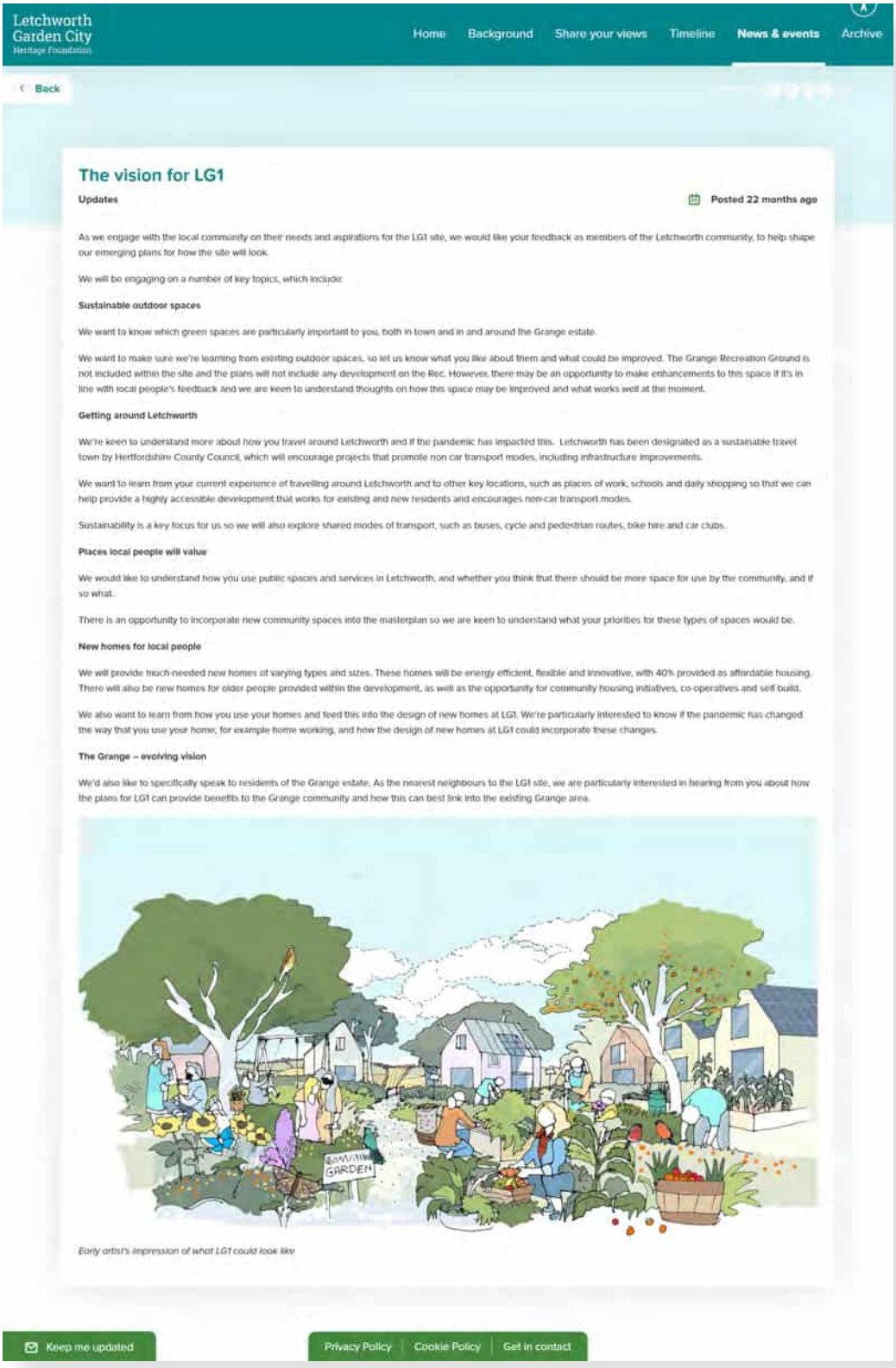

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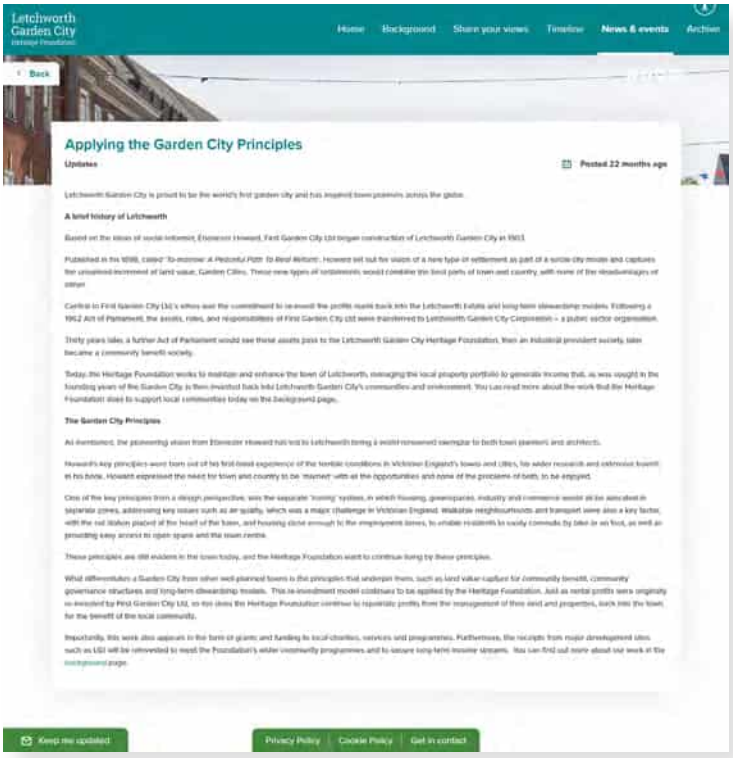

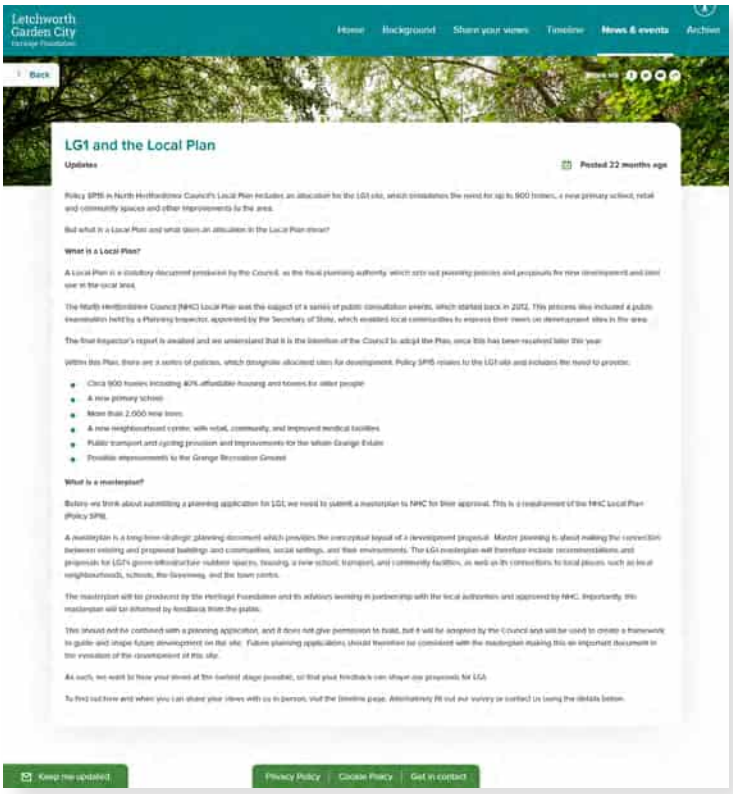

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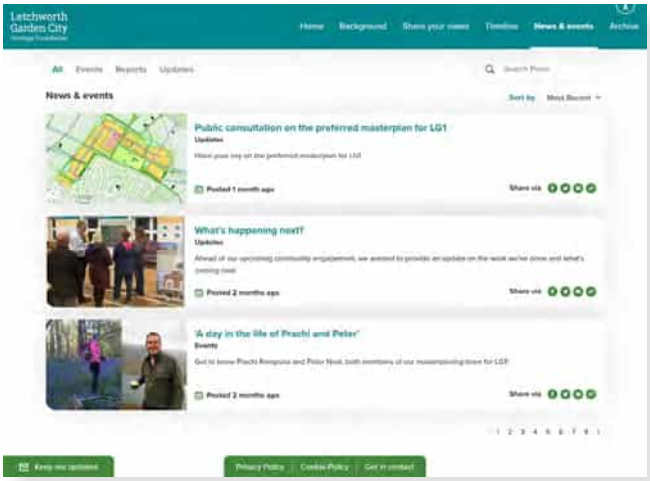

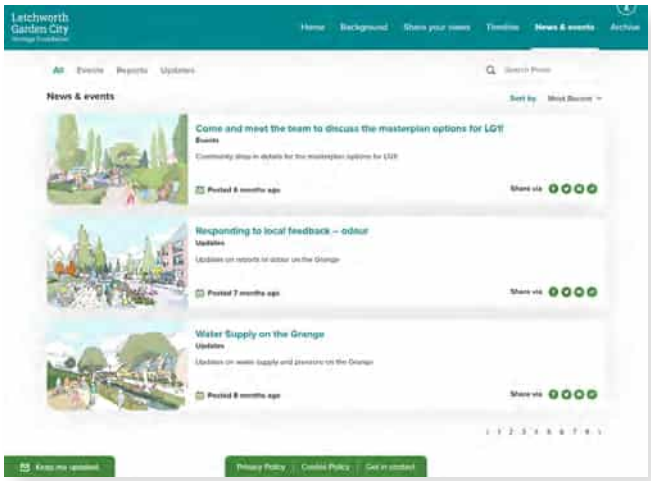

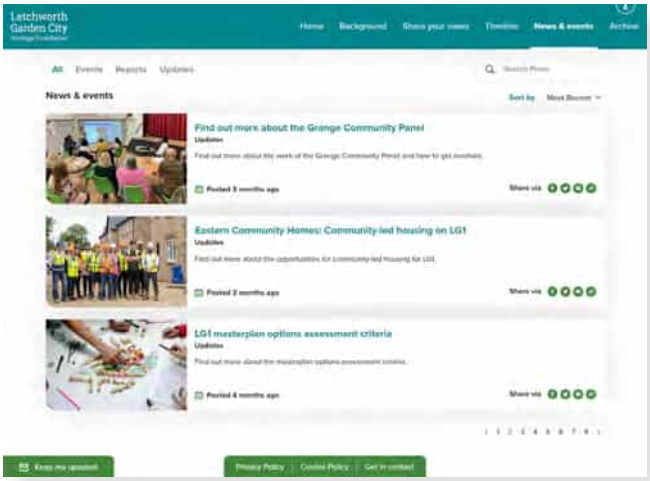

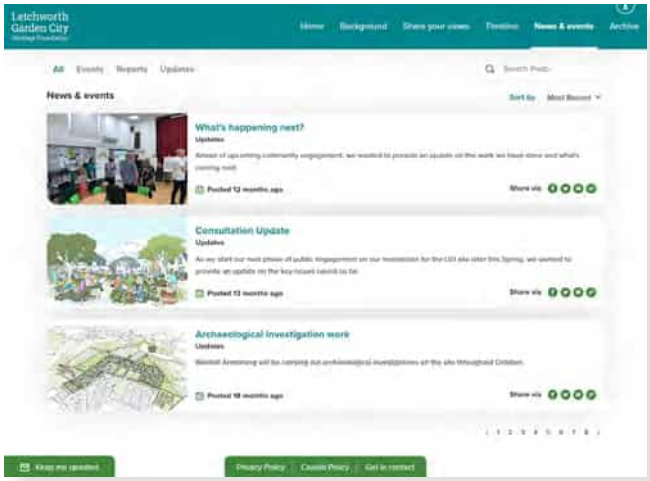

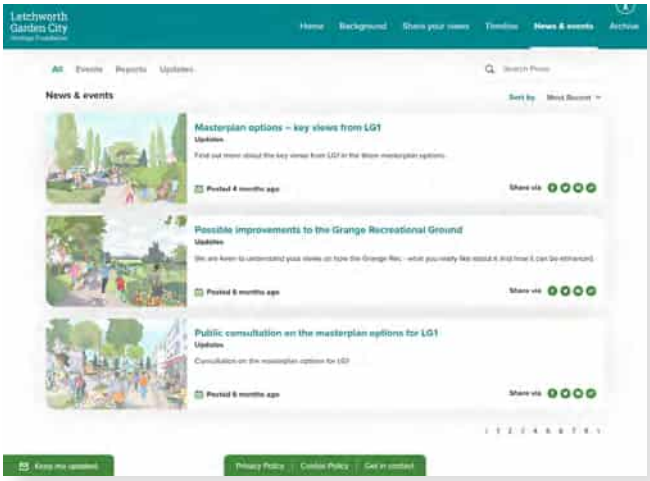

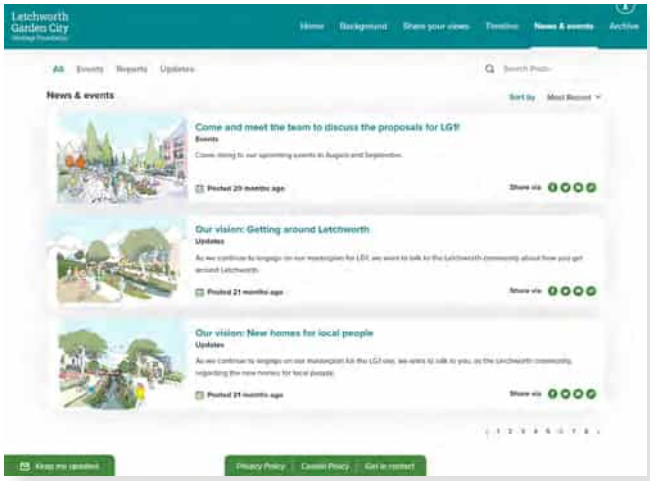

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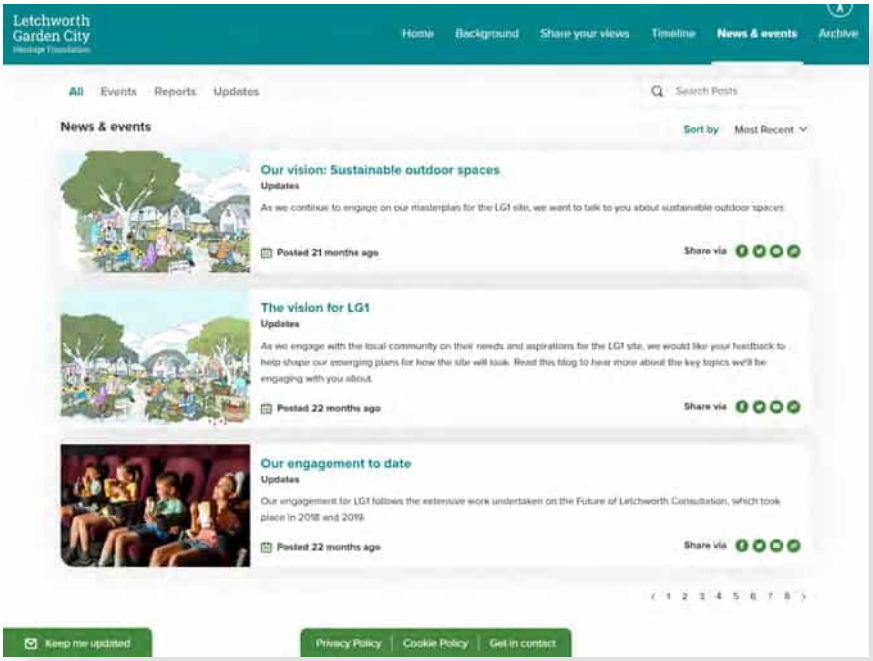
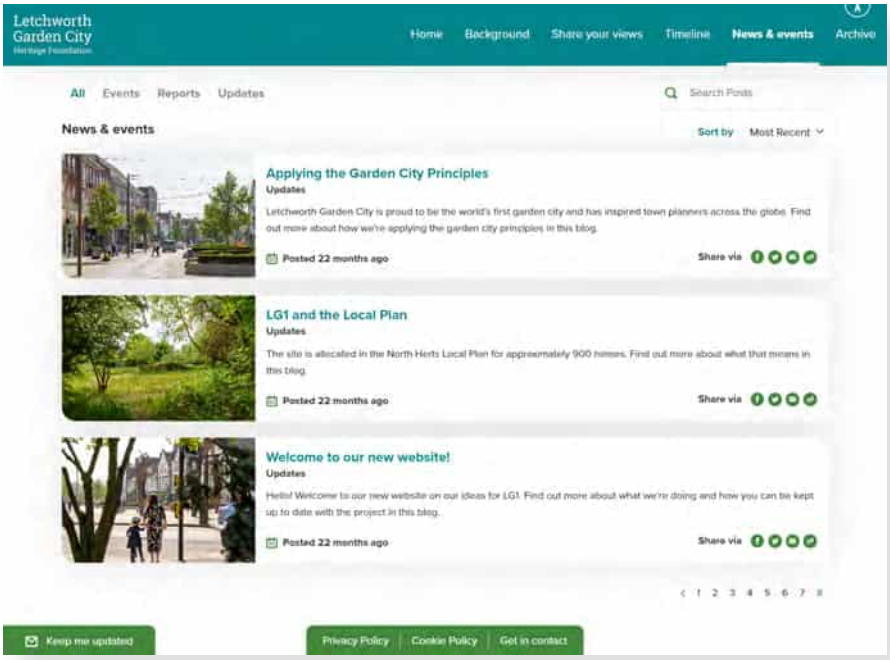




6. Appendices

LG1 early understandings consultation

Appendix B1 – Event banners

Letchworth Garden City
Heritage Foundation

'Grange in the Hedges' 2019 design competition winning concept sketch

Following our previous discussions with the local community over the last few years, Letchworth Garden City Heritage Foundation is now launching a new phase of community engagement.

We're currently starting the process that will lead to a masterplan for the site called Land North of Letchworth (which is referred to as LG1 in the North Herts Local Plan). The LG1 site is marked on the photo below. it is located to the north of Letchworth, next to the Grange Recreation Ground.

The story so far

Throughout 2018 and 2019, we undertook the Future of Letchworth Consultation. The conversations we had with residents during this time helped us to understand the needs of the community in Letchworth. We are now looking at the LG1 site in more detail.

As we have spent the last two years living through the Covid-19 pandemic, we're also keen to understand if the pandemic has changed how you live and work in Letchworth, so we can ensure that we are delivering the best possible development for the local community.

What is a masterplan?

A masterplan is a long-term planning document that sets out the strategic approach to a development site. Master planning is about making the connection between buildings, social settings, and their environments. It includes recommendations and proposals for the site's green spaces, housing, new school, transport, and community facilities, as well as its connections to local places, such as schools, the Greenway, and the town centre.

Importantly, it is shaped by feedback from the local community. We want to hear your views at the earliest stage possible, so that your feedback can shape the future of this important site.

Please speak to a member of the team or scan the QR code beside, which will direct you to our dedicated website.

To minimise the environmental impact of our engagement, we are limiting the print and distribution of information via the post. Below are some options on how you can keep up to date on the plans. Please give us a call if you require any assistance:

- www.letchworth.com/consultation
- consultation@letchworth.com
- 0800 368 9809
- Freepost Plus RUAE–BZXR–EELX, FAO KAN0352, 44-48 Paul Street, EC2A 4LB

Scan here

Or you can use the letterbox at the Heritage Foundation office:
One Garden City, Broadway, Letchworth SG6 3BF

6. Appendices

LG1 early understandings consultation

Appendix B1 – Event banners

What will we be talking about?

Letchworth Garden City Heritage Foundation

We want the ideas from local people to be at the heart of our plans for LG1. Therefore, we are particularly interested to hear your thoughts on a number of key topics.

Green spaces

We want to know which green spaces are particularly important to you, both in town and in and around the Grange estate.

We want to make sure we're learning from existing green spaces, so let us know what you like about them and what could be improved. The Grange Recreation Ground is not included within the site and the plans will not include any development on the Rec. However, there may be an opportunity to make enhancements to this space if it's in line with local people's feedback.

Getting around

We're keen to understand more about how you travel around Letchworth and if the pandemic has impacted this.

We want to learn from your current experience of travelling around Letchworth so that we can provide a highly accessible development that works for existing and new residents.

Sustainability is a key focus for us so we will also explore shared modes of transport, such as bike hire and car clubs.

Community and public spaces

We would like to understand how you use shared spaces in Letchworth, and what sorts of community facilities you think are needed in the area.

There is an opportunity to incorporate new community spaces into the masterplan so we are keen to understand what your priorities for these types of spaces would be.

New homes

We also want to learn from how you use your homes and feed this into the design of new homes at LG1. We're particularly interested to know if the pandemic has changed the way that you use your home and if there is anything we can incorporate into the design to support this.

This is not an exhaustive list, and we're keen to find out as much as possible about your priorities for this site. Your feedback will be used to help prepare our masterplan options.

6. Appendices

LG1 early understandings consultation

Appendix B1 – Event banners

Background

Letchworth Garden City Heritage Foundation

Who are we working with?

As we develop the key principles that will form part of the masterplan, we will work in partnership with a range of appointed advisors to shape the emerging masterplan for the site. This includes EcoResponsive Environments, who won the design competition in 2019, with their 'Grange in the Hedges' entry, which also won the community's vote on the shortlisted entries.

Below is a selection of the team members involved:

Letchworth Garden City Heritage Foundation	EcoResponsive Environments	Peter Neal Consulting	kanda	steer
Landowner and promoter	Masterplanner	Green infrastructure and Landscape lead	Community engagement	Sustainable transport advisor

What's next?

Over the next year we'll be undertaking lots of engagement, leading up to agreeing our masterplan with the Council. This engagement will ensure that the plans are informed by the views of the local community.

- **June-August 2022** Phase 1 — Early engagement to shape the different options for the masterplan
- **19 June** 10am-3pm — Fathers' Day event at Standalone Farm
- **16 July** 9am-1pm — Farmers Market on Leys Square
- **25 June** 11am-4pm — Armed Forces Day event on Broadway Gardens
- **Autumn 2022** Phase 2 — Community engagement on the options for the masterplan
- **Early 2023** Phase 3 — Engagement on the developed masterplan proposals
- **Spring 2023** Phase 4 — Final stage of engagement on the finalised masterplan proposals

Grange Community Panel

We are also setting up a Grange Community Panel to help positively shape the future of the development. Local residents and groups will provide local expertise, advising the Heritage Foundation and its development partners throughout the design and development of the scheme.

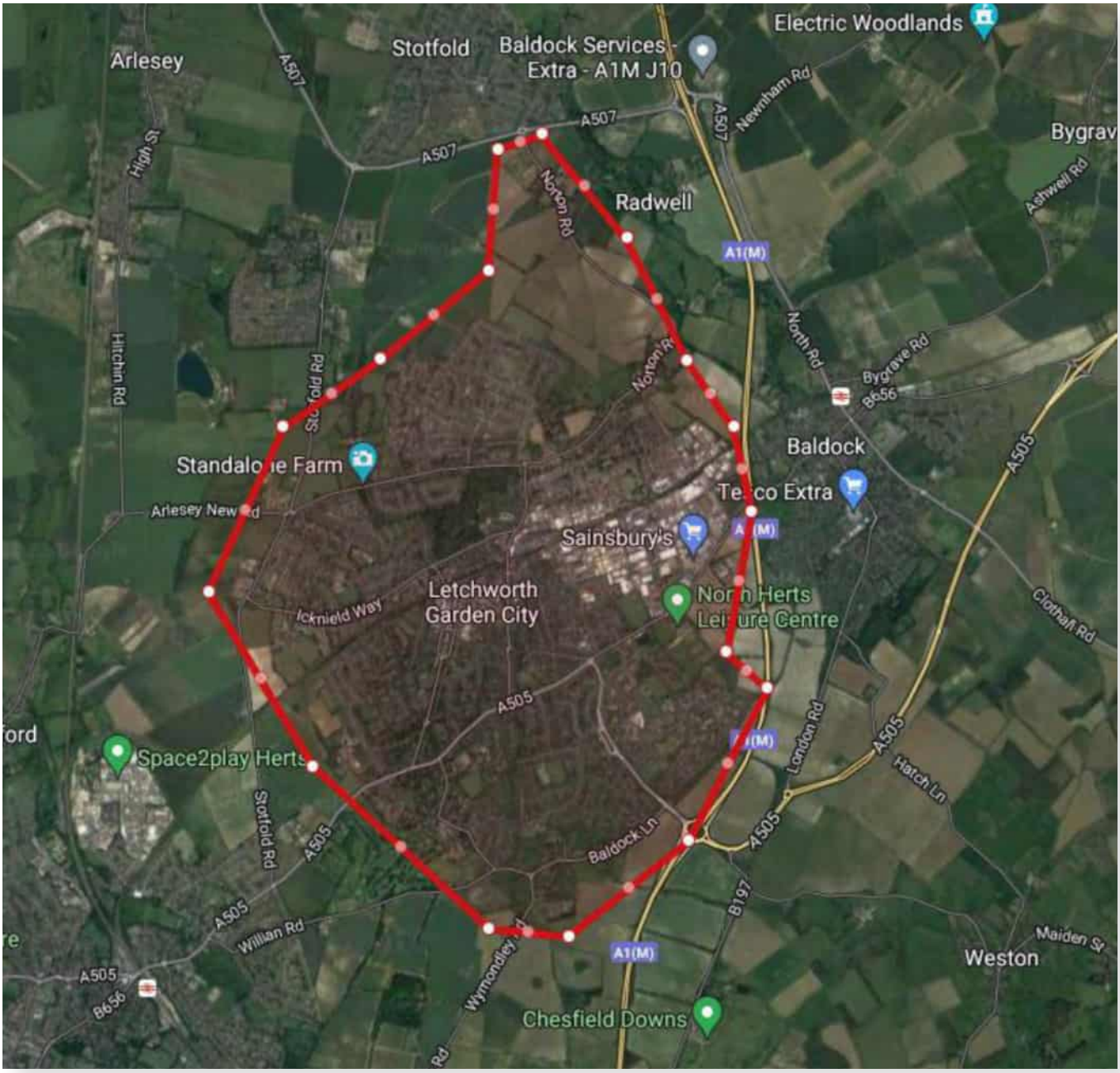
Members will receive vouchers to local shops and venues in recognition of their valuable time spent on the panel. Please let us know if you are interested in joining the panel.

If you live in the Grange, please keep an eye out for another flyer that we will be sending soon. This will include details of events for residents of the Grange.

6. Appendices

LG1 early understandings consultation

Appendix D1 – Newsletter distribution area



6. Appendices

LG1 early understandings consultation

Appendix E1 – Community flyer

Letchworth Garden City
Heritage Foundation

Dear neighbours

I am pleased to invite you to join a new panel that I am helping the Heritage Foundation to set up, which will put residents at the heart of the plans for LG1 (the parcel of land to the north of the recreation ground).

As the closest neighbours of the site, the Heritage Foundation is particularly keen to hear from residents of the Grange during the development of the masterplan for the site.

The new panel will provide an opportunity to help shape the future of the development of LG1. Local residents and groups will provide local expertise, advising the Heritage Foundation and its development partners throughout the design and development of the scheme.

Members will receive vouchers to local shops and venues in recognition of their valuable time spent on the panel.

I will be chairing the panel, and am looking forward to working alongside fellow residents of the Grange and members of local organisations to help the Heritage Foundation deliver the best masterplan for LG1.

Please get in touch using the details below to register your interest.

We look forward to working with you on this soon!

Best wishes

Helen Oliver

Scan here

consultation@letchworth.com
www.letchworth.com/consultation
0800 368 9809
Freepost address: **Freepost Plus RUAE–BZXR–EELX, FAO KAN0352, 44-48 Paul Street, EC2A 4LB**

Or use the letterbox in the Heritage Foundation office:
One Garden City, Broadway, Letchworth SG6 3BF

Invitation to Future Grange events

Letchworth Garden City
Heritage Foundation

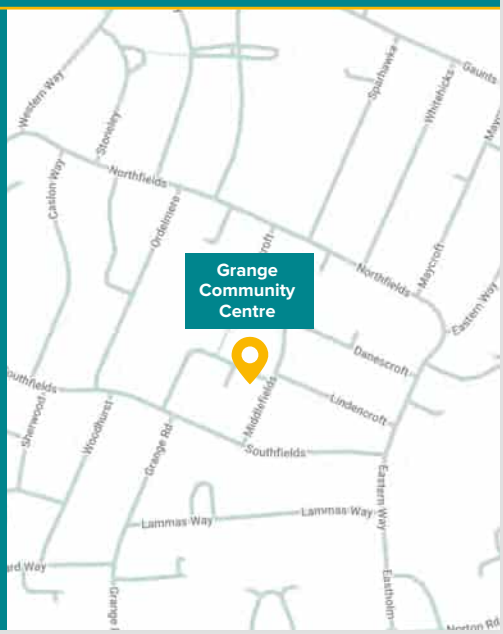
As part of our current consultation on the LG1 proposals, we are pleased to be hosting 2 joint drop-in events with Settle. This will be an opportunity to discuss the LG1 scheme as well as Settle's ideas for Pelican Way and a Grange Neighbourhood Plan.

At these events you will be able to ask questions, comment and make suggestions to the project teams.

More information on our consultation can be found at **www.letchworth.com/consultation**.

The events will be held at the Grange Community Centre on:

- **12-4pm on Saturday 2 July**
- **4-8pm on Tuesday 5 July**



6. Appendices

LG1 early understandings consultation

Appendix F1 – Flyer distribution area

6. Appendices

LG1 early understandings consultation

Appendix G1 – Social media advertisement

6. Appendices

LG1 early understandings consultation

Appendix H1 – 'Sorry We Missed You' card

Sorry we missed you!

Letchworth Garden City Heritage Foundation

We recently visited to discuss how you can help shape Letchworth Garden City Heritage Foundation's plans for Land North of Letchworth (referred to as LG1 in the North Herts Local Plan). We're currently starting the process that will lead to a masterplan for LG1.

Share your views

We want our plans to be shaped by feedback from the local community, with your ideas at the heart of our plans.

To get involved, scan the QR code: **www.letchworth.com/consultation**

Grange Community Panel

We are also setting up a Grange Community Panel to help positively shape the future of the development. Local residents and groups will provide local expertise, advising the Heritage Foundation and its development partners throughout the design and development of the scheme.

Members will receive vouchers to local shops and venues in recognition of their valuable time spent on the panel. Please let us know if you are interested in joining the panel.

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- **0800 368 9809**
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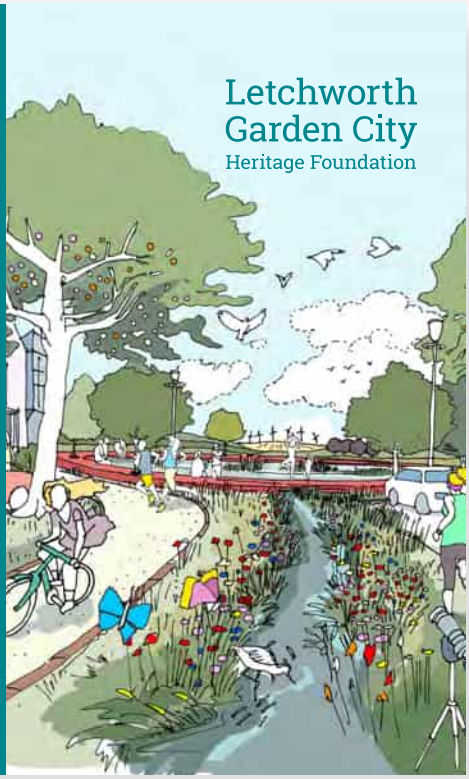

6. Appendices

LG1 early understandings consultation

Appendix I1 – Postcard

Following our previous discussions with the local community over the last few years, Letchworth Garden City Heritage Foundation is now launching a new phase of community engagement.

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Share your views

We want our plans to be shaped by the feedback we receive from the community in Letchworth, with ideas from local people at the heart of our plans.

To find out more and share your views, please scan the QR code or head to **www.letchworth.com/consultation**

consultation@letchworth.com

0800 368 9809

FAO: Freepost Plus RUAE–BZXR–EELX, FAO KAN0352, 44-48 Paul Street, EC2A 4LB

6. Appendices

LG1 early understandings consultation

Appendix J1 – Stakeholder list

Name	Role	Organisation
Cllr Elizabeth Dennis-Harburg	Leader of the Council / Chair of Employment Committee / Hitchin Walsworth Member	North Herts Council
Cllr Simon Bloxham	Letchworth Grange ward member	North Herts Council
Cllr Morgan Derbyshire	Letchworth Grange Ward Member	North Herts Council
Cllr Daniel Allen	Letchworth Grange Labour and Co-Operative / Chair of Letchworth Committee	North Herts Council
Cllr Sean Prendergast	Executive Member for Environmental Health and Housing / Letchworth South West Ward Member	North Herts Council
Cllr Judi Billing MBE	Executive Member for Community Engagement / Chair of Standards Committee / Joint Chair of Cabinet Panel on Community Engagement and Co-operative Development	North Herts Council
Cllr Amy Allen	Letchworth Wilbury Ward Member / Executive Member for Recycling and Waste Management	North Herts Council
Cllr Ian Albert	Executive Member for Finance and IT	North Herts Council
Cllr Steve Jarvis	Executive Member for Environment and Leisure	North Herts Council
Cllr Ruth Brown	Executive Member for Planning / Chair of Planning Control Committee / Royston Heath Ward Member	North Herts Council
Cllr Ian Mantle	Deputy Executive Member for Planning / Letchworth East ward member	North Herts Council
Cllr Sean Nolan	Letchworth South East Ward Member	North Herts Council
Cllr Terry Hone	Letchworth South West ward member	North Herts Council / Hertfordshire County Council
Cllr David Levett	Chair of the Overview and Scrutiny Committee / Letchworth South East Member	North Herts Council
Cllr Tom Plater	Letchworth Wilbury Ward Member	North Herts Council
Cllr Sam Collins	Joint Chair of Co-Operative Development / Hitchin Walsworth Road Ward Member / Lib Dem Parliamentary candidate	North Herts Council

6. Appendices

LG1 early understandings consultation

Appendix J1 – Stakeholder list

Name	Role	Organisation
Cllr Keith Hoskins MBE	Deputy Executive Member for Community Engagement / Chair of Finance / Audit & Risk Committee / Hitchin Highbury Ward Member	North Herts Council
Cllr Adem Ruggiero-Cakir	Deputy Executive Member for Environment and Leisure / Letchworth South East Ward Member	North Herts Council
Cllr Tamsin Thomas	Letchworth East Ward Member	North Herts Council
Cllr Val Bryant	Chair of Planning Control Committee	North Herts Council
Cllr Tom Tyson	Vice Chair of Planning Control Committee	North Herts Council
Cllr Alistair Willoughby	Planning Control Committee Member and Deputy Executive for Housing and Environmental Health	North Herts Council
Cllr Sean Nolan	Planning Control Committee Member / Letchworth South ward member	North Herts Council
Cllr Raj Bhakar	Planning Control Committee Member	North Herts Council
Cllr Terry Tyler	Planning Control Committee Member / Chair of Finance and Audit Committee	North Herts Council
Cllr Ian Moody	Planning Control Committee Member	North Herts Council
Cllr Tony Hunter	Planning Control Committee Member	North Herts Council
Cllr Tina Bhartwas	Letchworth North Division Member	Hertfordshire County Council Councillor
Prof Jim McManus	Director of Public Health	Hertfordshire County Council
Rt Hon Sir Oliver Heald QC MP	MP for North East Hertfordshire	House of Commons
David Kahn	Chairman	Altro Ltd
Paul Caller	Group Director	Autoglym
Rick Wilmott	Group Chief Executive	Wilmott Dixon
Robert Rand	Farming lead	Hatchpen
Tom Williams	Managing Director	Maydencroft
Gary Wilkinson	Chief Executive Officer	Redwood Bank

6. Appendices

LG1 early understandings consultation

Appendix J1 – Stakeholder list

Name	Role	Organisation
Rev Jess McLaren	Vicar	St Thomas's Church
Sue Plummer	Chief Executive	Garden House Hospice
Ruth Coleman	Lead Family Support Worker	Letchworth Partnership of Schools
Rt. Hon. Paul Burstow	Independent Chair	Hertfordshire Health and Wellbeing Board
Elizabeth Ellis	Head Teacher	Fearnhill School
Claire Logan	Head Teacher	Northfields School
Lucy Miles	Head Teacher	Highfield School
Melissa Peacock	Head Teacher	Hillshott Infant School
Ms Chelsea Atkins	Head Teacher	Wilbury Junior School
Alex Evans	Head Teacher	Pixmore Junior School
Mrs A Collins	Head Teacher	Icknield Infant School
Elaine Close	Head Teacher	Stonehill School
Mrs J Petitt	Head Teacher	Lordship Farm School
Emma-Kate Henry	Head Teacher	St Christopher School
Mr A Brown	Head Teacher	Norton St Nicholas School
Jane Perry	Head Teacher	St Thomas More School
Sean English	Head Teacher	Garden City Academy
Amanda Hopwood	Head Teacher	The Grange Academy
Jenny Stone	Head Teacher	Fairfield Park School
Kit Davies	Chief Executive	North Hertfordshire College
Bronwen Goulding	Head Teacher	St Francis' College
Alice Courtney-Duguid	Neighbourhood Team Leader	settle (previously known as North Hertfordshire Homes)

6. Appendices

LG1 early understandings consultation

Appendix J1 – Stakeholder list

Name	Role	Organisation
Andrew Mills	Service Manager Grounds	North Herts Council
Anthony Roche	Chief Executive	North Herts Council
Claire Morgan	Community Engagement Team Leader	North Herts Council
Nigel Smith	Planning Policy Manager	North Herts Council
Tom Allington	Principal Planning Officer - Major Projects	North Herts Council
Ian Fullstone	Service Director - Regulatory and Conservation	North Herts Council
Simon Ellis	Development and Conservation Manager	North Herts Council
Helen Flage	Strategic Planning and Implementation	North Herts Council
Anthony Collier	Local Plan and Strategic Development	Hertfordshire County Council
Roger Flowerday	Highways Head of Profession - Local Development Plans and Strategic Development	Hertfordshire County Council
Dr Linda Sheridan	Chair	Herts Community NHS Trust
Sally Orr	Head of Early Years and Childhood Support	Hertfordshire County Council
Chantal Lommel	Manager of Hertfordshire Adult and Family Learning Service	Hertfordshire County Council
David Conrad	Deputy Director of Public Health	Hertfordshire County Council
Elaine Fox	Chair	Letchworth Arts & Leisure Group
Alison Shersby		Growing People
Sue Lines	Trustee	Wilbury Community Forum
Brian Burke	President	Letchworth RFC
Christopher Lunnon		Letchworth Cricket Club
Simon Efford	Chairman	Letchworth Eagles FC

6. Appendices

LG1 early understandings consultation

Appendix J1 – Stakeholder list

Name	Role	Organisation
Jim Abraham	General Manager	Letchworth Golf Club
Julie Fewings	President	Letchworth Hockey Club
Sandra Bovell	Chairperson	Letchworth Caribbean Harmony Group
George Luis	Lead Trainer	Box Cleva
Sweenie Gunasekera	Secretary	North Herts 50 Plus Forum
Sarah Wren MBE	Chief Executive	Herts Independent Living Services
Jonny Whitehead	Chief Executive	Herts Young Homeless
Sue Williams	Scheme manager	Kingfisher Dementia Club
Jackie Nealon	Founder	Jackie's Drop-in
Eric Daugless	President	British Legion Letchworth
Jacquie Gascoigne	Employment & Skills Co-ordinator	Youth Connexions Herts
Rosie Waters	Chief Executive Officer	Citizens Advice North Hertfordshire
Stephen Boyce	Interim Chair	Heritage Lottery Fund East of England
Helen Gray	Foundation Director	Hertfordshire Community Foundation
Maureen Kell	Warden	Wymondley Wood Scout And Guide Centre
Wendy Tierney	District Commissioner	Letchworth & Baldock District Scouts

6. Appendices

LG1 early understandings consultation

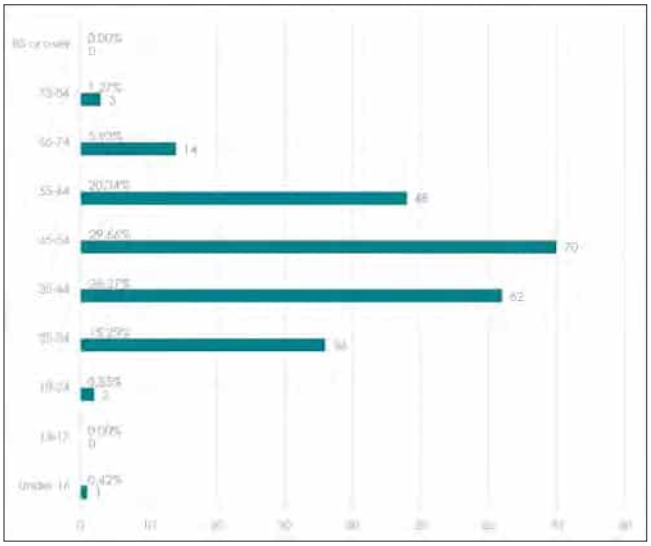
Appendix J1 – Stakeholder list

Name	Role	Organisation
Hannah Morgan-Gray	Chief Executive Officer	North Herts CVS
Paul Reeve	Chief Executive	Into Film Festival
Patricia Saunders	Lead / BID Manager	Food and Drink Festival / Beer and World Food Festival / Letchworth Garden City Business Improvement District
Eddie Curran	BNI Lead	Senior Consultant with Crawford Drake Financial Consultants
Trevor Saunders	Chair	Housing Development Committee
Jeremy Bishop	Chief Executive	Hertfordshire Chamber of Commerce
Neil Hayes	Executive Director	Herts Local Economic Partnership
Peter Willcox	Trustee	Transition Town Letchworth
Fiona Howie	Chief Executive	Town and Country Planning Association
Maureen Hersee MBE	Chair	Letchworth District Gardeners Association
Gavin Cansfield	Chief Executive	Settle (previously known as North Hertfordshire Homes)
John Welch	Chief Executive	First Garden City Homes
Helen Cairns	Supported Housing Manager	First Garden City Homes
Jon Thurlow	Resident Relations & Comms Manager	First Garden City Homes

6. Appendices

LG1 early understandings consultation

Appendix K1 – Demographics

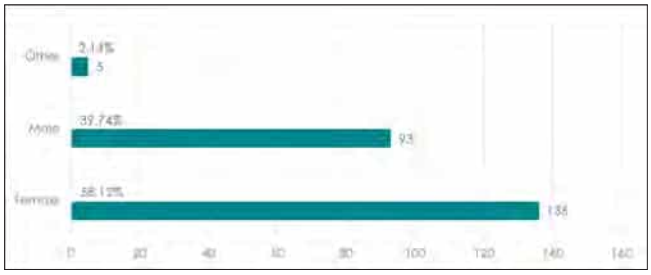


4.318.
Question six was designed to establish the demographics of respondents, this highlighted that the majority of people that participated in the survey were between 35-64 years old, making up a total of 76.25%.

4.319.
Those aged under 24 and those aged above 85 were the least well represented in the feedback obtained so far, with the majority of respondents being aged between 45-54, totalling almost 30%.

4.320.
This indicates that the team should continue engaging with schools and local young people but should also look to engage further with the significant number of older residents who live in Letchworth.

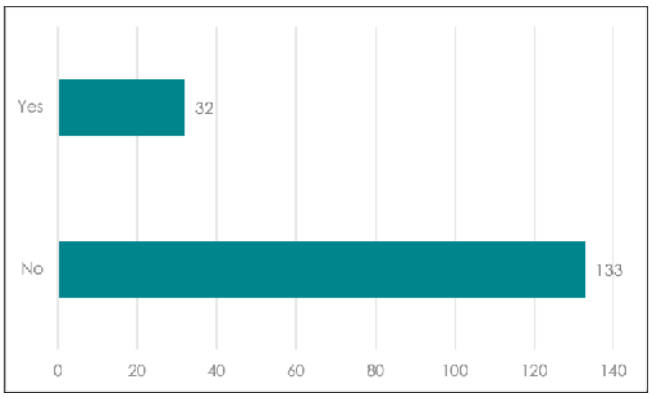
4.321.
Question 7: What gender are you?



4.322.
Question six was to establish the demographics of respondents to see if responses were representative of the local community. Overall, there were a significant number more responses from those who identified as female rather than male.

4.323.
This is not in line with the North Hertfordshire population which includes 51% of people who identify as female and 49% who identify as male. The team will consider further why there is a disparity in terms of those engaging with this phase of community engagement.

4.324.
Question 8: Is your gender identity different to the sex you were assumed to be at birth?



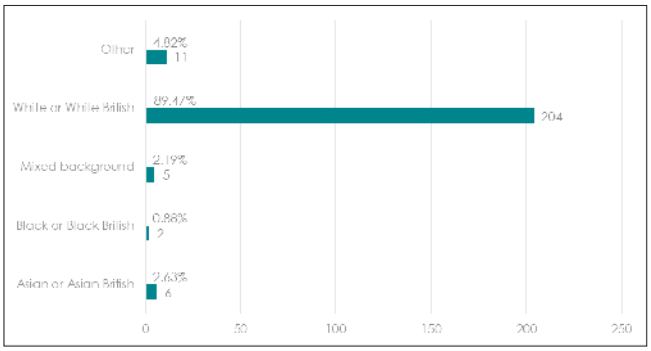
6. Appendices

LG1 early understandings consultation

Appendix K1 – Demographics

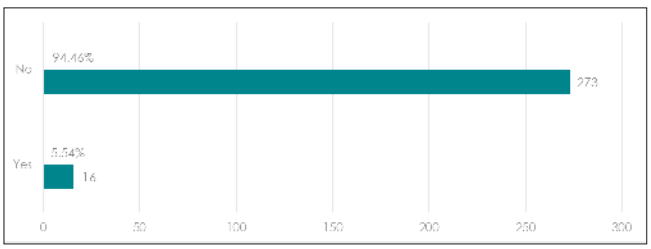
4.325.
There is not enough robust data to accurately calculate what percentage of people in the UK are transgender, although the UK government has previously estimated that around 1% of people are trans. This data is broadly in line with that collected in the other surveys.

4.326.
Question 9: How would you describe your ethnic origin?



4.327.
Question nine was also to establish the demographics of respondents to see if responses were representative of the local population. The majority of respondents identified as being white or white British, which is largely representative of the population of North Hertfordshire, where the population is 89.5% white. However, significantly more people identified their ethnic origin as 'other' than the North Hertfordshire average (0.4%).

4.328.
Question 10: Do you consider yourself to be disabled?

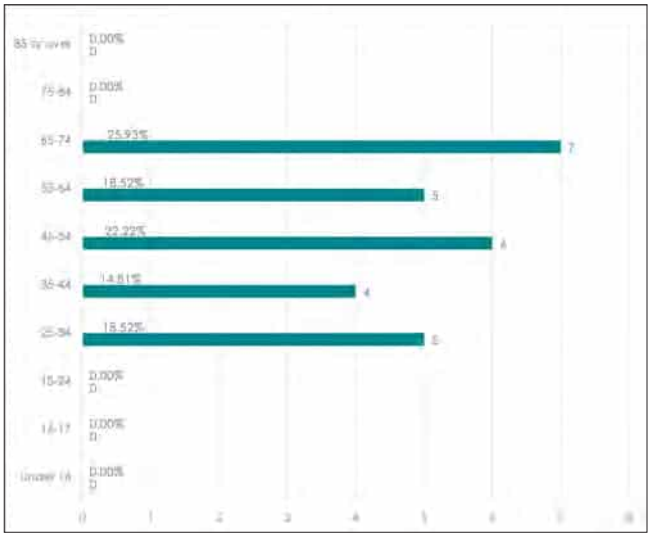


4.329.
Question ten was designed to establish the demographics of respondents and to see if this was representative of the local demographic. As only 5.54% of respondents considered themselves to be disabled, this is not representative of North Hertfordshire, where the last census recorded that 15.1% of people had a disability.

4.330.
The team will continue to engage with local stakeholder groups, including those that advocate for people with disabilities. However, the team will also consider adding information to this question in the future, highlighting the definition of a disability that is used within the census so that people can use this to make a judgment on whether they have a disability.

Survey 2 – 'Share your views: what we have heard to date'

4.331.
Question 6: What is your age group?



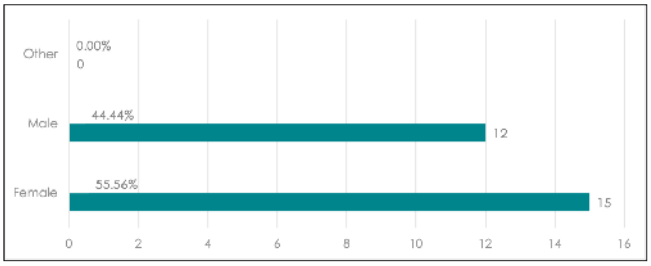
6. Appendices

LG1 early understandings consultation

Appendix K1 – Demographics

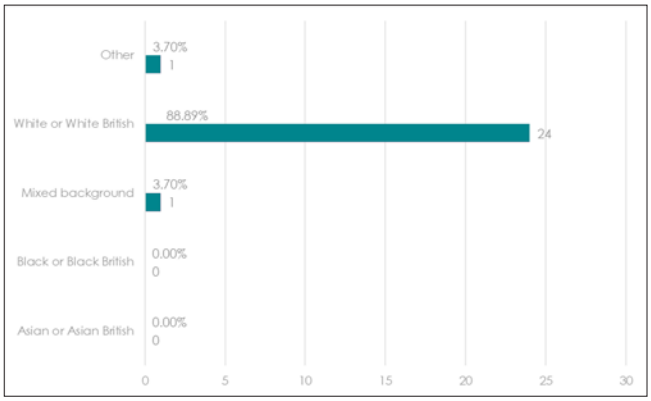
4.332.
Question six was to establish the demographics of respondents to see if responses were representative of the local community. All respondents were between 25 and 74. As highlighted above, the team will continue engaging with local schools and young people and consider how best to engage with older residents in the local area.

4.333.
Question 7: What gender are you?



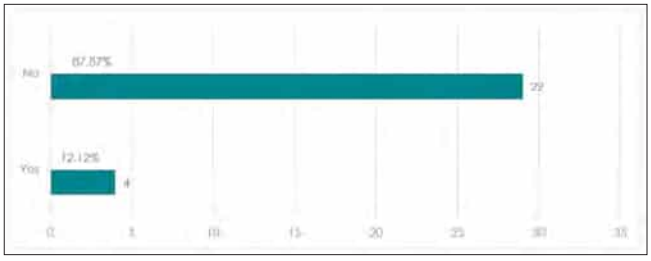
4.334.
Question seven was to establish the demographics of respondents to see if responses were representative of the local community. 55% of respondents identified as female and 44% identified as male. This is slightly out of line with the North Hertfordshire population which includes 51% of people who identify as female and 49% who identify as male.

4.335.
Question 8: How would you describe your ethnic origin?



4.336.
Question eight was also to establish the demographics of respondents to see if responses were representative of the local community. The majority of respondents identified as being white or white British, this is broadly in line with the local population, although again a significant proportion of people selected their ethnic origin as 'other'. We will consider whether further clarification is required for this question.

4.337.
Question 9: Do you consider yourself to be disabled?



4.338.
Question nine was designed to establish the demographics of respondents and to see if this was representative of the local demographic. As 12.12% of respondents considered themselves to be disabled, this is more representative of North Hertfordshire than the responses to Survey 1.

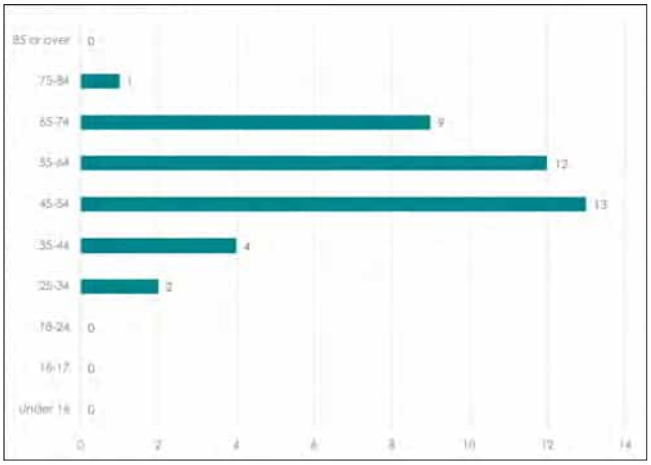
6. Appendices

LG1 early understandings consultation

Appendix K1 – Demographics

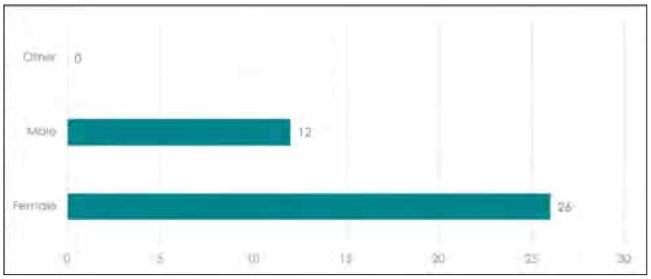
Survey 3 – 'Share your views: sustainable outdoor spaces'

4.339.
Question 4: What is your age group?



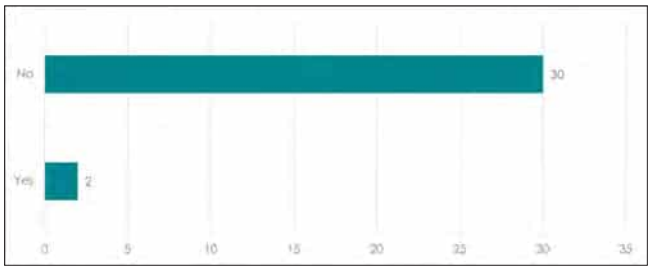
4.340.
Question four was to establish the demographics of respondents to see if responses were representative of the local community. All respondents were between 25 and 84. As earlier highlighted, the team will continue to engage with schools and younger generations in Letchworth to ensure that everyone within the local community has an opportunity to feed into the development of the proposals.

4.341.
Question 5: What gender are you?



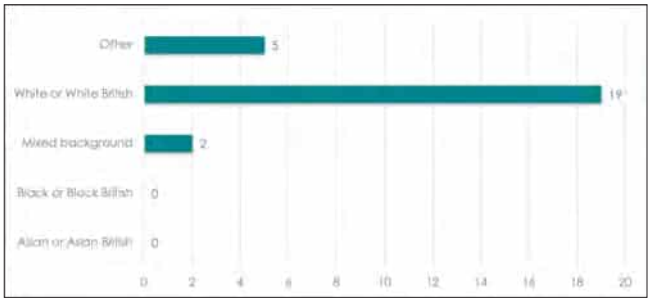
4.342.
Question five was to establish the demographics of respondents to see if responses were representative of the local community. A total of 68.42% respondents identified as female and 31.58% identified as male. As mentioned earlier, this is not in line with the North Hertfordshire population which includes 51% of people who identify as female and 49% who identify as male. The team will consider further why there is a disparity in terms of those engaging with the engagement process.

4.343.
Question 6: Is your gender identity different to the sex you were assumed to be at birth?



4.344.
Question six was also to establish the demographics of respondents to see if responses were representative of the local community. This indicates that the majority of people identify with the gender they were assumed to be at birth.

4.345.
Question 7: How would you describe your ethnic origin?



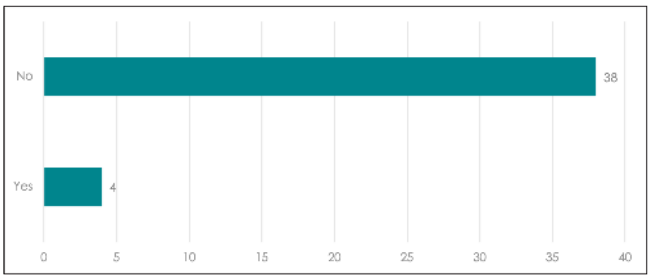
6. Appendices

LG1 early understandings consultation

Appendix K1 – Demographics

4.346.
Question seven was to establish the demographics of respondents to see if responses were representative of the local community. In summary, the majority of respondents identified as being white or white British (73.08%), this is broadly in line with the local population, although again a significant proportion totalling (19.23%) of people selected their ethnic origin as 'other'. The project team will consider if further clarification is required for this question.

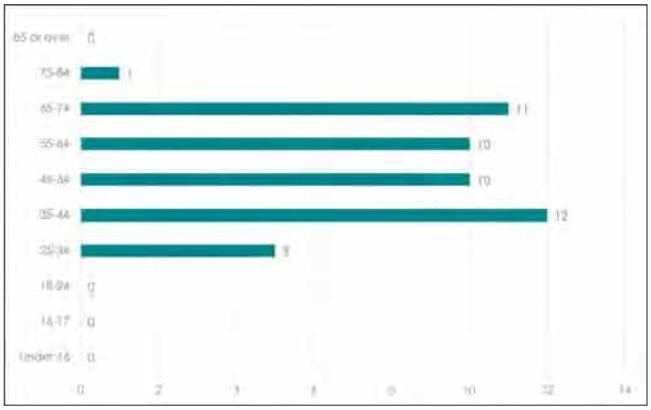
4.347.
Question 8: Do you consider yourself to be disabled?



4.348.
Question eight was designed to establish the demographics of respondents and to see if this was representative of the local demographic. As earlier mentioned, the team will continue to engage with local stakeholder groups, including those that advocate for people with disabilities to ensure that the community engagement process is as representative as possible.

Survey 4 – 'Share your views: Getting around Letchworth'

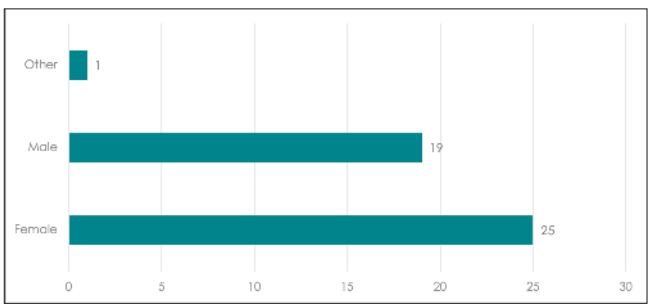
Question 6: What is your age group?



4.349.
Question six was designed to establish the demographics of respondents, this highlighted that the majority of people that participated in the survey were between 35-64 years old, making up a total of 65.31%.

4.350.
However as previously highlighted, the project team are cognisant that those aged under 24 and those aged above 74 were the least well-represented in the survey and will be looking to ensure that engagement with these groups is pursued in the future.

4.351.
Question 7: What gender are you?



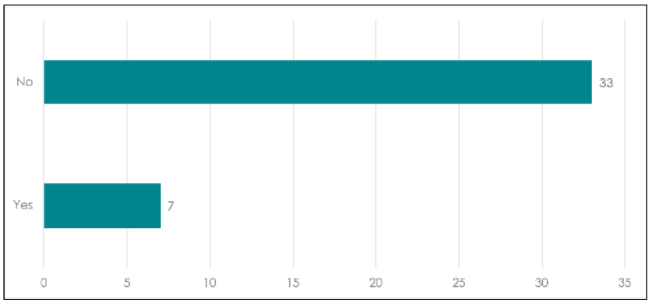
6. Appendices

LG1 early understandings consultation

Appendix K1 – Demographics

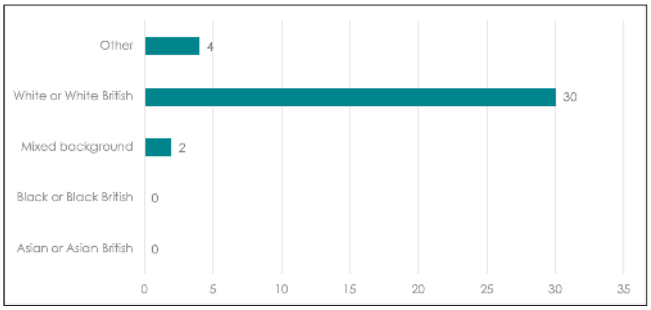
4.352.
Question seven was to establish the demographics of respondents to see if responses were representative of the local community. Overall, there was a more representative balance of respondents that identified as female and male in this survey compared to surveys one, two and three.

4.353.
Question 8: Is your gender identity different to the sex you were assumed to be at birth?



4.354.
Question eight was to establish the demographics of respondents to see if responses were representative of the local community. These results are largely in keeping with the results from other surveys.

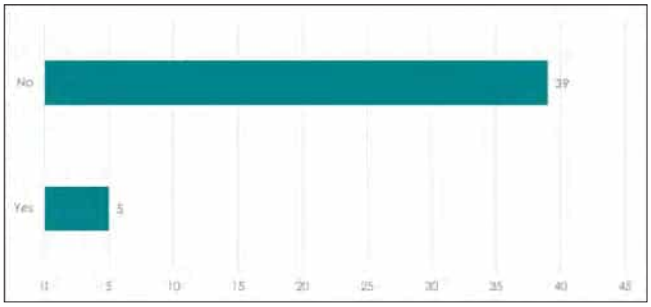
4.355.
Question 9: How would you describe your ethnic origin?



4.356.
Question nine was also to establish the demographics of respondents to see if responses were representative of the local population. A total of 61.22% of respondents identified as being white or white British, which is broadly representative of the population of North Hertfordshire, where the population is 89.5% white.

4.357.
Significantly, a total of 8.16% of respondents identified their ethnic origin as 'other', notably more than the North Hertfordshire average of 0.4% of the population.

4.358.
Question 10: Do you consider yourself to be disabled?



4.359.
Question ten was designed to establish the demographics of respondents and to see if this was representative of the local demographic. This indicates that 8.11% of respondents considered themselves to be disabled. As highlighted above, this is not representative of North Hertfordshire. However, the project team are conscious that those with disabilities have been underrepresented and will be exploring opportunities to engage more widely.

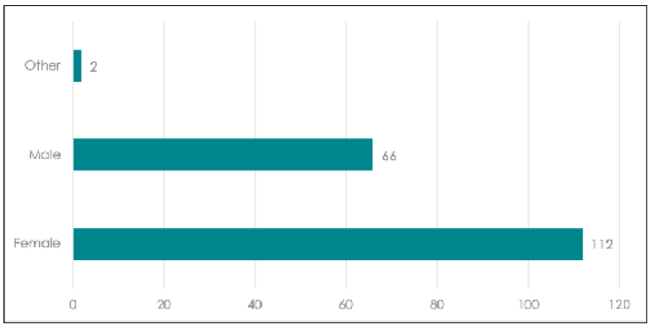
Survey 5- 'Share your views: new homes for local people'

6. Appendices

LG1 early understandings consultation

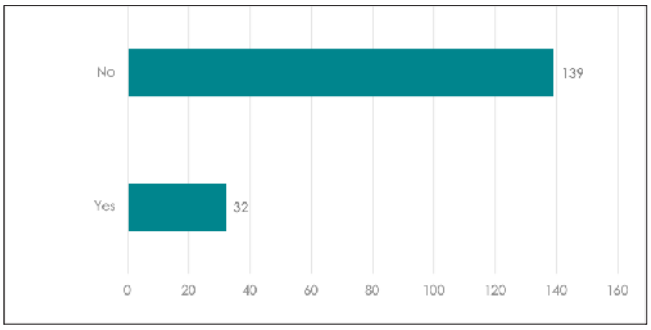
Appendix K1 – Demographics

4.360.
Question 7: What gender are you?



4.361.
Question seven was to establish the demographics of respondents to see if responses were representative of the local community. Overall, 62.22% of respondents identified as female and 36.67% identified as male. Once again this is not in line with the North Hertfordshire population and the project team will consider further why there is a disparity.

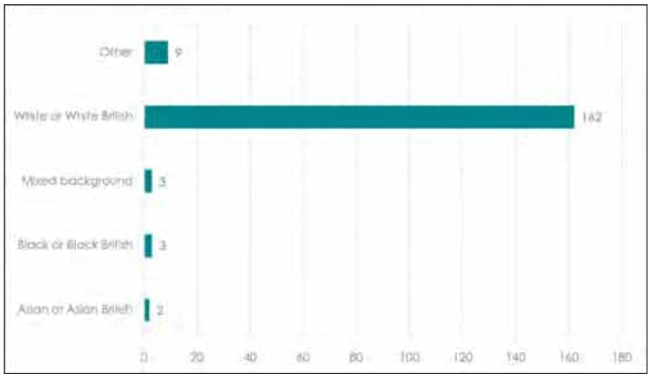
4.362.
Question 8: Is your gender identity different to the sex you were assumed to be at birth?



4.363.
Question eight was to establish the demographics of respondents to see if responses were representative of the local community. These results are largely in keeping with the results from other surveys of around 70% of respondents saying that their gender identity was not different to that at birth.

4.364.
However, as earlier mentioned there is not enough robust data to accurately estimate the UK transgender population locally or nationally.

4.365.
Question 9: How would you describe your ethnic origin?



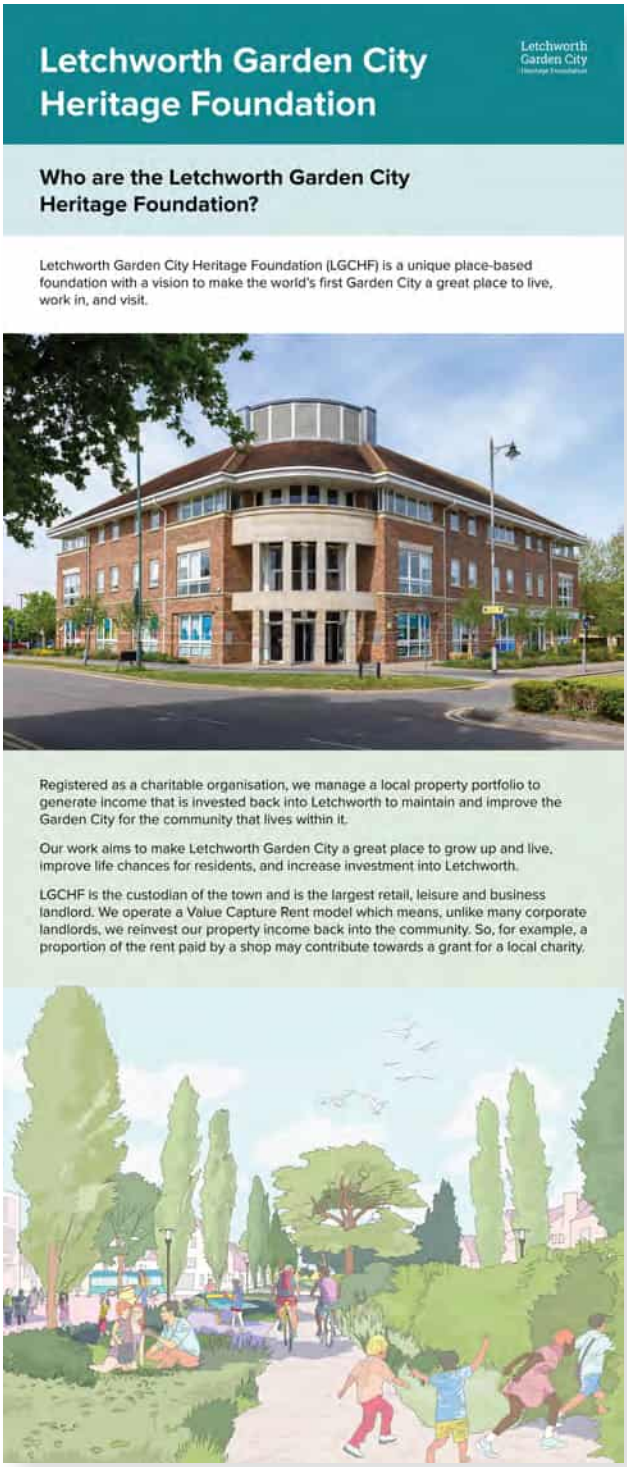
4.366.
Question nine was also to establish the demographics of respondents to see if responses were representative of the local population. A total of 90.90% of respondents identified as being white or white British, which is largely representative of the population of North Hertfordshire, where the population is 89.5% white.

4.367.
Notably, this survey saw responses from a broader range of ethnic origins represented, including Asian or Asian British (1.12%), Black or Black British (1.68%), Mixed background (1.68%) and those identifying as other 5.03%.

6. Appendices

LG1 masterplan options consultation

Appendix A2 – Event Banners



6. Appendices

LG1 masterplan options consultation

Appendix A2 – Event Banners

6. Appendices

LG1 masterplan options consultation

Appendix A2 – Event Banners

Creating masterplan options for LG1

Letchworth Garden City

What is a masterplan?

Before we think about submitting a planning application for LG1, we need to agree a high-level masterplan with North Herts Council (NHC). This is a requirement of the North Herts Local Plan and also part of LGCHF's preferred approach to enable community participation in the planning of the site.

A masterplan is a long-term planning document which provides a conceptual layout of a development proposal. This sets the guiding principles for a scheme. Once approved, all future planning applications will have to align with this framework.

Masterplanning is about taking all of the policy requirements, place-making principles, technical constraints and opportunities, commercial considerations and community feedback, and creating a spatial solution which balances all of these beautifully and functionally. For LG1, we have been led at all times by the landscape of the site and by the Garden City Design Principles upon which the town is based.

The masterplan will be produced by the Heritage Foundation and approved by NHC. It is not a planning application, and it does not give permission to build, although future planning applications should be consistent with it. It will be agreed with the council and will guide the future of the development.

Importantly, as a result of LGCHF's approach, it is informed by feedback from the public. We want to hear your views at the earliest stage possible, so that your feedback can shape our proposals for LG1.

Masterplan optioneering and the assessment criteria

Over the past year, we have reflected on all the conversations and feedback we have received from the local community, ongoing background studies, commercial advice and statutory consultees, and have produced many proposals, which have now been refined into three masterplan options.

These options have been considered against the following criteria:

Green infrastructure - provide a range of green spaces and landscaping across the site, with new activity spaces for future and existing residents to enjoy

Movement and transport - promote and focus on the provision of new sustainable transportation methods by providing new pedestrian and cycle routes across LG1, improving accessibility

Land use and urban design – provide a new school, retail, community centre, mobility hubs whilst creating a new, active and attractive local town centre that respects its surroundings

Value capture – making best use of the land to provide future investment into Letchworth

Assessing all options against these criteria ensures that consideration of the options is fair and objective, whilst also underpinning the agreed principles for LG1.

The next step is to refine these options down into a preferred masterplan. We need your help and local experience to make this the best it can be.

Thank you

Letchworth Garden City

Thank you for attending our event on the masterplan options for the LG1 site. We hope that you found the information on display useful.

If you have any questions or would like assistance with any of the information, please do speak to a member of the team present.

Provide your feedback

To ensure that your input and thoughts are considered into the finalised masterplan for LG1, please do provide your feedback on the options that have been presented. In particular, we would welcome your feedback on what you like and dislike about the options and what you feel could be improved.

Next steps

Following the feedback, we will look to develop one single masterplan in more detail which responds to the feedback provided. This will then be consulted on again and finalised before it is submitted to North Herts Council.

Late 2023 – Early 2024	Spring 2024	Summer 2024	Autumn 2024
Ongoing development of preferred masterplan option	Responding to feedback and finalising preferred masterplan	Submit preferred masterplan to North Herts Council	North Herts Council reviews masterplan

You can stay up to date by signing up to our mailing list on our consultation website below.

Contact us!

If you would like to get in touch with the team, please do not hesitate to contact us on the contact details below:

consultation@letchworth.com
0800 368 9809
www.letchworth.com/consultation

Scan here

6. Appendices

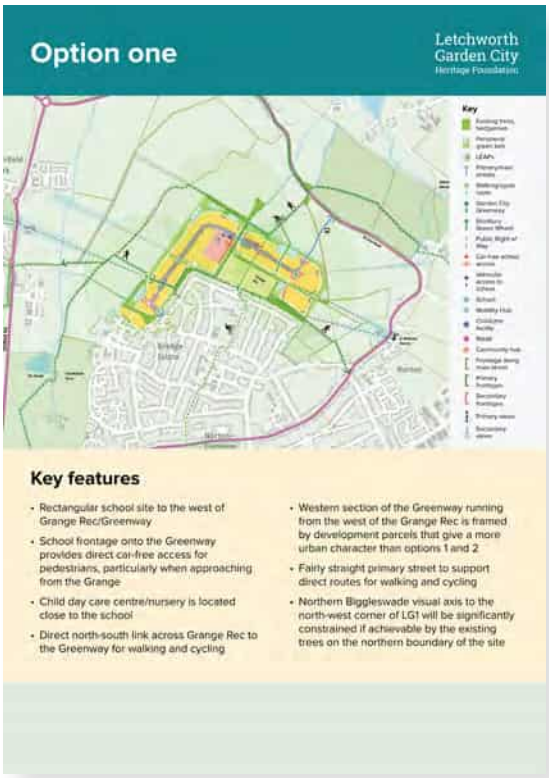
LG1 masterplan options consultation

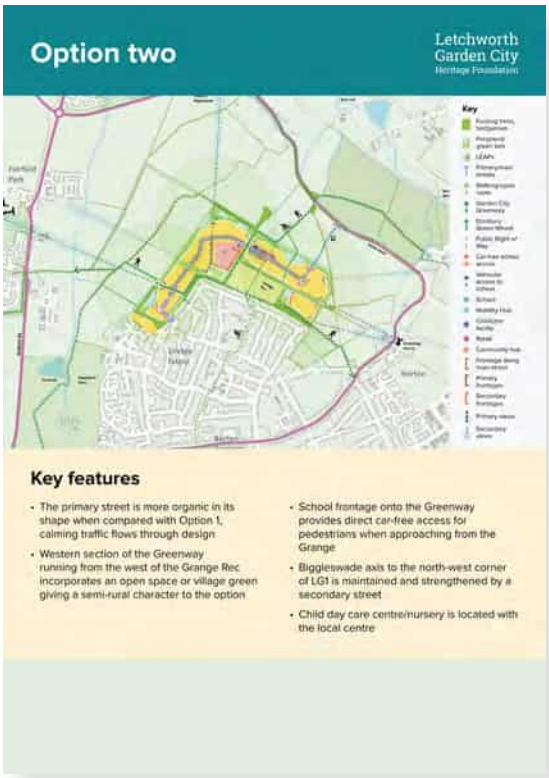
Appendix A2 – Event Banners

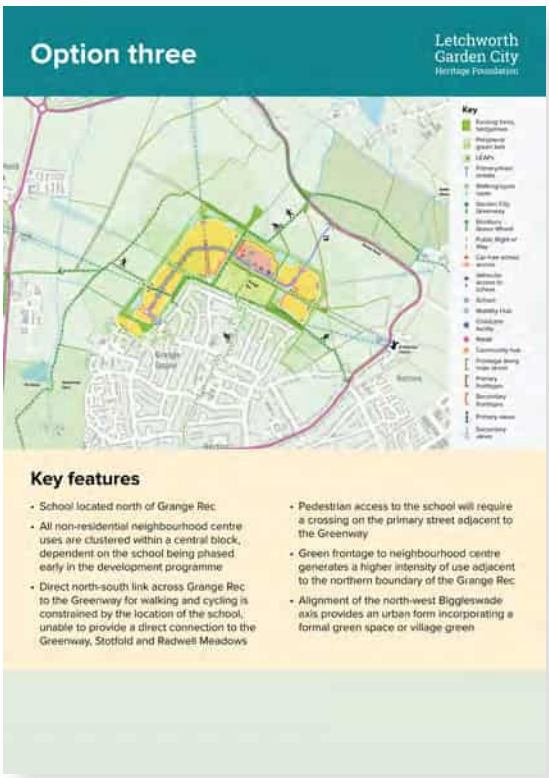
6. Appendices

LG1 masterplan options consultation

Appendix B2 – Exhibition boards



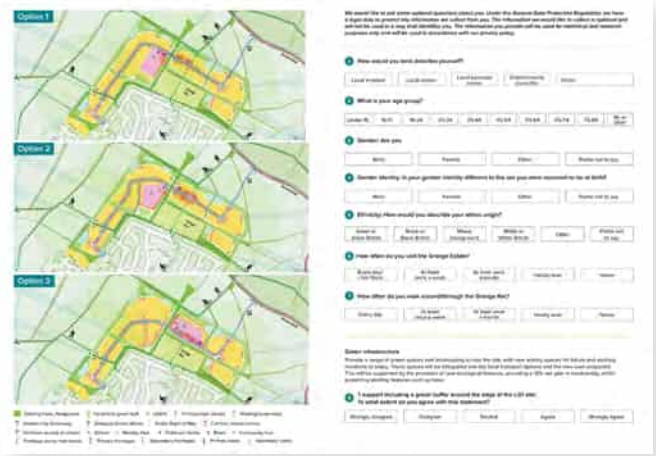




6. Appendices

LG1 masterplan options consultation

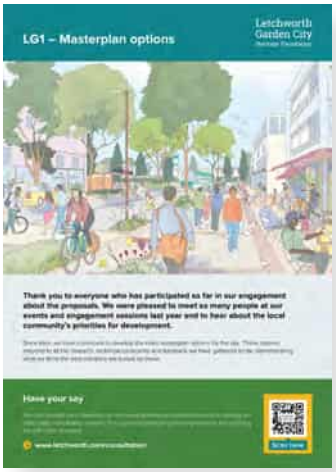
Appendix C2 – Feeback booklet

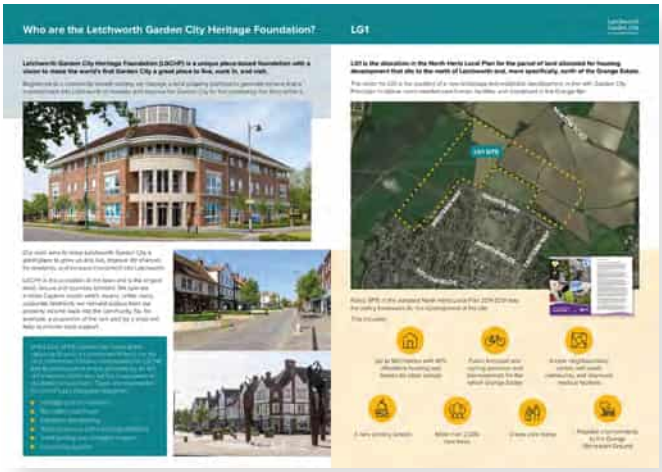


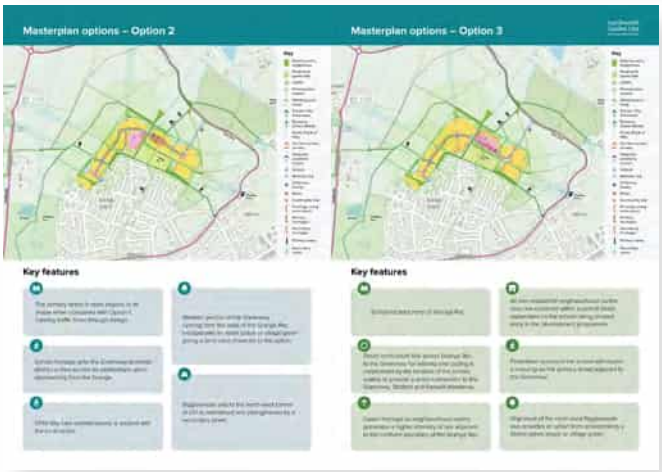
6. Appendices

LG1 masterplan options consultation

Appendix D2 – Information booklet







6. Appendices

LG1 masterplan options consultation

Appendix E2 – 'Sorry We Missed You' card

Sorry we missed you!

Letchworth Garden City Heritage Foundation

We recently visited to discuss the masterplan options for the LG1 site. LG1 is a policy allocation in the North Herts Local Plan for the parcel of land allocated for housing development that sits to the north of Letchworth.

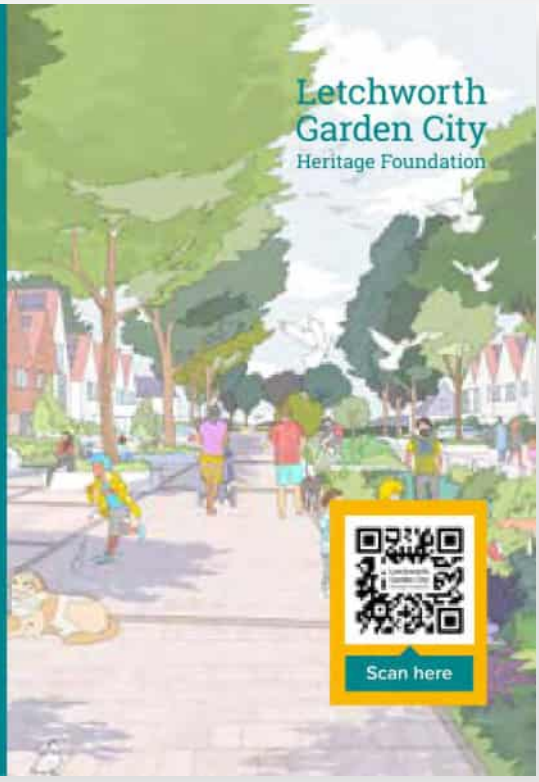
The vision for LG1 is the creation of a new landscape-led residential development, in line with Garden City principles to deliver much-needed new homes, facilities and investment in the Grange Rec.

Following your feedback, we will look to develop one single masterplan in more detail which responds to the feedback provided. This will then be consulted on again and finalised before it is submitted to North Herts Council.

Get in touch!

If you would like to get in touch with the team or learn more about the masterplan options, please do not hesitate to visit our website or contact us via the details below:

www.letchworth.com/consultation
consultation@letchworth.com
0800 368 9809



6. Appendices

LG1 masterplan options consultation

Appendix F2 – Business cards

6. Appendices

LG1 masterplan options consultation

Appendix G2 – Community flyer

Have your say on the masterplan options for LG1

Letchworth Garden City Heritage Foundation

Letchworth Garden City Heritage Foundation has been continuing to develop the initial masterplan options for LG1 – Land North of Letchworth.

Thank you to everyone who has participated so far in our engagement about the proposals. We were pleased to meet so many people at our events and engagement sessions last year and to hear about the local community's priorities for development.

Following extensive engagement with stakeholders and technical work, we are now ready to present to you three masterplan options for feedback. These options respond to all the research, technical constraints and feedback we have gathered so far, demonstrating what we think the best solutions are based on these.

The next step is to refine these options down into a preferred masterplan. We need your help and local experience to make this the best it can be.

To ensure that your input and thoughts are considered in the finalised masterplan for LG1, please do provide your feedback on the options that are being presented.

To find out how to provide your feedback, **please turn over**.

We want to hear your views

We're keen to hear about your thoughts on the masterplans, including what you like and dislike about each option.

You can learn more about the masterplan process, view the options and provide your feedback on our website:

www.letchworth.com/consultation

Scan here

The team will be hosting and attending a variety of events over the next few weeks. We would love you to come and speak with us about the masterplan options and provide us with your feedback in person.

Attend our public exhibitions on the masterplan options for LG1:

- **Monday 30th October, Grange Academy, SG6 4PY, 5pm-9pm**
- **Saturday 4th November, The Stables, Three Horseshoes, Norton Road, SG6 1AG, 10am-2pm**
- **Wednesday 15th November, Grange Academy, SG6 4PY, 5pm-9pm**

We will also be popping up across Letchworth and joining local events throughout October and November. We look forward to speaking with you all soon!

If you'd prefer to send us a printed version of the form and material on display, we can send you one along with a prepaid reply envelope. To request this please either call **01462 530350** or email **response@letchworth.com**.

You can also collect a form and envelope from reception at One Garden City, Broadway Cinema or Standalone Farm.

Alternatively, you can write to us with your views at our Freepost address noted below. You do not need to include a stamp.

Letchworth Garden City Heritage Foundation
Freepost Plus RUEH–HGEJ–AJEE
One Garden City
Broadway, Letchworth Garden City
Hertfordshire
SG6 3BF

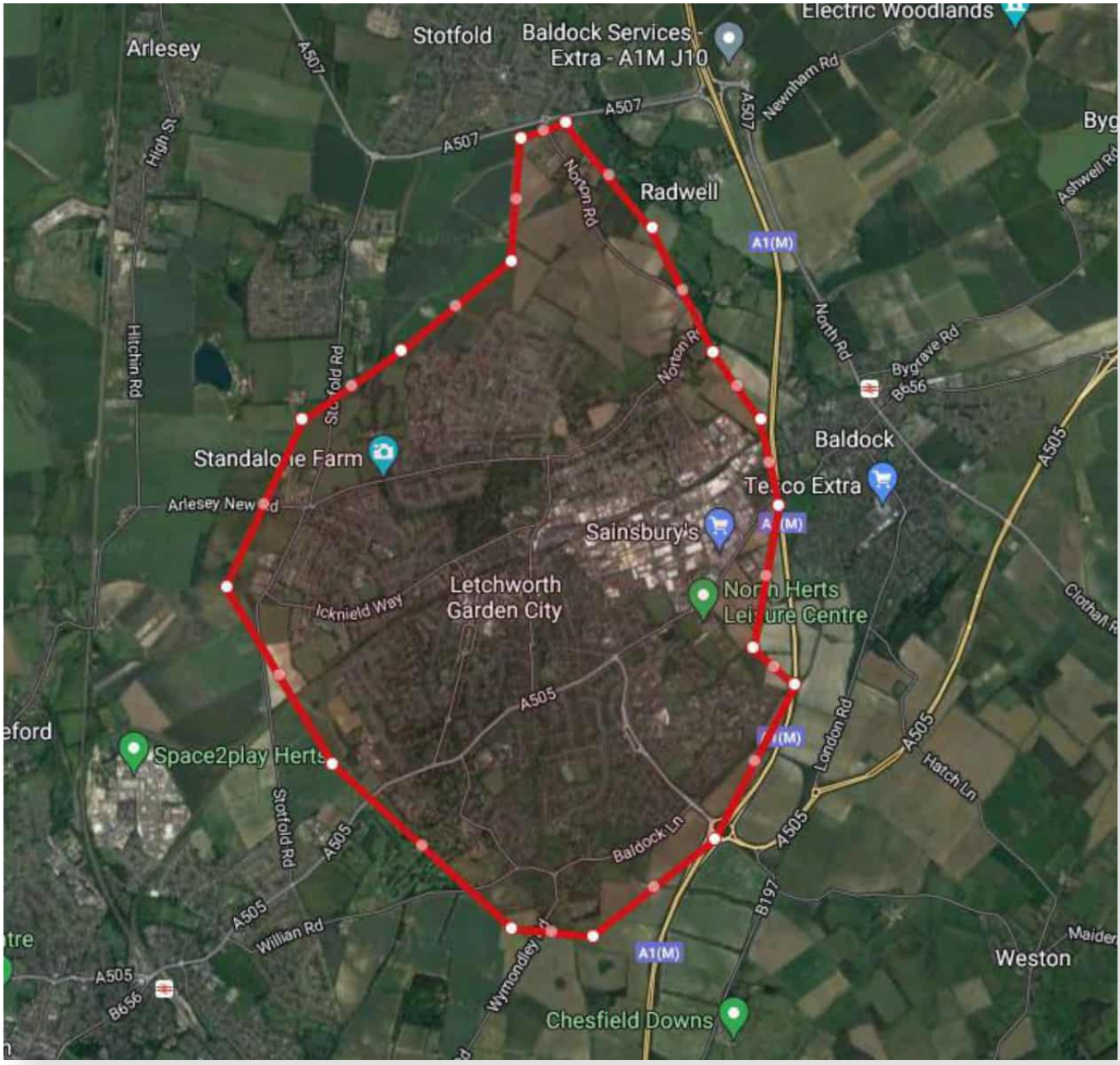
Get in touch

consultation@letchworth.com
0800 368 9809
www.letchworth.com/consultation

6. Appendices

LG1 masterplan options consultation

Appendix H2 – Flyer distribution area



6. Appendices

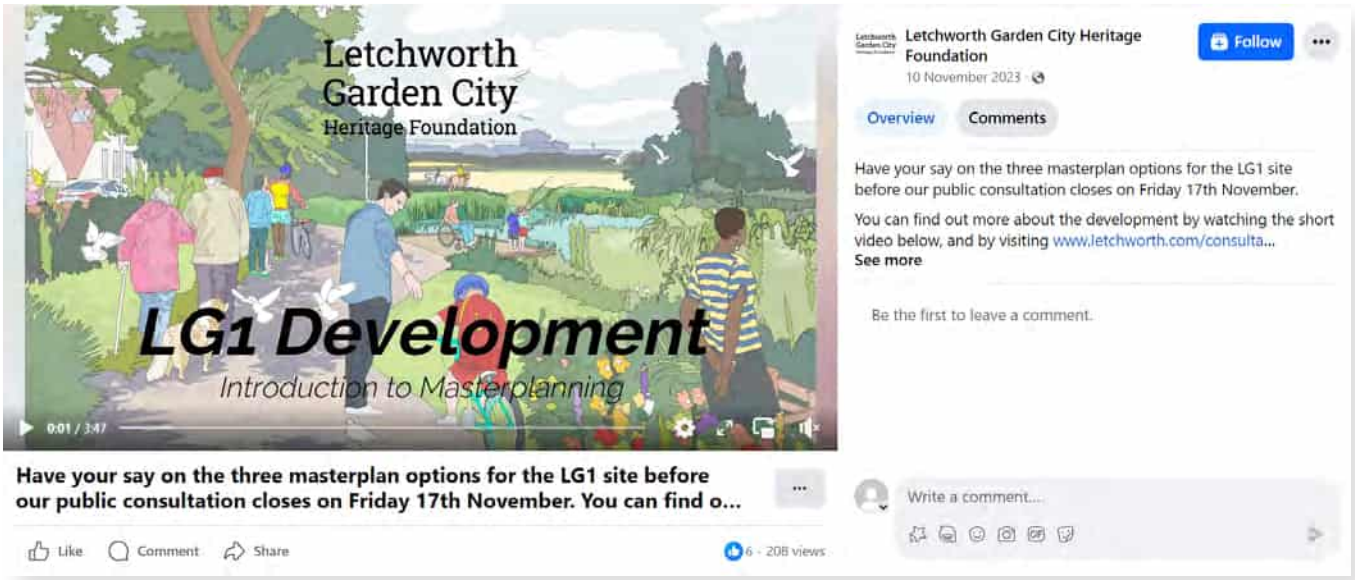
LG1 masterplan options consultation

Appendix I2 – Social media advertisement

6. Appendices

LG1 masterplan options consultation

Appendix J2 – Social media advertisement video

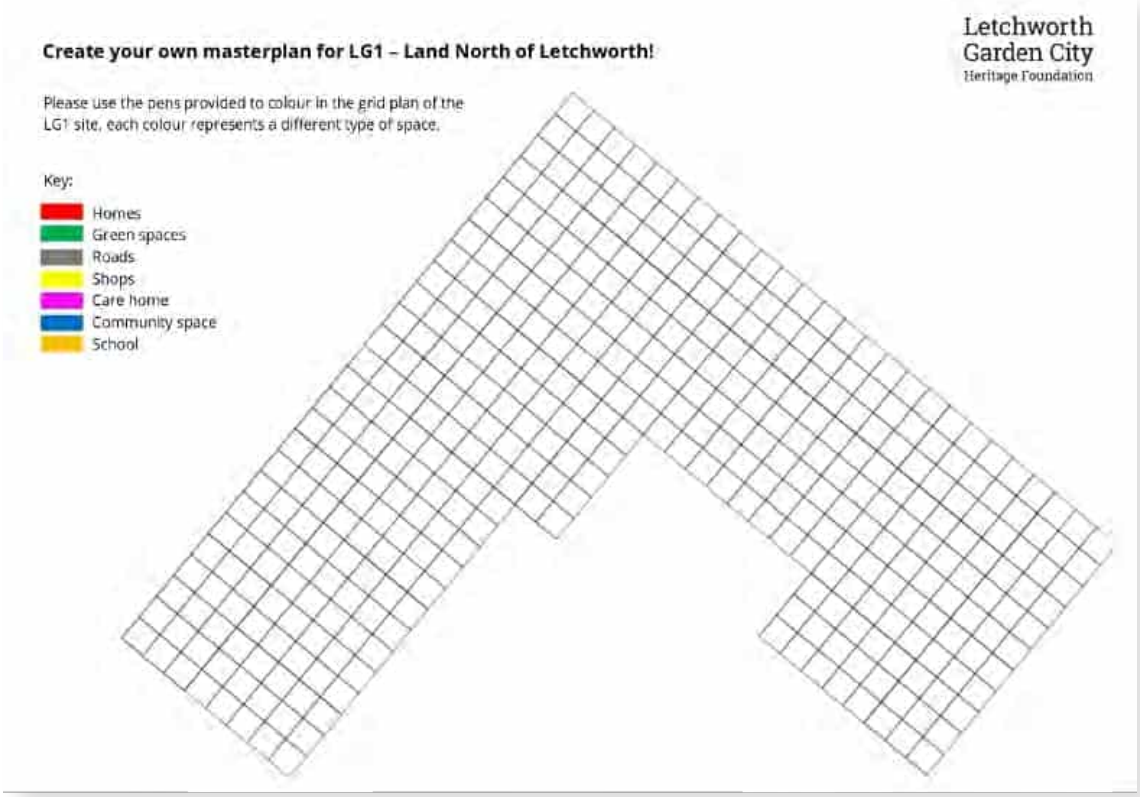


Please click to see the video here.

6. Appendices

LG1 masterplan options consultation

Appendix K2 – Youth engagement masterplanning activity



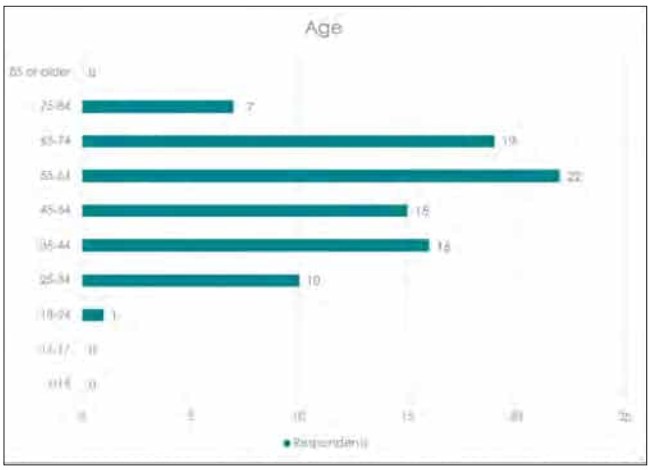
6. Appendices

LG1 masterplan options consultation

Appendix L2 – Demographic questions on survey 1

'Share your views: masterplan options for LG1'

6.1.
Question 20: Age: What is your age group?

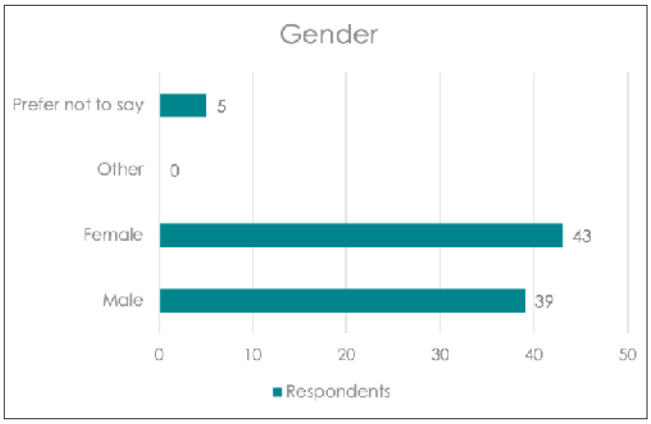


6.2.
Question 20 wanted to scope the age of the respondents of the survey, to better understand the demographics of respondents. Although most respondents did not answer the question, 80% of respondents were between 35 and 74 years old.

6.3.
This is not in line with the North Hertfordshire population of which 51% are between 35-74 years old, however, in both cases the age range makes up the largest group in each survey's respondents.

6.4.
However, in smaller age ranges the demographics are more similar. For example. 16.6% of our respondents were between 55-64 years old and 14.2% of North Herts are 55-64 years old. Demonstrating that this local demographic was well represented from our survey responses.

6.5.
Question 21: Gender: Are you?



6.6.
Question 21 was to establish the demographics of respondents to see if responses were representative of the local community. Overall, 48.3% of respondents who answered this question were female, 43.8% were male and 5.6% preferred not to say.

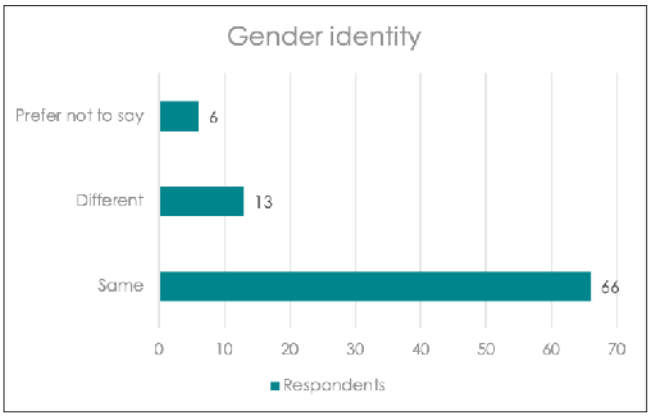
6.7.
This is not in line with the North Hertfordshire population which includes 51% of people who identify as female and 49% who identify as male. The team will consider further why there is a disparity in terms of those engaging with this phase of community engagement.

6. Appendices

LG1 masterplan options consultation

Appendix L2 – Demographic questions on survey 1

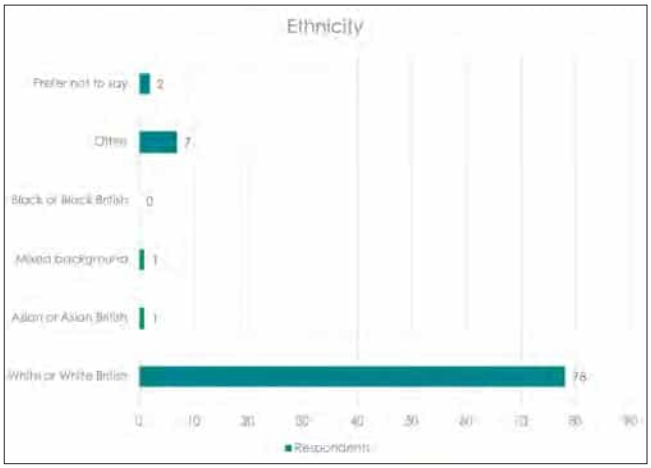
6.8.
Question 22: Gender identity: Is your gender identity different to the sex you were assumed to be at birth?



6.9.
Question 22 aimed to further knowledge of the demographics of the respondents. Overall, 77.6% of the 85 respondents' gender was the same as the sex they were assumed to be at birth. A number of respondents did not answer the question.

6.10.
Unfortunately, there is not enough robust data to accurately estimate the UKs, and by virtue North Herts', population of those who identify as a different gender to the one they were assumed to be at birth.

6.11.
Question 23: Ethnicity: How would you describe your ethnic origin?



6.12.
Question 23 was the last question focussing on demographics and aimed to discern the respondents' ethnic origin. As can be seen, 88.6% of respondents identify as 'White or White British'. This does fit with the broader demographics of Letchworth and North Herts' overall 'White British' population is up at 84.9%. Despite this difference, it should be noted that many respondents did not answer the question and in both cases the majority of respondents were 'White or White British'. The team are therefore lacking data from ethnic minorities and will look into how we can diversify respondents to these surveys to receive as many points of view as we can.

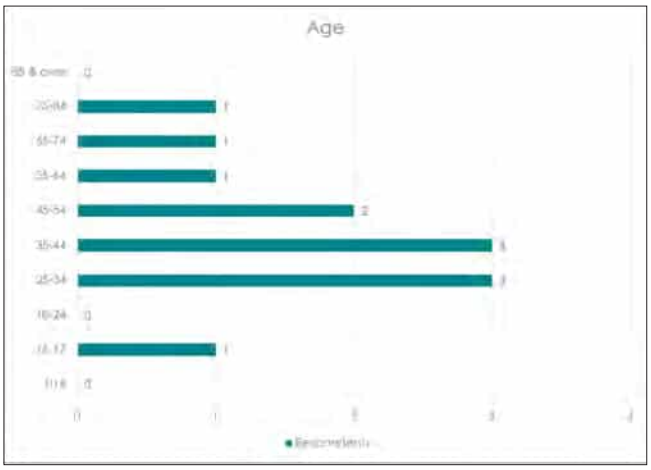
6. Appendices

LG1 masterplan options consultation

Appendix M2 – Demographic questions on survey 2

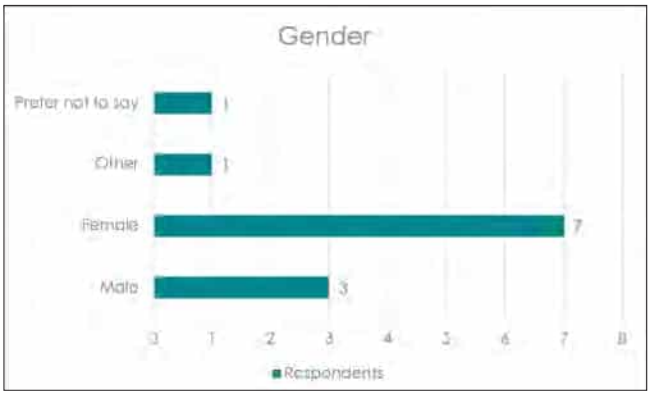
'Share your views: improvements to the Grange Recreation ground'

6.13.
Question 7: Age: What is your age group?



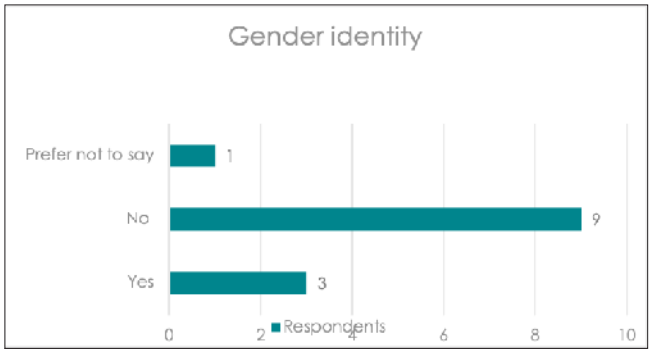
6.14.
As was the case in the first survey, this question aimed to find out the age of respondents. The age groups that had the most respondents were 25-34 and 35-44 (25% each). The next was between 45-54 (16.6%), which broadly fit with what the demographics are in Letchworth and North Herts.

6.15.
Question 8: Gender: Are you?



6.16.
This question aimed to find out the gender of respondents. As can be seen, 58.3% of the respondents were female, and 25.0% were male. This does not suit the demographics of the respondents of the first survey, for which there were slightly more female respondents than male. This also does not fit in with the broader demographics of North Herts, in which 48.6% are men. The team will look into where the disparities are in there being less men answering the survey then the demographics of the area suggest.

6.17.
Question 9: Gender identity: Is your gender identity different to the sex you were assumed at birth?



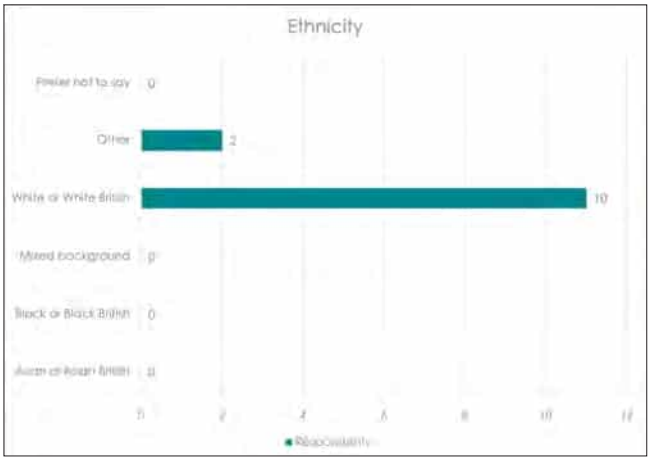
6.18.
Respondents were asked to state if their gender identity was different to what sex they were assumed to be when they were born. As is the case with the answers to this question in survey one, 69.2% do identify as the sex they were assumed at birth. However, 23% answered that they were not, though this was only three respondents in total.

6. Appendices

LG1 masterplan options consultation

Appendix M2 – Demographic questions on survey 2

6.19.
Question 10: Ethnicity: How would you describe your ethnic origin?



6.20.
The final question aimed to discover the ethnicity of respondents. 84.6% of respondents identified as 'White or White British', which fits the trend of the answers given to this question in survey one as being the largest group answering the survey. It also fits the broader demographic of Letchworth and North Hertfordshire regarding the 'White or White British' population. Notably, a significant proportion of respondents (16.6%) selected 'other'. The team will consider whether further clarification is required.

6. Appendices

LG1 masterplan options consultation

Appendix N2 – Stakeholder list

Name	Role	Organisation
Cllr. Elizabeth Dennis-Harburg	Leader of the Council	North Herts Council
Cllr. Daniel Allen	Letchworth Grange ward member	North Herts Council
Cllr. Daniel Marsh	Letchworth Grange ward member	North Herts Council
Cllr. Simon Bloxham	Letchworth Grange ward member	North Herts Council
Cllr. Ruth Brown	Deputy leader of the council & executive member for planning and transport	North Herts Council
Cllr. Keith Hoskins	Executive member for enterprise and arts	North Herts Council
Cllr. Steve Jarvis	Executive member for environment, leisure and green spaces	North Herts Council
Cllr. Sean Prendergast	Executive member for housing and environmental health	North Herts Council
Cllr. Alistair Willoughby	Executive member for community and partnerships	North Herts Council
Cllr. Val Bryant	Planning control committee chair	North Herts Council
Cllr. Tom Tyson	Chair of licensing and regulation committee	North Herts Council
Cllr. Ian Albert	Executive member for finance and IT	North Herts Council
Cllr. Amy Allen	Executive member for recycling and waste management	North Herts Council
Anthony Roche	Managing Director	North Herts Council
Martin Lawrence	Strategic Housing Manager	North Herts Council
Debbie Ealand	Strategic Housing	North Herts Council
Andrew Mills	Service Manager Greenspace	North Herts Council
Edward Leigh	Senior Transport Policy Officer	North Herts Council
Hollie Hawkins	Planning Officer	North Herts Council
Joe Morizzo	Architect	North Herts Council

6. Appendices

LG1 masterplan options consultation

Appendix N2 – Stakeholder list

Name	Role	Organisation
Nigel Smith	Strategic Planning Manager	North Herts Council
Cllr. Tina Bhartwas	Letchworth North division member	Hertfordshire County Council
Cllr. Richard Roberts	Leader of the council	Hertfordshire County Council
Cllr. Caroline Clapper	Executive member for education, libraries & lifelong learning	Hertfordshire County Council
Cllr. Stephen Boulton	Executive member for sustainable economic growth	Hertfordshire County Council
Cllr. Eric Buckmaster	Executive member for environment	Hertfordshire County Council
Cllr. Phil Bibby	Executive member for highways and transport	Hertfordshire County Council
Cllr. Fiona Thomson	Executive member for children, young people & families	Hertfordshire County Council
Cllr. Morris Bright	Executive member for public health & community safety	Hertfordshire County Council
Cllr. Tony Kingsbury	Executive member for adult care, health & wellbeing	Hertfordshire County Council
Cllr. Bob Deering	Executive member for resources and performance	Hertfordshire County Council
Cllr. Terry Hone	Development control committee chair	Hertfordshire County Council
Cllr. Fiona Guest	Development control committee vice-chair	Hertfordshire County Council
Anthony Proietti	Growth & Infrastructure Unit Team Leader	Hertfordshire County Council
Xavier Preston	Senior Planner	Hertfordshire County Council
Colin Haigh	Director of Growth & Place	Hertfordshire County Council
Anthony Collier	Local Plan and Strategic Development assistant manager	Hertfordshire County Council
Rt. Hon Sir Oliver Heald QC MP	MP for North East Hertfordshire	House of Commons
Richard Bullen	Chairman	CPRE Herts
Peter Bathmaker	Director	Bioss International

6. Appendices

LG1 masterplan options consultation

Appendix N2 – Stakeholder list

Name	Role	Organisation
Rob Dell	Headmaster	Northfields Infants and Nursery School
Elaine Close	Headmaster	Stonehill School
Gavin Cansfield	CEO	settle
Penny Metcalfe	Regeneration Officer	settle
Helen Gray	Director	Hertfordshire Community Foundation
Briege Leahy	CEO	Hertfordshire Chamber of Commerce
Neil Hayes	Chief Executive	Hertfordshire LEP
Sam Durham	PC	Letchworth Neighbourhood Team
Stephen Hill	Director	Hyas
Lucy de la Mothe	Consultant Town Planner	Hyas
Jon Thurlow	Resident Relations & Comms Manager	First Garden Cities Homes
John Welch	Chief Executive	First Garden Cities Homes
Roy Warren	Planning Manager	Sport England
Anthony Proietti	Growth & Infrastructure Unit Team Leader	Hertfordshire County Council
Xavier Preston	Senior Planner	Hertfordshire County Council
Colin Haigh	Director of Growth & Place	Hertfordshire County Council
Anthony Collier	Local Plan and Strategic Development assistant manager	Hertfordshire County Council
Rt. Hon Sir Oliver Heald QC MP	MP for North East Hertfordshire	House of Commons
Richard Bullen	Chairman	CPRE Herts
Peter Bathmaker	Director	Bioss International

6. Appendices

LG1 masterplan options consultation

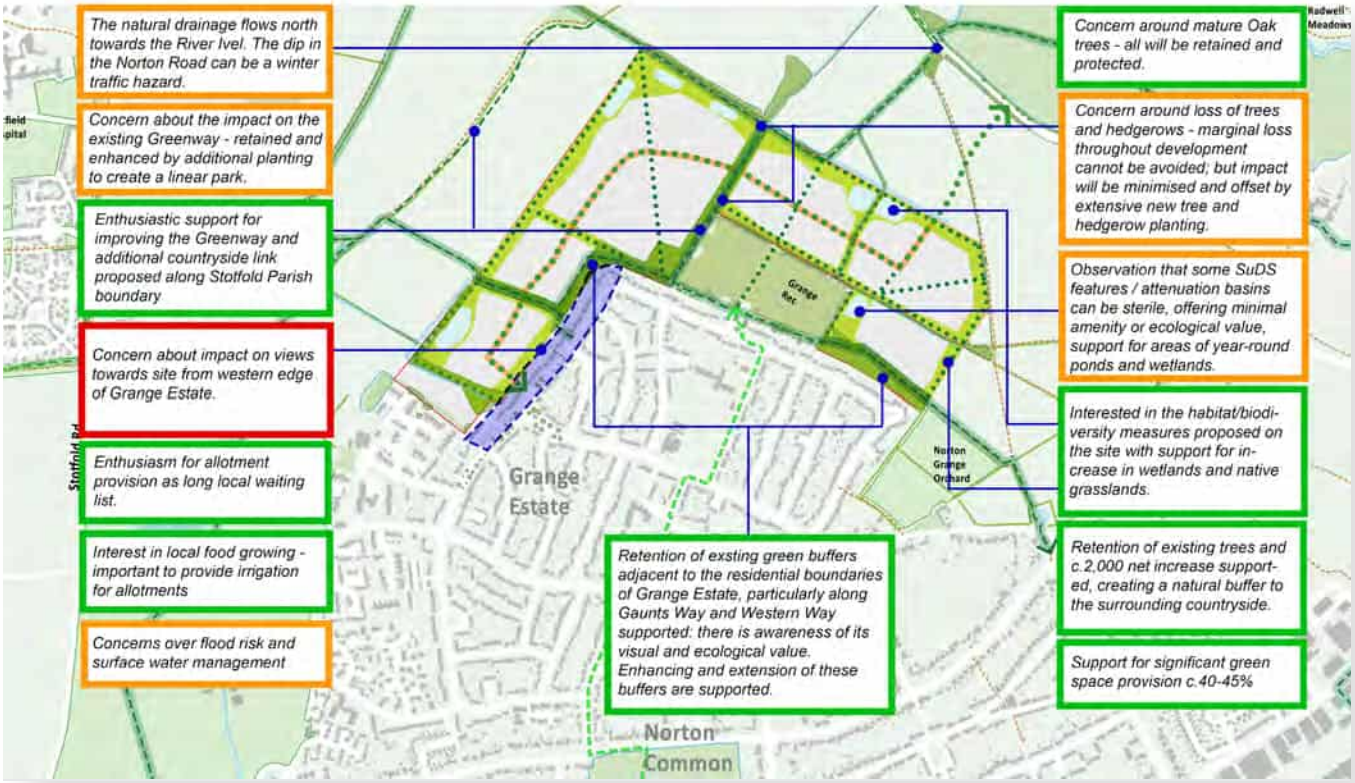
Appendix N2 – Stakeholder list

Name	Role	Organisation
	Friends of Norton Common	
	Save our green belt	
	Transition Town Letchworth	
	Letchworth Civic Trust	
	Grange Baptist Church	
	Fragrance of Life Connections Church	
	Howard Cottage	
	Save Letchworth Garden City	
	Grange Fellowship Community Association	
	North Hertfordshire College	
	Business Innovation District	
	Rob Dell	
	Rob Dell	
	Rob Dell	
	Rob Dell	
	Rob Dell	

6. Appendices

LG1 masterplan options consultation

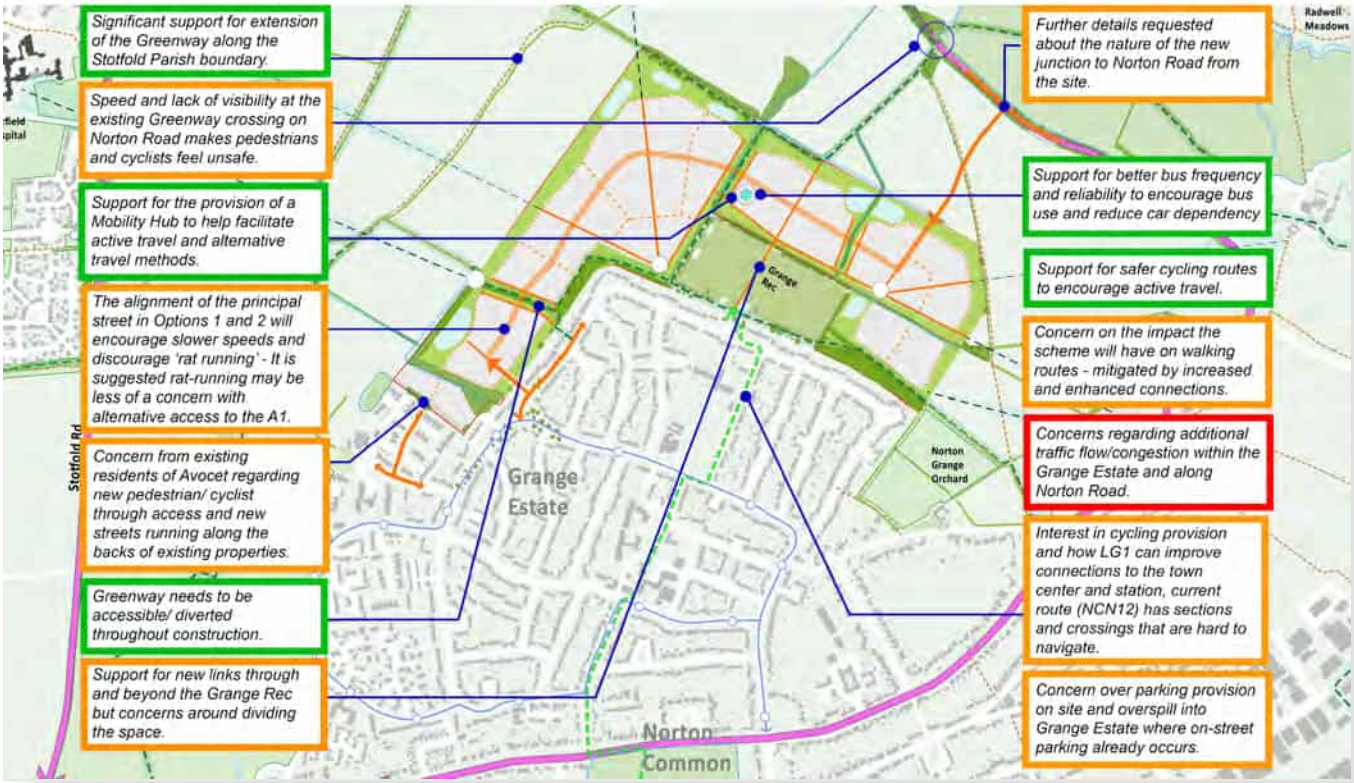
Appendix O2 – Feedback slides



6. Appendices

LG1 masterplan options consultation

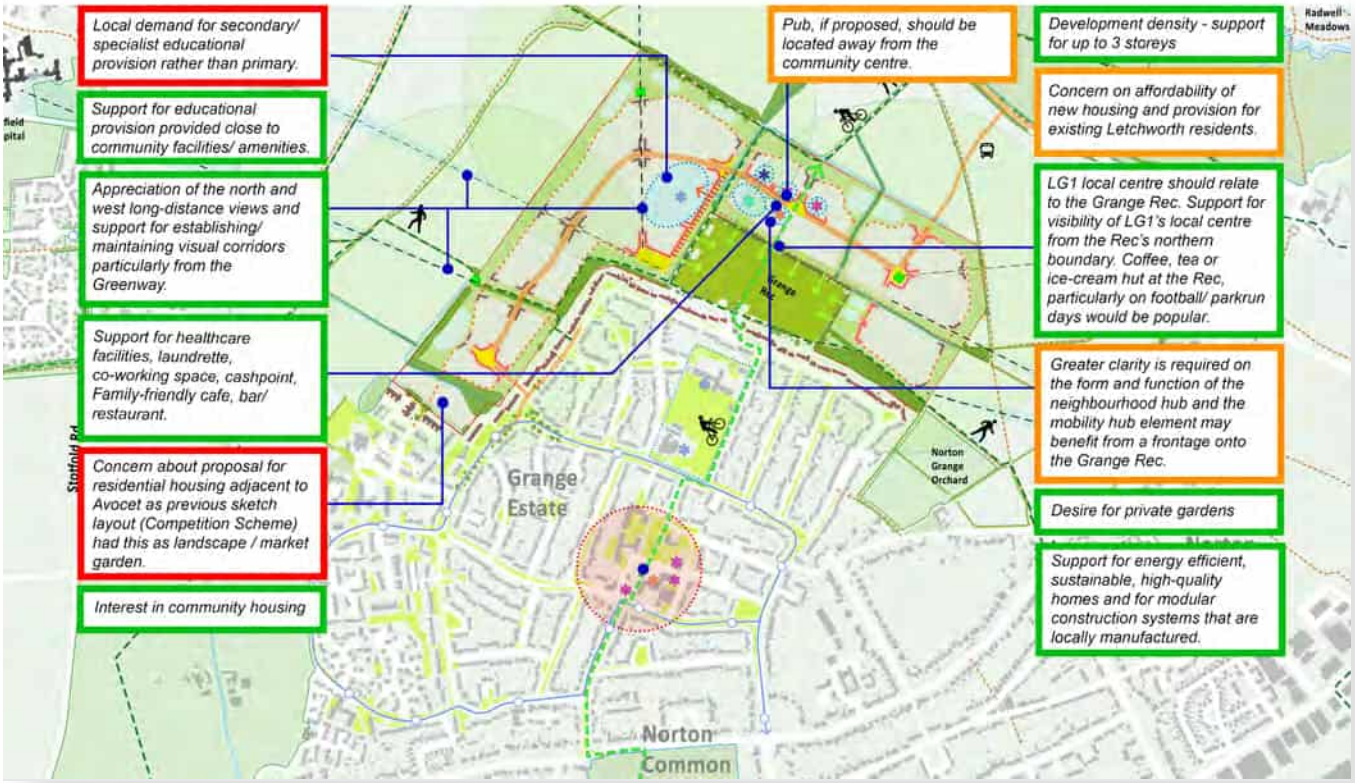
Appendix O2 – Feedback slides



6. Appendices

LG1 masterplan options consultation

Appendix O2 – Feedback slides



6. Appendices

LG1 masterplan options consultation

Appendix P2 – Flyer distribution area

6. Appendices

LG1 preferred masterplan consultation

Appendix A3 – Event banners

6. Appendices

LG1 preferred masterplan consultation

Appendix A3 – Event banners

Masterplan options feedback

Letchworth Garden City

Since our community engagement in the autumn, we have collated all the feedback received both online and at our events about the masterplan options. This, along with technical research and assessments, has enabled us to develop a preferred masterplan for LG1.

We received feedback on a range of topics covering the assessment criteria for the masterplan: natural infrastructure, transport infrastructure, land use & urban design. Your feedback covers green spaces and biodiversity/landscaping, road layout, access points, local infrastructure and key views. We are also looking at the Grange Rec as part of the proposals and received valuable feedback on how we can work with the District Council to make improvements to suit the needs of the community.

Thank you to everyone who provided their feedback to ensure the preferred masterplan is tailored to local needs, we were delighted to speak to so many people.

714 people engaged with the masterplan options at in-person events

16,467 consultation flyers sent

1,172 people reached by social media

172 total survey responses

5,660 page views of our purpose-built community engagement website

Below you can find some of the key feedback themes we received on the masterplan options:

	You said...	Steps taken so far...
Protecting green spaces	Residents reaffirmed how deeply they value green spaces. Many respondents to our surveys visit the Rec often and agreed that there should be a landscape buffer around LG1.	The team are committed to a landscape-led approach and to maintain and improve the Greenway, whilst retaining and enhancing the landscape buffers around the site.
Landscaping & biodiversity	Improving local biodiversity and retaining trees was strongly supported.	Biodiversity net gain requirements can be achieved within the site as part of our proposals. We will plant over 2,000 new trees on site and retain all mature trees and existing hedgerows, leading to a significant biodiversity net gain. Increasing wetlands and native grasslands was supported and these areas will contribute to the net amount of greenspace proposed for the scheme (c.40%).
Drainage	Ensure surface water is managed effectively.	The scheme incorporates balancing ponds to manage surface water. Letchworth Garden City Heritage Foundation (LGCHF) is working with its advisors to formulate proposals in more detail to ensure that the masterplan is compliant with the requirements of the statutory authorities.
Access points and wider traffic congestion	Residents were concerned about the traffic implications arising from the development.	Our transport consultants, Steer, have been working with Hertfordshire County Council (HCC) Highways to deliver the safest and most effective solutions. This has led to the main road being delivered in the preferred masterplan, which has a primary access from Norton Road and a secondary access into Western Way. We are working with HCC on managing speed on Norton Road to assist with this and ensure all construction traffic enters the site from this access. Concern was expressed about overspill parking from the development on to the Grange if a low car parking scheme is proposed. LGCHF has therefore committed to be compliant with NHC parking standards, rather than promote a low parking scheme. We are also developing public transport improvements with HCC such as bus services and car clubs as part of a mobility hub. We fully understand residents' traffic concerns and will continue to work with HCC to agree a series of measures in line with their requirements, supported by the masterplan.
Supporting infrastructure	There were concerns with the impact on public services and the infrastructure of Letchworth, particularly schools and local doctors surgeries.	Medical facilities are part of the Council's policy requirement and, although outside of our control, we will continue to work with statutory bodies to explore the delivery of a flexible space. As part of the Local Plan policy allocation for the site we remain committed to providing a site reserved for a primary school within the masterplan.
Key views	Desire to maintain long distance views north, west and east of the site.	The preferred masterplan maintains key views towards Fairfield, Stotfold, St Nicholas Church, Biggleswade and Norton.
Appearance of buildings on site	Respondents expressed support for a modern look that retains the character of existing buildings on the Grange Estate.	LGCHF is committed to ensuring that the character of buildings on the LG1 site respects the surrounding context and a modern interpretation of garden city design principles and as part of this consultation welcome views on the type of design approach that should be taken.
Affordable housing	Residents were supportive of the commitment to 40% affordable housing on the site but questioned what 'affordable' actually means.	LGCHF is committed to providing 40% of affordable housing on the site, of these two-thirds will be designated as social housing and managed by a housing association, the remainder will be discounted below market value. We are continuing to work with Eastern Community Homes to grasp opportunities for local selfbuild, co-operative and community land trust homes for local people. This will help provide the potential for local people to have access to affordable housing opportunities.

Preferred masterplan

Letchworth Garden City

Following our consultation activities on the masterplan options from October – November 2023, and ongoing community engagement since, we have developed the preferred masterplan for LG1 below:

Key features:

- Retaining and enhancing a green buffer around LG1 and the Grange Estate
- Protection and enhancement of the Greenway, including an extension to the existing route
- Improved walking and cycling routes from the Grange Estate into the LG1 site and beyond
- Maintaining key views towards Biggleswade, Stotfold, Fairfields, St Nicholas Church and Norton
- Speed reduction through design and a 20mph speed limit throughout the primary road which has two access points, at Norton Road and Western Way
- Location of the site reserved for a school close to new community amenities
- Inclusion of a mobility hub to promote alternative forms of transport to car-use
- Improvements of the Grange Rec, working with our partners at North Herts Council

Please review the preferred masterplan option above and if you have any questions, feel free to ask the team members present at this event.

6. Appendices

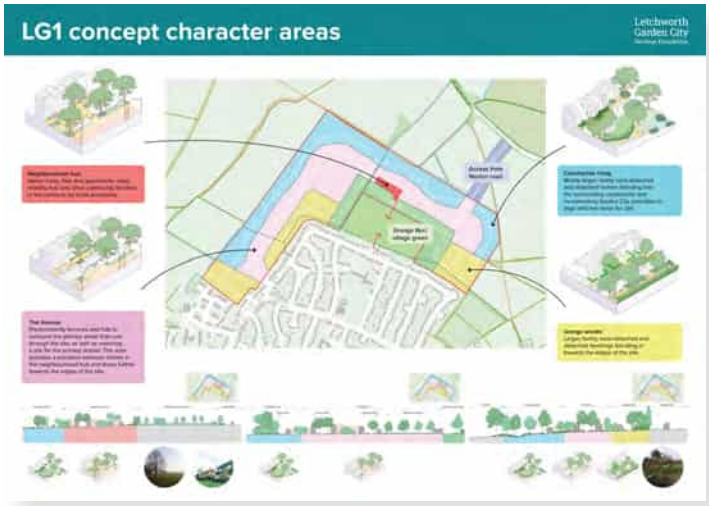
LG1 preferred masterplan consultation

Appendix A3 – Event banners

6. Appendices

LG1 preferred masterplan consultation

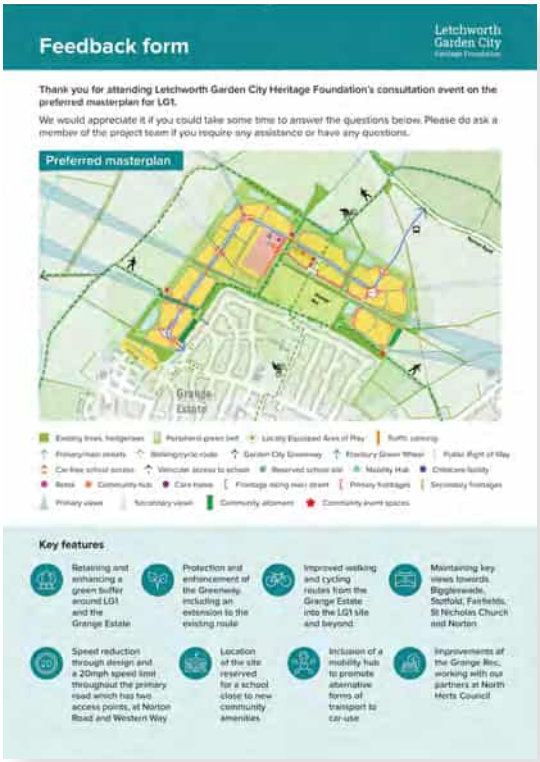
Appendix A3 – Event banners



6. Appendices

LG1 preferred masterplan consultation

Appendix B3 – Feedback form



Feedback form

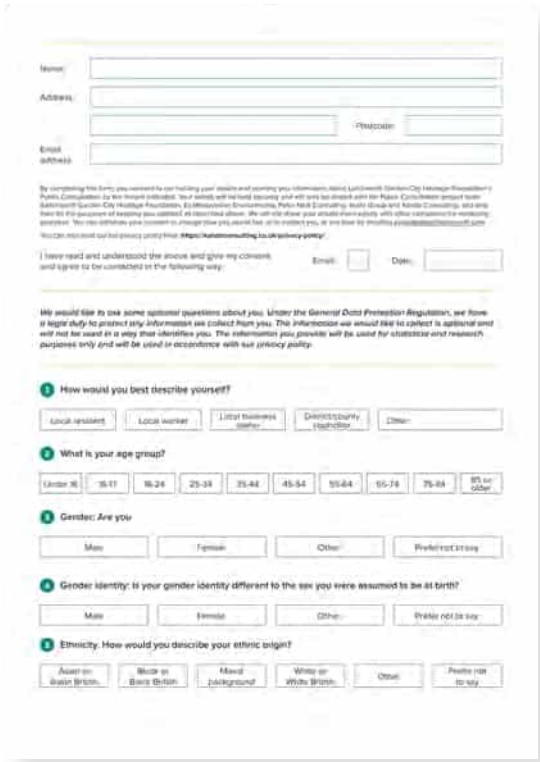
Letchworth Garden City

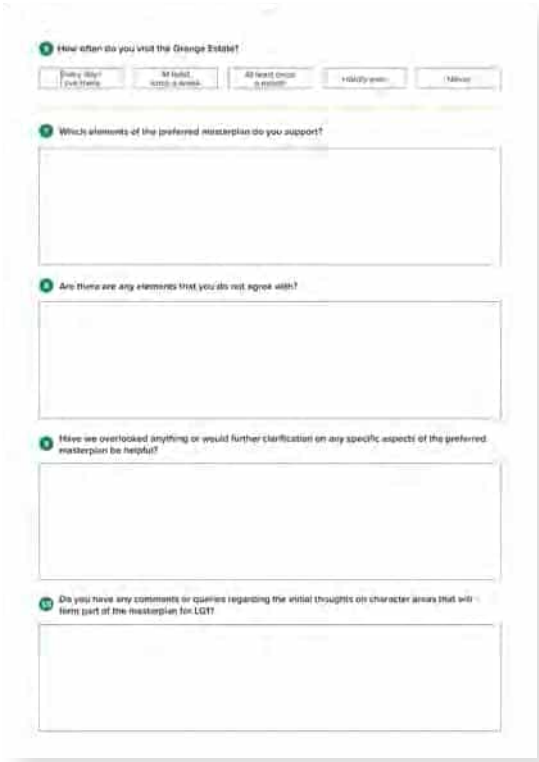
Thank you for attending Letchworth Garden City Heritage Foundation's consultation event on the preferred masterplan for LG1.

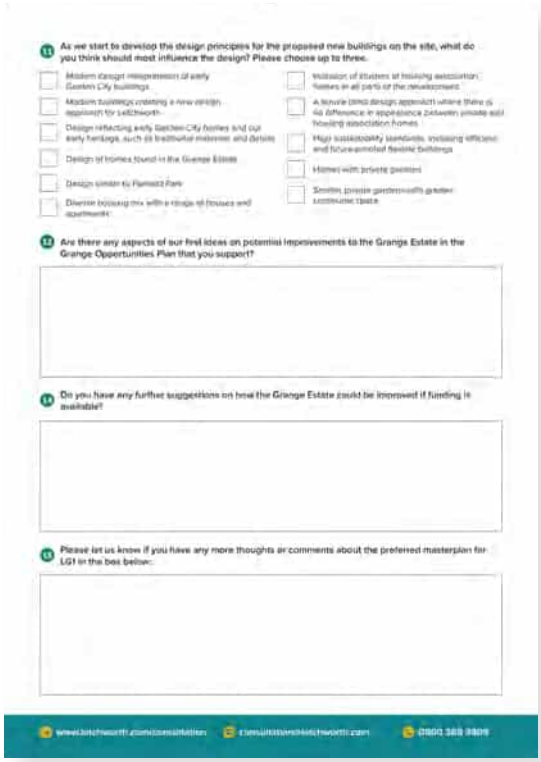
We would appreciate it if you could take some time to answer the questions below. Please do ask a member of the project team if you require any assistance or have any questions.

Preferred masterplan

Key features







6. Appendices

LG1 preferred masterplan consultation

Appendix C3 – Community Flyer

Have your say on the masterplan for LG1

Letchworth Garden City
Heritage Foundation

Following extensive consultation with local residents last autumn, Letchworth Garden City Heritage Foundation has developed the preferred masterplan option for LG1 – Land North of Letchworth.

Thank you to everyone who has participated in our engagement on the masterplan options. We were pleased to meet so many people at our events and engagement sessions last year and hear about the local community's priorities for development.

Following our engagement with the local community, stakeholders and technical work, we are now ready to present the preferred masterplan for feedback. The preferred masterplan responds to all the research, technical constraints and feedback we have gathered so far, demonstrating what we think the best solutions are based on these.

The next step is to consult with the local community on the preferred masterplan option and to receive further feedback before it is submitted to North Herts Council for approval.

To find out how to provide your feedback, **please turn over**.

We want to hear your views

We're keen to hear about your thoughts on the masterplan for LG1, including what you like and dislike about the preferred option.

So do please join us in person at our consultation event and provide us with your feedback.

Thursday 7th March, 6pm-8pm, Grange Academy, SG6 4PY

Following the consultation event you will be able to review the preferred masterplan and complete our online survey until our consultation closes on **26th March**. In the meantime, more information about the process and why we have prepared a masterplan can already be found on our website.

Scan here

www.letchworth.com/consultation

If you'd prefer to send us a printed version of the form and material on display, we can send you one along with a prepaid envelope. To request this please either call **01462 530350** or email **response@letchworth.com**.

You can also collect a form and envelope from reception at One Garden City, Broadway Cinema or Standalone Farm.

Alternatively, you can write to us with your views at our Freepost address noted below. You do not need to include a stamp.

Letchworth Garden City Heritage Foundation
Freepost Plus RUEH–HGEJ–AJEE
One Garden City
Broadway, Letchworth Garden City
Hertfordshire
SG6 3BF

Get in touch

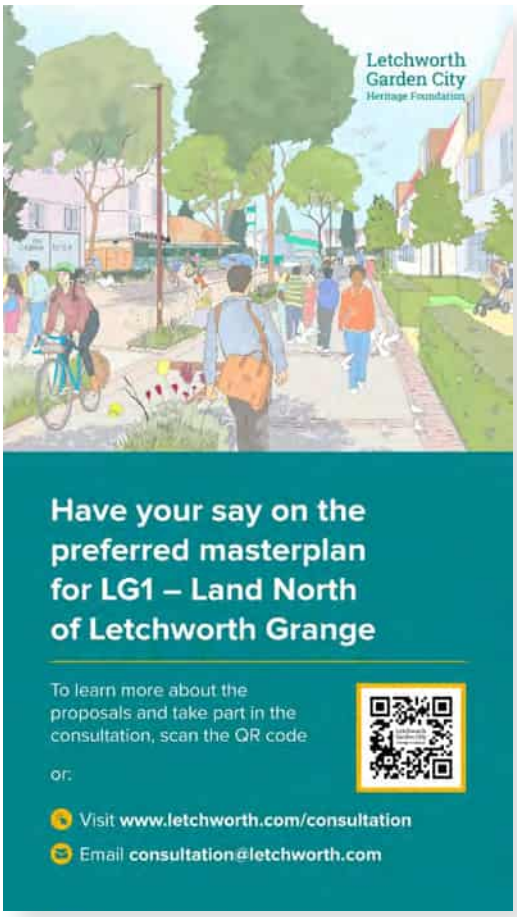
If you have any questions, or would like to speak to us, please do not hesitate to get in contact using the details below:

consultation@letchworth.com
0800 368 9809
www.letchworth.com/consultation

6. Appendices

LG1 preferred masterplan consultation

Appendix D3 – Digital Banners



6. Appendices

LG1 preferred masterplan consultation

Appendix E3 – Social media adverts

6. Appendices

LG1 preferred masterplan consultation

Appendix E3 – Social media adverts

Letchworth Garden City Heritage Foundation

22 March ·

There's still time to leave feedback on the preferred masterplan option for the LG1 site before our public consultation closes on Tuesday 26th March.

You can find out more and share your views here - https://bit.ly/3ItN29p

If you have filled in a paper form, this needs to be returned by Tuesday 26th March. You can do this by handing it in at One Garden City, Broadway, Letchworth or at reception at Standalone Farm. You can also post your form to

Letchworth Garden City Heritage Foundation
Freepost Plus RUEH-HGEJ-AJEE
One Garden City
Broadway, Letchworth Garden City
Hertfordshire
SG6 3BF **See less**

6. Appendices

LG1 preferred masterplan consultation

Appendix E3 – Social media adverts

Letchworth Garden City Heritage Foundation
22 March ·

There's still time to leave feedback on the preferred masterplan option for the LG1 site before our public consultation closes on Tuesday 26th March.

You can find out more and share your views here - https://bit.ly/3ItN29p

If you have filled in a paper form, this needs to be returned by Tuesday 26th March. You can do this by handing it in at One Garden City, Broadway, Letchworth or at reception at Standalone Farm. You can also post your form to

Letchworth Garden City Heritage Foundation
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One Garden City
Broadway, Letchworth Garden City
Hertfordshire
SG6 3BF **See less**

2 2

6. Appendices

LG1 preferred masterplan consultation

Appendix F3 – Preferred masterplan & Grange Opportunities Plan interactive board

Figure 14:Interactive masterplan board.

Figure 15: Grange Opportunities Plan interactive board.

6. Appendices

LG1 preferred masterplan consultation

Appendix G3 – North Hertfordshire Council e-newsletter advertising the consultation

Letchworth Garden City: Consultation Event

Letchworth Garden City Heritage Foundation want to work with you to create new places that you will value and build much-needed new homes on the land north of Letchworth (referred to as 'LG1').

Over the coming weeks, they will be engaging with local communities on a number of topics regarding the preferred masterplan for LG1. To find out more, visit the consultation event on **Thursday 7 March, 6pm-8pm, Grange Academy, SG6 4PY.**

Keep up to date on the future of Letchworth:

Shape Letchworth

6. Appendices

LG1 preferred masterplan consultation

Appendix H3 – Stakeholder list for preferred masterplan consultation

Name	Role	Organisation
Cllr. Elizabeth Dennis-Harburg	Leader of the Council	North Herts Council
Cllr. Daniel Allen	Letchworth Grange ward member	North Herts Council
Cllr. Daniel Marsh	Letchworth Grange ward member	North Herts Council
Cllr. Simon Bloxham	Letchworth Grange ward member	North Herts Council
Emma Fernandes	Letchworth Grange ward candidate	N/A
Cllr. Ruth Brown	Deputy leader of the council & executive member for planning and transport	North Herts Council
Cllr. Keith Hoskins	Executive member for enterprise and arts	North Herts Council
Cllr. Steve Jarvis	Executive member for environment, leisure and green spaces	North Herts Council
Cllr. Sean Prendergast	Executive member for housing and environmental health	North Herts Council
Cllr. Alistair Willoughby	Executive member for community and partnerships	North Herts Council
Cllr. Val Bryant	Planning control committee chair	North Herts Council
Cllr. Tom Tyson	Chair of licensing and regulation committee	North Herts Council
Cllr. Ian Albert	Executive member for finance and IT	North Herts Council
Cllr. Amy Allen	Executive member for recycling and waste management	North Herts Council
Nigel Smith	NHC Project Team	North Herts Council
Edward Leigh	NHC Project Team	North Herts Council
Hollie Hawkins	NHC Project Team	North Herts Council
Sam Dicocco	NHC Project Team	North Herts Council
Naomi Reynard	NHC Project Team	North Herts Council
Lewis Reynolds	NHC Project Team	North Herts Council

6. Appendices

LG1 preferred masterplan consultation

Appendix H3 – Stakeholder list for preferred masterplan consultation

Name	Role	Organisation
Joe Morrizo	NHC Project Team	North Herts Council
Nigel Smith	NHC Project Team	North Herts Council
Danny Pearson	Grange Network Team	North Herts Council
Aimee Flack	Grange Network Team	North Herts Council
Cllr. Tina Bhartwas	Letchworth North division member	Hertfordshire County Council
Cllr. Richard Roberts	Leader of the council	Hertfordshire County Council
Cllr. Caroline Clapper	Executive member for education, libraries & lifelong learning	Hertfordshire County Council
Cllr. Stephen Boulton	Executive member for sustainable economic growth	Hertfordshire County Council
Cllr. Eric Buckmaster	Executive member for environment	Hertfordshire County Council
Cllr. Phil Bibby	Executive member for highways and transport	Hertfordshire County Council
Cllr. Fiona Thomson	Executive member for children, young people & families	Hertfordshire County Council
Cllr. Morris Bright	Executive member for public health & community safety	Hertfordshire County Council
Cllr. Tony Kingsbury	Executive member for adult care, health & wellbeing	Hertfordshire County Council
Cllr. Bob Deering	Executive member for resources and performance	Hertfordshire County Council
Cllr. Terry Hone	Development Control Committee Chair	Hertfordshire County Council
Cllr. Fiona Guest	Development Control committee vice-chair	Hertfordshire County Council
Rt. Hon Sir Oliver Heald KC MP	MP for North East Hertfordshire	House of Commons
Xavier Preston	Senior Planner	Hertfordshire County Council
Antony Proietti	Local Plan and Strategic Development assistant manager	Hertfordshire County Council
Anthony Collier	HCC Project Team/Education Team	Hertfordshire County Council

6. Appendices

LG1 preferred masterplan consultation

Appendix H3 – Stakeholder list for preferred masterplan consultation

Name	Role	Organisation
Scott Crudgington	HCC Project Team/Education Team	Hertfordshire County Council
Sarah Anderson	HCC Project Team/Education Team	Hertfordshire County Council
Emily White	HCC Project Team/Education Team	Hertfordshire County Council
Sarah McLaughlin	HCC Project Team/Education Team	Hertfordshire County Council
Lorna McCallum	Executive Director – apprenticeships and partnerships	North Herts College
Stephen Hill	Director	Hyas
Lucie de la Mothe	Town Planner	Hyas
Giles Meredith	Hertfordshire Adviser	Eastern Community Homes
Debbie Wildridge	Community Housing Development Officer	Eastern Community Homes
Fiona Coulson	Executive Director of Development	Settle
Georgie-May Laurie	Regeneration Manager	Settle
Kirsten Bennett	Chief Executive	Cambridgeshire ACRE
Roy Warren	Planning Manager	Sport England
Sam Durham	PC	Hertfordshire Police
Phoebe Taylor	PC	Hertfordshire Police
Jon Thurlow	Resident Relations & Comms Manager	First Garden Cities Homes
Briege Leahy	CEO	Hertfordshire Chamber of Commerce
Helen Gray	Director	Hertfordshire Community Foundation
Richard Bullen	Chairman	CPRE Herts
Peter Bathmaker	Director	Bioss International

6. Appendices

LG1 preferred masterplan consultation

Appendix H3 – Stakeholder list for preferred masterplan consultation

Name	Rolew	Organisation
Neil Hayes	Chief Executive	Hertfordshire LEP
Andrew Brown	Head teacher	St Nicholas School
Elaine Close	Head teacher	Stonehill School
Kris Karslake	Sustainability Police and Programme Manager	Letchworth Garden City Heritage Foundation
Charles Chong	Governor	Letchworth Garden City Heritage Foundation
William Armitage	Governor	Letchworth Garden City Heritage Foundation
Judith Nash	Governor	Letchworth Garden City Heritage Foundation
Lynne Ceeney	Governor	Letchworth Garden City Heritage Foundation
Harry Williams	Governor	Letchworth Garden City Heritage Foundation
Mick Johal	Governor	Letchworth Garden City Heritage Foundation
Adam Grant	Governor	Letchworth Garden City Heritage Foundation
Sam Villis	Governor	Letchworth Garden City Heritage Foundation
Peter Lennie	Governor	Letchworth Garden City Heritage Foundation
Tim Wilson	Governor	Letchworth Garden City Heritage Foundation
Becky Hayes	Governor	Letchworth Garden City Heritage Foundation
David Adam	Governor	Letchworth Garden City Heritage Foundation
Tabitha Wilson	Governor	Letchworth Garden City Heritage Foundation
Faiza Spittles	Governor	Letchworth Garden City Heritage Foundation
John Hillson	Trustee	Letchworth Garden City Heritage Foundation
Kevin Jones	Trustee	Letchworth Garden City Heritage Foundation

6. Appendices

LG1 preferred masterplan consultation

Appendix H3 – Stakeholder list for preferred masterplan consultation

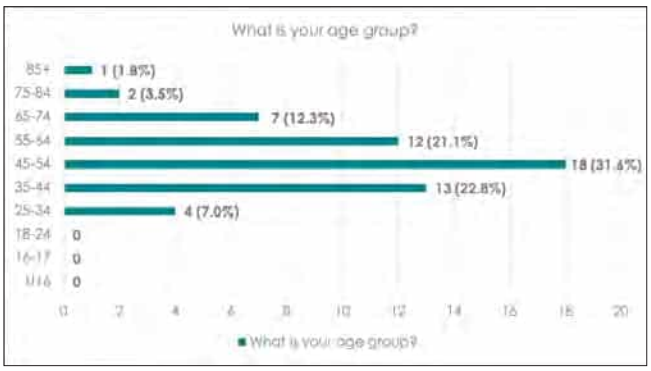
Name	Rolew	Organisation
Chris Pattison	Trustee	Letchworth Garden City Heritage Foundation
Gareth Hawkins	Trustee	Letchworth Garden City Heritage Foundation
Roger McIntyre-Brown	Trustee	Letchworth Garden City Heritage Foundation
John Coling	Trustee	Letchworth Garden City Heritage Foundation
Joanna Dew	Trustee	Letchworth Garden City Heritage Foundation
Michael Collins	Trustee	Letchworth Garden City Heritage Foundation
Amanda Egbe	Trustee	Letchworth Garden City Heritage Foundation
Simon Franklin	Trustee	Letchworth Garden City Heritage Foundation
Lucy Gravatt	Trustee	Letchworth Garden City Heritage Foundation
Ian Mantle	Trustee	Letchworth Garden City Heritage Foundation
Grange Fellowship Community Association		
Business Innovation District		
Grange Baptist Church		
Fragrance of Life Connections Church		
Letchworth Civic Trust		
Transition Town Letchworth		
Friends of Norton Common		
First Garden Cities Homes		
Save Letchworth Garden City		
Save our green belt		
Letchworth Parkrun		
The Grange Academy		

6. Appendices

LG1 preferred masterplan consultation

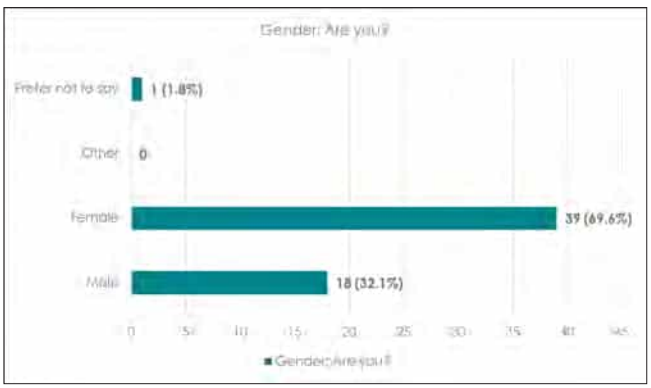
Appendix I3 – Demographics

4.368.
Question 11: What is your age group?



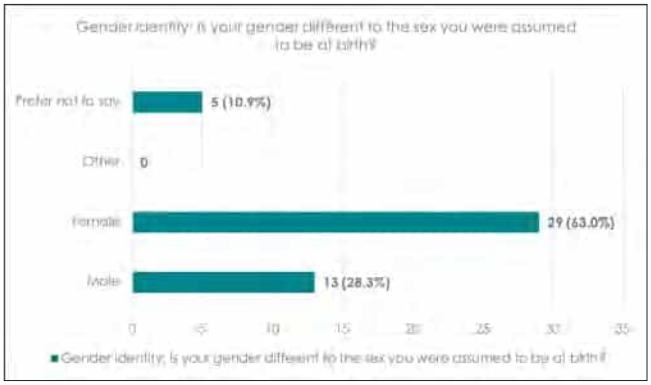
4.369.
The most popular age bracket was 45-54 years old (31.6%). This was different to the most popular age range from the masterplan option consultation, which was 55-64 years old (24.4%). The second most popular was 35-44 years old (22.8%), demonstrating that this round of consultation appealed to a slightly younger demographic than our previous round of consultation, indicating that LGCHF has been able to reach a broad audience of different age groups.

4.370.
Question 12: Gender: Are you?



4.371.
Overall, 69.6% of respondents were female and 32.1% were male suggesting quite a split between men and women which can be expected. This was not the case last time which saw a much more even split between men and women. However, 76 respondents did not answer the question and therefore assumptions made from this data may not be reflective of every respondent.

4.372.
Question 13: Gender identity: Is your gender different to the sex you were assumed to be at birth?



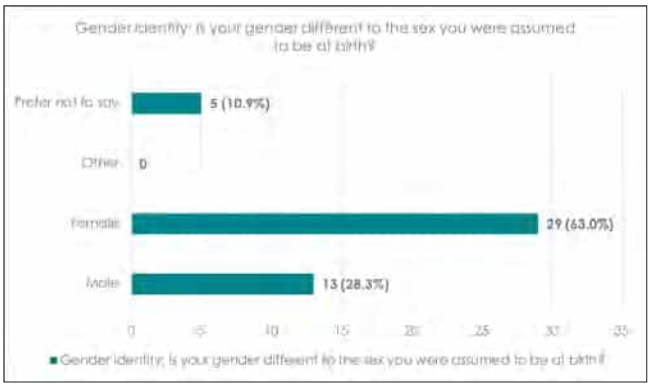
4.373.
A total of 91.3% of respondents identified as the same sex they were assumed to be at birth, more than the 77.6% who did so from the previous consultation on the LG1 three masterplan options. However, 10.9% preferred not to say whether they were or not, suggesting a broader demographic was reached of those who do not identify as the same sex they were assumed to be at birth.

6. Appendices

LG1 preferred masterplan consultation

Appendix I3 – Demographics

4.374.
Question 14: Ethnicity: How would you describe your ethnic origin?



4.375.
A significant majority of responses (88.9%) were provided by people who identify as 'White or White British', very similar to those who identified as such in the last round of consultation (88.6%). This fits Letchworth's and North Herts' overall 'White British' population of 84.9% and is therefore unsurprising that these demographics match.

6. Appendices

LG1 preferred masterplan consultation

Appendix J3 – Flyer distribution area

Letchworth Garden City

Heritage Foundation

Appendix D

Landscape character study

Letchworth Garden City | LG1 Development Site

LG1 Landscape Character and Sensitivity Study

Prepared on behalf of

Letchworth Garden City Heritage Foundation

EcoResponsiveEnvironments

Peter Neal Consulting Ltd

Third Draft

25 January 2023

Version	Date	Issued by	Description
1.0	03/05/2022	Peter Neal	First Draft for ERE and Client Review
2.0	27/05/2022	Peter Neal	Revision following Client Review and Comments
3.0	25/01/2023	Peter Neal	Revision following NHC Review and Comments

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CONTENTS

1 Introduction **4**
- Purpose of the Study
- Methodology
- Site location and Planning Context
- Preceding Landscape Assessment

2 Landscape and Green Infrastructure Context **7**
- Planning Policy Context
- Historic Development
- Green Infrastructure Policy Context
- Strategic Green Infrastructure Network

3 LG1 Landscape Structure **18**
- LG1 Site Description
- Topography and Hydrology
- Geology and Soils
- Visibility and Viewpoints
- Visual Receptors
- Footpaths and Rights of Way
- Landscape Features

4 Landscape Character **33**
- National Character Area Profiles
- North Hertfordshire Landscape Character Assessment
- Landscape Character Methodology
- LG1 Landscape Character Areas

5 Landscape Sensitivity **43**
- Landscape Sensitivity Methodology
- Landscape Sensitivity Criteria
- Visual Sensitivity Criteria
- Landscape Sensitivity Findings

6 Conclusions and Recommendations **51**

Annex A - Field Survey Template **56**

Annex B – Individual Landscape and Visual Assessments for LG1 ..... **57**

1.0 INTRODUCTION

1.1 This Landscape Character and Sensitivity Study has been prepared on behalf of the Letchworth Garden City Heritage Foundation (LGCHF). It forms part of the Planning Baseline and evidence base that will be used to inform the future masterplan framework for the land to the north of the Grange (LG1) located on the northern boundary of Letchworth Garden City. This strategic 45 ha (112 acre) housing site is allocated in the adopted Local Plan 2011-2031 (NHC/2022) for a new neighbourhood of approximately 900 homes and the planning objectives are described in Policy SP15: Site LG1 - North of Letchworth Garden City.

Purpose of the study

1.2 The key objectives of this study are:

- To provide a summary description of the landscape and green infrastructure planning context and current strategic green infrastructure framework for the site
- To provide an analytical description of the Landscape Character of the site and its immediate surrounding context
- To provide an assessment of the Landscape Sensitivity of the site
- To provide a set of landscape and green infrastructure recommendations for the masterplanning of the site.

1.3 A detailed Landscape and Visual Impact Assessment for LG1 will be undertaken separately during the masterplanning process. A Green Infrastructure Audit providing an assessment of current and future open space provision reflecting prevailing open space planning standards will also be undertaken separately.

Methodology

1.4 The methodology and scope for this study has been agreed by Place Services (Essex County Council) on behalf of North Herts Council. The study includes desk-based research, the review of relevant planning studies and associated data, site surveys undertaken in March, April and July 2022, and follows relevant national guidance including:

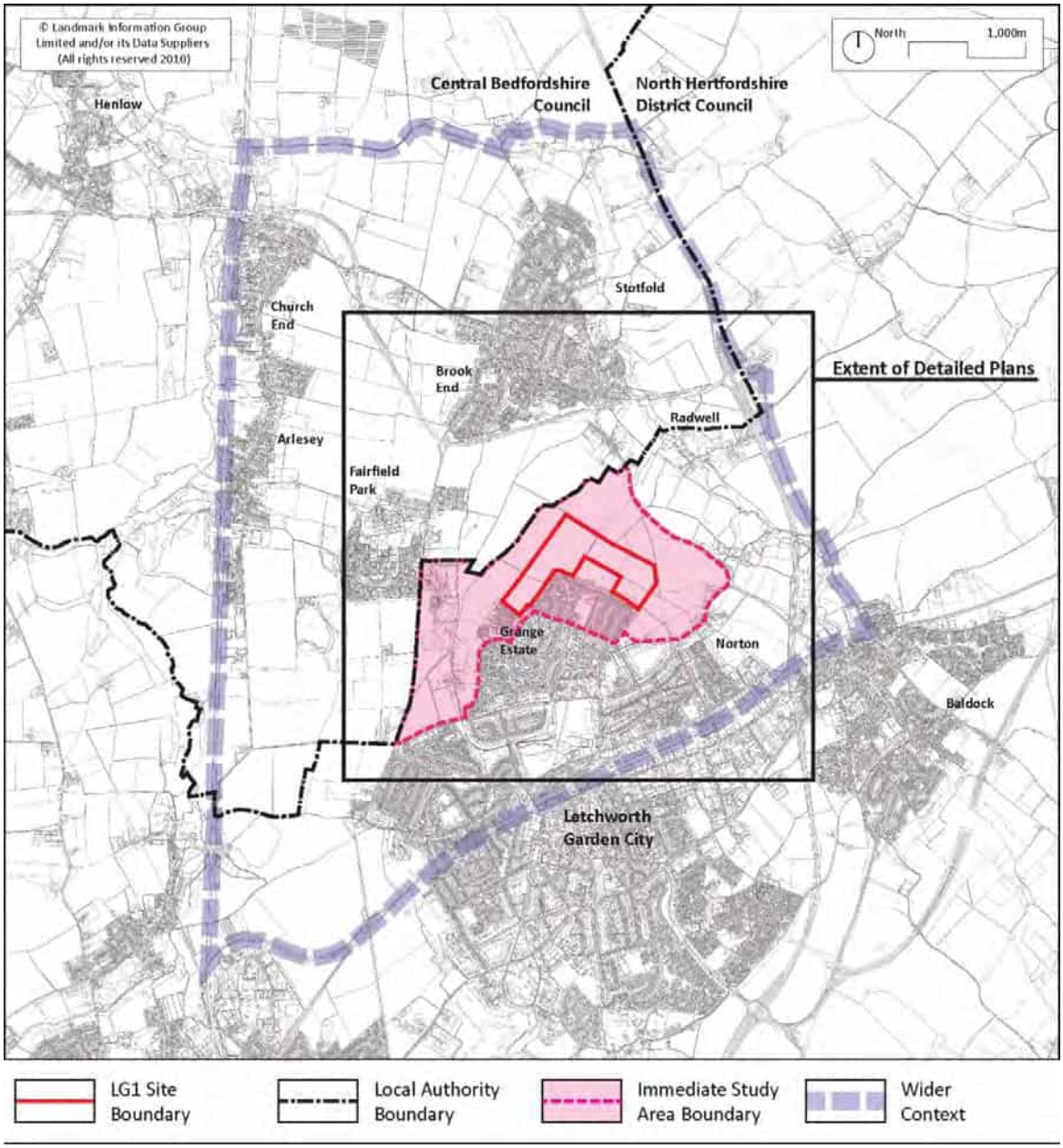
- An Approach to Landscape Character Assessment[1] (Natural England / 2014)
- An Approach to Landscape Sensitivity Assessment[2] (Natural England / 2019)

The landscape and green infrastructure criteria used in the assessment are described in the report and the detailed field survey templates and site-based survey reports are provided in Annex A and B.

[1] Natural England, 2014. An Approach to Landscape Character Assessment. Christine Tudor, October 2014. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691184/landscape-character-assessment.pdf

[2] Natural England, 2019. An Approach to Landscape Sensitivity Assessment - to inform spatial planning and land management. Christine Tudor, June 2019. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817928/landscape-sensitivity-assessment-2019.pdf

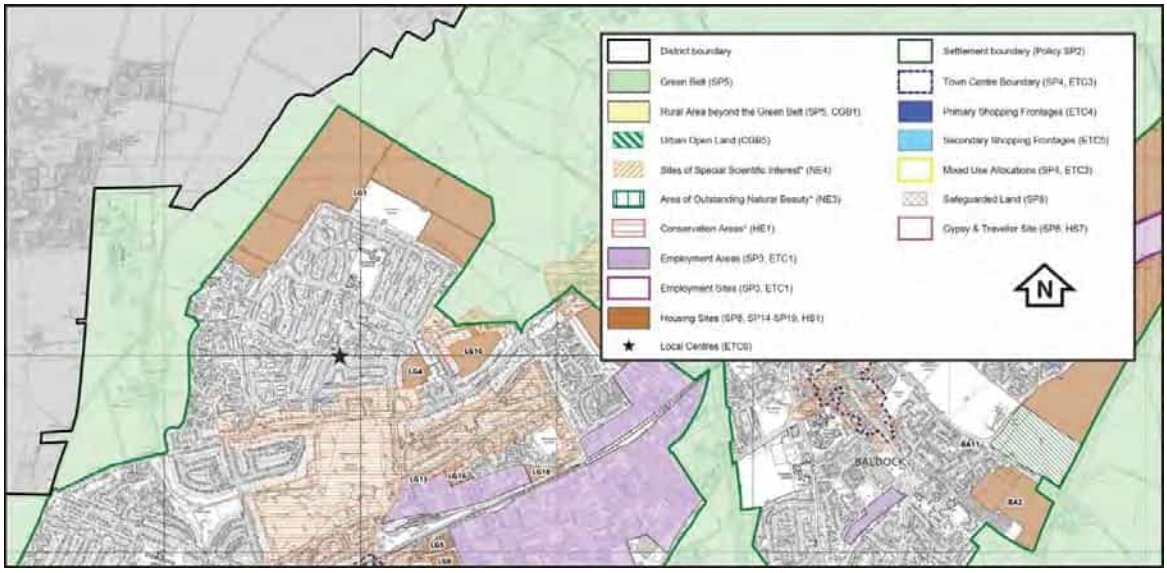
Figure 1.1 - Orientation Plan and Study Area



Site location and local planning context

1.5 LG1 is located close to the northern boundary of North Herts Council (NHC) and Central Bedfordshire Council (CBC) as indicated in Figure 1.1. This indicates both the immediate study area boundary for LG1 and the wider landscape context. This study follows NHC Policy but also takes account of relevant landscape and green infrastructure planning policy and data from both local authorities. A high-level appraisal of the strategic landscape context includes the surrounding settlements of Fairfield Park, Arlesey, Church End, Stotfold and Baldock. The detailed Landscape Character and Sensitivity Assessment focus on LG1 and its immediate surroundings.

Figure 1.2 - Excerpt from NHC Local Plan 2011 - 2031 Policies Map B, Letchworth Garden City



Source - NHC Local Plan 2011-2031 https://www.north-herts.gov.uk/north-herts-local-plan-2011-2031

1.6 The NHC adopted Local Plan 2011-2031 and Proposal Map (NHC/2022) sets the allocation boundary for LG1 and is shown in Figure 1.2. This Strategic Housing Site is for a new neighbourhood of approximately 900 homes. A comprehensive and deliverable Strategic Masterplan for the entire allocation should follow and implement Garden City principles.

1.7 The Local Plan notes that 'although development of the town to Ebenezer Howard's original vision of 32,000 residents has been achieved, it is considered there remains scope for a sensitive extension of the town to the north, which respects the town's original ideals while making provision for the needs of the 21st Century' (NHC/2022, Para 4.208). Landscape and green infrastructure are integral components of the character and identity of the Garden City and the masterplan will need to demonstrate how these principles will be incorporated.

Preceding landscape assessment

1.8 A previous assessment of the landscape sensitivity of the land to the north of Letchworth was undertaken in 2013 (Land North of Letchworth: Landscape Sensitivity Study[3], LUC/2013). The boundary of the study extended beyond the LG1 boundary and sub-divided the study area into two separate character areas. The content of this previous study has been taken into account although NHC requires a finer-grained appraisal of character and sensitivity for the planning baseline for LG1. Other relevant landscape and green infrastructure studies have also been taken into account during the desktop research and these are referenced where appropriate throughout the document.

[3] LUC, 2013. Land North of Letchworth: Landscape sensitivity study. Final Report to North Hertfordshire District Council. Prepared by LUC, January 2013. https://www.north-herts.gov.uk/sites/default/files/CG6%20Land%20North%20of%20Letchworth%20-%20Landscape%20Sensitivity%20Study.pdf

2.0 LANDSCAPE AND GREEN INFRASTRUCTURE CONTEXT

2.1 LG1 is located on the northern boundary of Letchworth between the suburban neighbourhood of the Grange Estate and open agricultural fields. The site is close to the boundary of North Herts Council whilst much of the northern and western context of the site falls within Central Bedfordshire Council.

2.2 The landscape and green infrastructure context and catchment of the site encompasses a variety of urban, suburban and rural qualities. These include public open spaces for recreation, an extensive network of footpaths and a national cycle route, a community orchard, a mosaic of arable fields bounded by established hedgerows and shelter belts, modest river corridors and woodlands and a small number of local nature reserves. There is an established and prominent pattern of settlements to the north, west and east of the site including several housing development sites.

Planning Policy Context

2.3 The National Planning Policy Framework[4] (MHCLG/2021) defines green infrastructure as 'a network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity' (NPPF, page 67). In conserving and enhancing the natural environment planning measures should address climate change mitigation and adaptation and 'take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure' (NPPF, para 175).

2.4 The current **North Hertfordshire Local Plan 2011-2031**[5] was adopted in November 2022 (NHC/2022) and provides the current planning framework for the district. The Foreword acknowledges that 'North Hertfordshire has a wide range of green infrastructure and environmental assets of local, regional and national importance. The plan seeks to protect, maintain and enhance the historical and natural environment. Policies encourage the provision of open space within new development to promote healthy lifestyles, sport, play and recreation' (page 1). The Spatial Vision describes how North Hertfordshire aspires to be in 2031, where 'new green infrastructure will have enhanced the network of green corridors linking settlements to the open countryside, providing greater opportunities for healthy lifestyles' (para 3.6, page 36). The plan includes a set of Strategic Policies (SP) and policies for the Natural Environment (NE) that are relevant to this study.

2.5 **Policy SP9**: Design and Sustainability - requires strategic masterplans and planning applications for strategic housing sites to create an 'accessible multi-functional green infrastructure network' (SP9 / para c. vi, page 69-70) that provides:

[4] MHCLG (2021) National Planning Policy Framework, revised on 20 July 2021, Department for Levelling Up, Housing and Communities. https://www.gov.uk/government/publications/national-planning-policy-framework--2
[5] NHC (2022) Local Plan 2011-2031, adopted 8 November 2022. https://www.north-herts.gov.uk/north-herts-local-plan-2011-2031

- a key structuring and functional place-making feature supporting healthy lifestyles, sport, play and recreation linking into the wider Green Infrastructure Network; and
- a high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network

2.6 **Policy SP12**: Green infrastructure, landscape and biodiversity - will ensure the natural environment is protected and enhanced whilst there is significant growth during the plan period (page 78). This includes the need to respect landscape character, scenic beauty and locally sensitive features as well as:

- Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and seek opportunities for ensure measurable net gains for biodiversity (para d).

2.7 **Policy SP15**: Site LG1 - North of Letchworth Garden City - provides the policy framework for this strategic housing site that is allocated for a new neighbourhood of approximately 900 homes (page 87-88). Development proposals should provide a variety of planning and masterplanning requirements including:

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained and any hedgerow losses kept to a minimum
i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach
j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east
k) Diversion and / or re-provision of the Letchworth Greenway to provide a revised route around the new urban edge

2.8 **Policy NE1**: Strategic green infrastructure - seeks to protect, conserve and where possible enhance the strategic green infrastructure network associated with development. Avoiding loss, fragmentation, severance or negative impact on the function of the network (page 149).

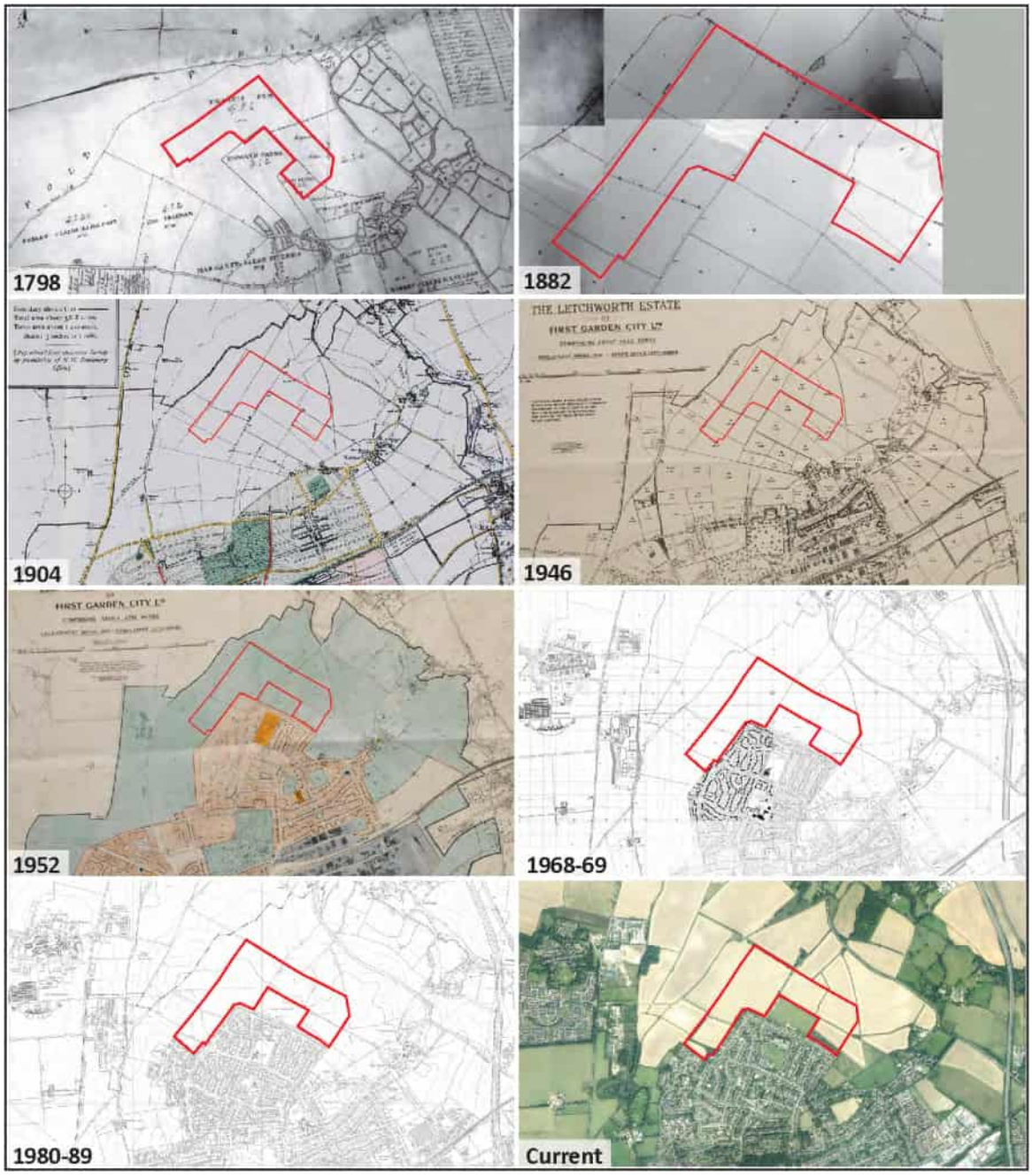
2.9 **Policy NE2**: Landscape - seeks to respect the sensitivities of the relevant landscape character area. Development should not cause unacceptable harm to the character and appearance of the surrounding area or the landscape character area in which the site is located (page 150).

2.10 **Policy NE4**: Biodiversity and geological sites - includes a requirement that all development delivers measurable net gains for biodiversity and geodiversity, contribute to ecological networks and the water environment, and/or restore degraded or isolated habitats where possible (page 153-154). Development proposals should:

- Integrate appropriate landscape buffers including 12 metres of complimentary habitat should be provided around trees and hedgerows and provide appropriate root protection for mature trees (Policy NE4 d).

2.11 The requirement for a 12-metre buffer is referenced back to the North Hertfordshire District Green Infrastructure Plan[6] (LUC/2009). This seeks to retain existing tree and hedgerow lines within future development to provide benefits in terms of connectivity and shading/cooling. Appropriate buffer and root protection zones (12 metres, or the root protection area defined by a tree survey, whichever is the greater) (Para 6.3 p137).

Figure 2.1 - Sequence of Historic Maps



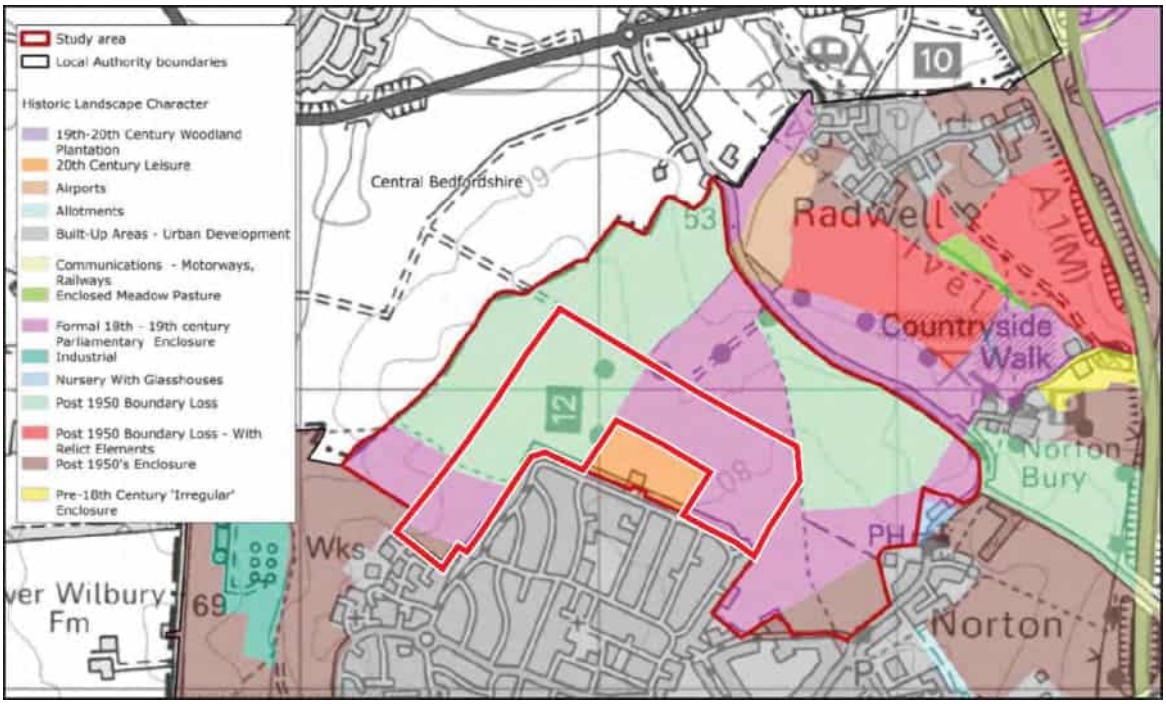
Source - Archaeological Solutions (28 Oct 2016) and Letchworth Garden City Heritage Foundation

[6] LUC (2009) North Hertfordshire District Green Infrastructure Plan. Final Report for North Hertfordshire District Council, Section 6, para 6.3, p137 https://www.north-herts.gov.uk/sites/northherts-cms/files/NHE15%20Green%20Infrastructure%20Report%20August%202009_Part1.pdf

Historic Development

2.12 A review of historic plans between 1798 and 1989 (Figure 2.1) indicate that some field boundaries date back to pre-1798 whilst the main pattern of field boundaries was established during the 19th Century. The construction of the Grange Estate marked the northern expansion of Letchworth after the Second World War and the boundary of the Letchworth Estate is most clearly shown on the coloured plan of 1952. This land ownership has changed over time and incorporates a variety of commercial and residential land uses, open space for recreation and land for agricultural production. The Historical Development of Letchworth is described in further detail in the Built Heritage Baseline Appraisal (Turley, 2022, Section 4).

Figure 2.2 - Excerpt of Hertfordshire Historic Landscape Characterisation Plan with LG1 Site Boundary



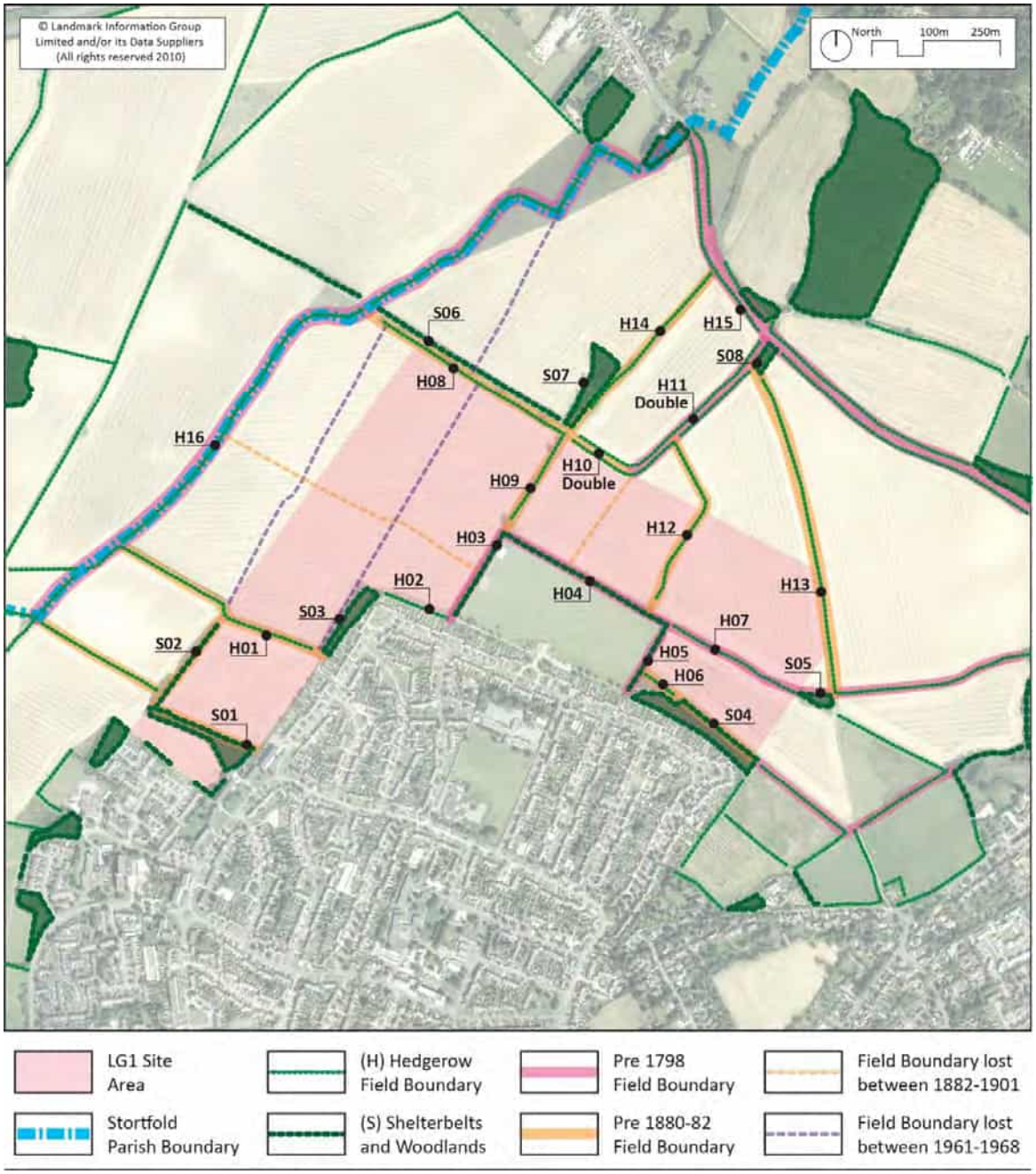
Source - LUC (2013) Land north of Letchworth, Landscape Sensitivity Study Figure 3.3, page 10

2.13 The Hertfordshire Historic Landscape Characterisation assessment shown in Figure 2.2 indicates much of the agricultural land was subdivided through the formal 18th - 19th Century Parliamentary Enclosure. The most significant area of change is the loss of boundaries through the creation of larger fields within and adjacent to the north-western boundary of LG1 where there has been some post-1950 boundary loss.

2.14 The historic plans indicate that the traditional pattern of field boundaries generally remained intact through the first half of the 20th Century and much of this pattern continues to remain the same to the present day. Some of the field boundaries that fall within LG1 are predominately marked by mature hedgerows with some incorporating drainage ditches and mature trees. Some field boundaries to the north and west also include an irregular pattern of woodland copses and shelter belts.

2.15 Figure 2.3 provides an audit of the Hedgerows, Shelterbelts and Woodlands within LG1. The characteristics and qualities are assessed in further detail in the BS 5837 Tree and Hedgerow Survey (PR Newson / February 2022) and the Preliminary Ecological Assessment (TEP / November 2022). A discussion on the historic alignment of field boundaries is presented in the Archaeological Desk-based Assessment[7] and the Built Heritage Baseline Appraisal[8].

Figure 2.3 - Audit of Hedgerows and Shelterbelts



[7] Archaeological Solutions (2016) Land to the North of Letchworth, Hertfordshire, Areas 4 & 10, An Archaeological Desk-Based Assessment, 28 October 2016, Figure 7, page 29 and Figure 9, page 31.
[8] Turley (2022) Built Heritage Baseline Appraisal, Land to the North of Letchworth Garden City, November 2022, Paragraph 3.32-3.34, Section 4 Page 12-18 and Figure 4.1, page 14

2.16 Important hedgerows are protected from removal by the Hedgerows Regulations 1997[9] (as amended). This provides a means to value hedgerows by taking account of a variety of historical and environmental characteristics including maturity and structure which affects their functional value (TEP - EDS/2022[10], para 3.32-3.33). Table 2.1 collates the Heritage and Ecological appraisals of the field boundaries and hedgerows illustrated in Figure 2.3 in accordance with the Hedgerow Regulations. It identifies those hedgerows that can be considered 'important' under the regulations.

Table 2.1 - Hedgerow and Field Boundary Assessment following Hedgerow Regulations 1997

No.	**Hedgerow Considered Important**	Existed for 30 Years or more	**Archaeology and History**		**Wildlife and Landscape**		
			Marks historic boundary[1]	Pre-dates field enclosure[2]	Contains protected species[3]	Referred to in biological records[4]	Defined No. of woody species[5]
H01	No	Yes	No	No	Data to follow survey in Spring 2023		
H02	No	Yes	No	No			
H03	**Yes**	Yes	No	Yes			
H04	**Yes**	Yes	No	Yes			
H05	**Yes**	Yes	No	Yes			
H06	No	Yes	No	No			
H07	**Yes**	Yes	No	Yes			
H08	No	Yes	No	No			
H09	No	Yes	No	No			
H10	No	Yes	No	No			
H11	**Yes**	Yes	No	Yes			
H12	No	Yes	No	No			
H13	No	Yes	No	No			
H14	No	Yes	No	No			
H15	**Yes**	Yes	No	Yes			
H16	**Yes**	Yes	Yes	Yes			

1	Hedgerow marks the boundary, or part of the boundary, of at least one historic (pre-1850) parish or township (Part II, Section 1)
2	Recorded as an integral part of a field system pre-dating the Inclosure Act (1845) or is part of, or visibly related to, any building or other feature associated with such a system (Part II, Section 5)
3	Hedgerow contains species protected by the Wildlife and Countryside Act 1981 (Part II, Section 6 (1) (a) and sub-paragraph (3) and (4))
4	Hedgerow is referred to in a record held immediately before the relevant date [Hedgerows Regulations 1997] by a biological record centre (Part II, Section 6 (1) (b))
5	Hedgerow includes a defined number of woody species and features (Part II, Section 7 (1))

[9] The Hedgerow Regulations 1997 (SI 1997/1167) https://www.legislation.gov.uk/uksi/1997/1160/
[10] TEP (2022) Ecological Desk Study, November 2022, Version 1.0

2.17 The Archaeological Assessment refers to the hedgebank that marks the Stortfold parish boundary (Figure 2.3 / H16). This boundary is described in an estate charter dating to 1007, whilst the hedge may be comparatively recent (Archaeological Solutions / 2016, para 4.2.9). Some of the existing LG1 field boundaries are indicated on the 1798 Ordnance Survey map of land enclosures and therefore pre-date the Enclosure Act (1845). Many of the current field boundaries are also shown on the Ordnance Survey map of 1882 that also indicates some tree planting along several of the field boundaries. However, the historic presence or status of hedgerows cannot be interpreted from the historic maps that mainly indicate field boundaries.

2.18 The Built Heritage Baseline Appraisal includes an assessment of the of the historic field pattern under the Hedgerow Regulations 1997 (Turley/2022, para 3.32-3.34). It notes that seven hedgerows may be considered 'important' based solely on the archaeology and history criteria (Hedges H03-05, H07, H11, H15-16). All of these hedgerows are located on the line of field boundaries (Figure 2.3) that appear on the 1798 enclosure map and can therefore be considered to form part of a field system pre-dating the Enclosure Acts (Criteria 5). In addition, the hedgerow (H16) located on the Stotfold parish boundary dates to 1007 (Criteria 1).

2.19 A partial Hedgerow Regulations Assessment was undertaken in August 2022 (TEP PEA/2022[11], para 2.15). However, several species that might determine whether a hedgerow is 'Important' were not in flower or able to be identified in August. A further walkover survey to look for these species will be undertaken in April 2023. A Hedgerow Regulations Assessment Report will be produced by TEP once this additional walkover survey is undertaken.

Green Infrastructure Policy Context

2.20 Relevant strategic green infrastructure policy that provides the environmental context for LG1 is available at a variety of scales. This includes county and district strategies for both Hertfordshire and Bedfordshire, due to the close proximity of the local authority boundary, as well as specific green infrastructure initiatives including:

- North Hertfordshire District Green Infrastructure Plan[12] (LUC/2009)
- Hertfordshire Strategic Green Infrastructure Plan[13] (LUC/2011)
- Greenspace Management Strategy for North Herts 2022-2027[14] (NHC/2022)
- Bedfordshire and Luton Strategic Green Infrastructure Pan[15] (BLGIC/2007)
- Mid-Bedfordshire Green Infrastructure Plan[16] (GT/2008)

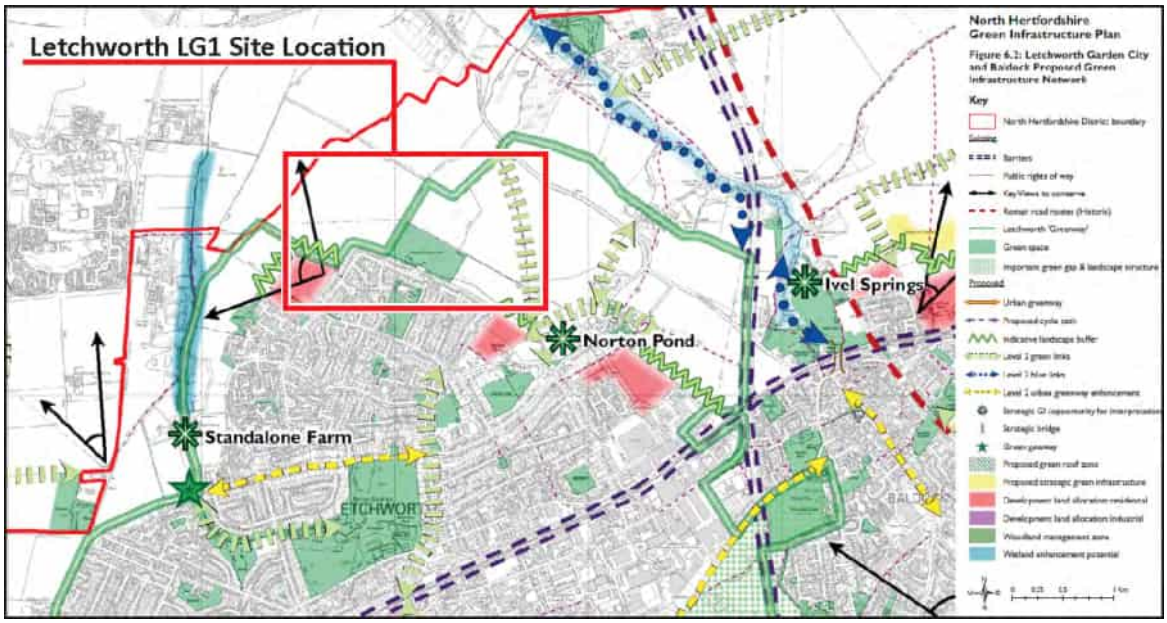
[11] TEP (2022) Preliminary Ecological Assessment, November 2022, Version 1.0
[12] LUC (2009) North Hertfordshire District Green Infrastructure Plan. Final Report for North Hertfordshire District Council. https://www.north-herts.gov.uk/sites/northherts-cms/files/NHE15%20Green%20Infrastructure%20Report%20August%202009_Part1.pdf
[13] LUC (2011) Hertfordshire Strategic Green Infrastructure Plan (Incorporating the GreenArc Area), Hertfordshire County Council, https://www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/landscape/hertfordshire-strategic-gi-plan-2011.pdf
[14] NHC (2022) Greenspace Management Strategy 2022-2027, North Herts Council. https://www.north-herts.gov.uk/sites/default/files/2022-04/Green%20Space%20Management%20Strategy%202022-2027.pdf
[15] BLGIC (2007) Bedfordshire and Luton Strategic Green Infrastructure Pan Bedfordshire and Luton Green Infrastructure Consortium. https://bedfordshirenaturally.com/wp-content/uploads/2015/01/GI-plan-leaflet.pdf
[16] Greensand Trust (2008) Mid-Bedfordshire Green Infrastructure Plan https://bedsrcc.org.uk/wp-content/uploads/2015/03/Mid-Beds-GI-Plan-ii.pdf

- Central Bedfordshire Design Guide, Section 2, Green Infrastructure[17] (CBC/2014)

2.21 The North Hertfordshire District Green Infrastructure Plan (LUC/2009) provides a review of Green Infrastructure assets including designated sites, green spaces and recreation grounds. The Strategic Green Infrastructure Network Plan (LUC/2009, Fig 4.1) indicates the significance of the Garden City Greenway whilst more detailed proposals within the Letchworth Garden City and Baldock Green Infrastructure Network are shown in Figure 2.4 (LUC/2009, Fig 6.2). The plan predates the current allocation of LG1 but includes landscape buffers and Level 2 green links from Norton Village towards Stotfold and Radwell Meadows. Norton Pond is identified as a Strategic Opportunity for green infrastructure interpretation and key views from the west towards Fairfield Park are recommended to be conserved.

2.22 The Mid-Bedfordshire Green Infrastructure Plan (Greensand Trust/2008) identifies the landscape in Central Bedfordshire to the north and west of LG1 to be a priority Landscape Opportunity Area. These are areas where the most advantage can be gained from GI investment in conservation, enhancement or renewal including the enhancement of the rural-urban fringe, transport corridors and improvements in hedgerows and field boundaries. The Green Infrastructure Plan also identifies opportunities to improve habitat networks and in particular woodland, wetlands and waterways and other priority habitats. These include opportunities to protect, create and enhance chalk grasslands. Further design guidance for green infrastructure is provided in the Central Bedfordshire Design Guide (CBC/2014) that is currently being updated.

Figure 2.4 - Excerpt of Letchworth Garden City and Baldock Proposed Green Infrastructure Network



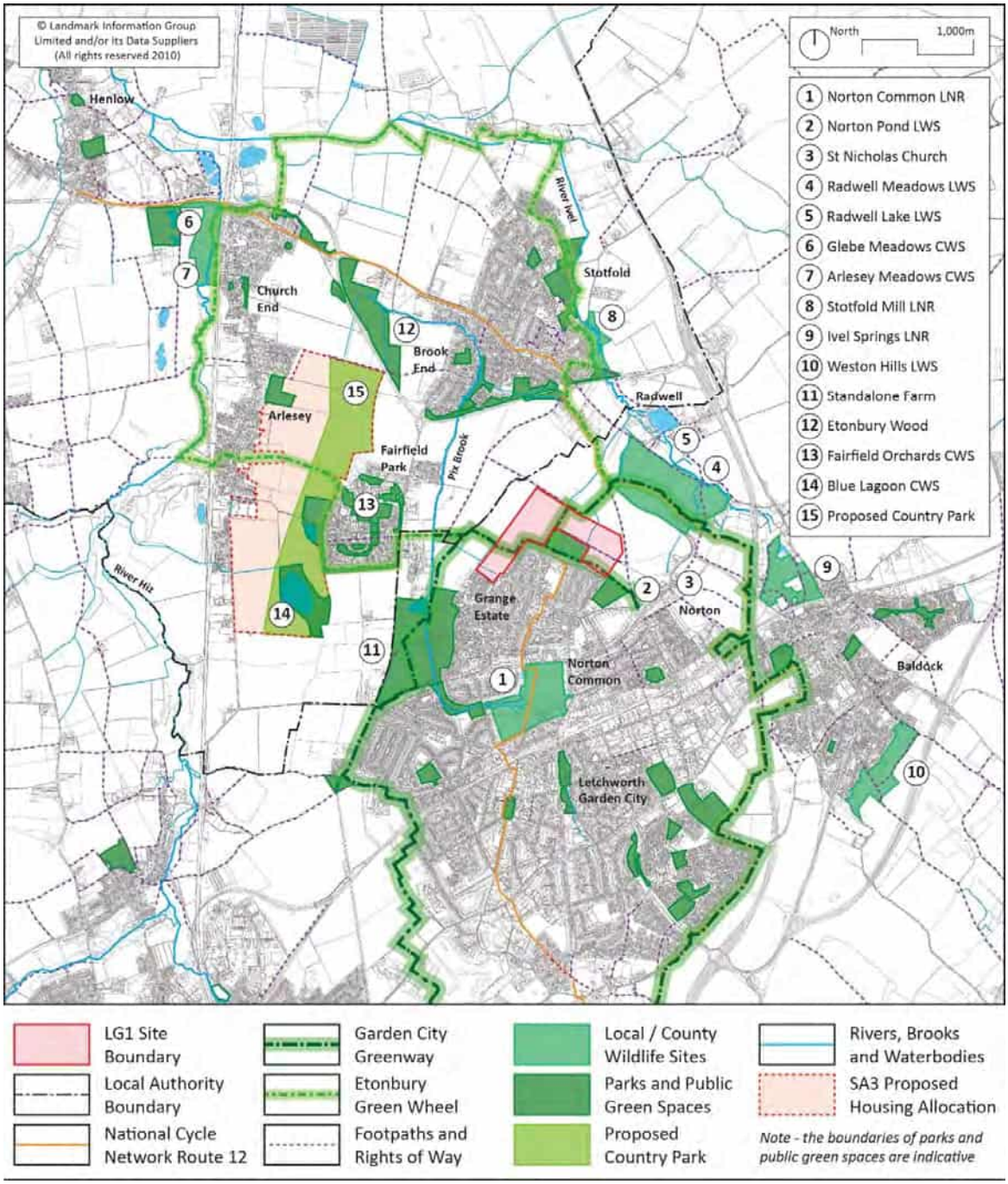
Source - LUC (2009) North Hertfordshire District Green Infrastructure Plan, Figure 6.2

[17] CBC (2014) Central Bedfordshire Design Guide, Section 2, Green Infrastructure, Climate Change Adaptation & Sustainable Buildings, Adopted 18 march 2014. https://www.centralbedfordshire.gov.uk/migrated_images/green-infrastructure_tcm3-2096.pdf

Strategic Green Infrastructure Network

2.23 The strategic green infrastructure network within the catchment of LG1 is illustrated in Figure 2.5. This includes the drainage networks and wetland corridors of the River Hiz, the Pix Brook and the River Ivel; key recreational routes of the Garden City Greenway, the Etonbury Green Wheel, the long-distance National Cycle Network; designated sites for recreation and nature conservation; and publicly accessible parks and green spaces.

Figure 2.5 - Current Strategic Green Infrastructure Network for LG1



2.24 The Letchworth Garden City Greenway[18] (LGCHF/2019) is the most established recreational green network and natural corridor in the area, providing a 13.6 mile walking, running and cycling route that circumnavigates the Garden City. The northern section passes through LG1 linking Standalone Farm to the west and Radwell Meadows to the north. The route of the Greenway is well signed although the recreational facilities within northern section are limited

[18] Letchworth Garden City Heritage Foundation (2019) Letchworth Garden City Greenway. https://www.discover-letchworth.com/sites/default/files/documents/2021-07/Greenway_A2FoldOutMap_ARTWORK_Sept2019_DIGITAL%20no%20watermarks.pdf

to a few benches for seating. The LGCHF plans to implement an improvement scheme for the Greenway including more benches, bins and signs.

2.25 The Etonbury Green Wheel[19] (CBC/2018) is a relatively new environmental initiative to improve access to surrounding green spaces forming a circuit around the communities of Arlesey, Stotfold and Fairfield. The masterplan commissioned by Central Bedfordshire Council sets out a long-term vision linking local communities with publicly accessible routes formed by a 'rim' of the main walking and cycling route supported by 'spokes' of additional linear paths and corridors. The southern section of the Green Wheel passes through LG1 connecting Fairfield Park with Radwell and Stotfold.

2.26 There are fifteen non-statutory wildlife sites within a 2km catchment of LG1. These are known as Local Wildlife Sites (LWS) in Hertfordshire and County Wildlife Sites (CWS) in Bedfordshire. The Ecological Desk Study provides a table of these sites that have recognised wildlife and biodiversity value and include Norton Pond LWS, Radwell Meadows LWS, Norton Common LWS, Ivel Springs LWS and Stotfold Watermill Wetland CWS (TEP/2022, para 4.4, table 3).

2.27 Habitats of ecological value present in and around the site have been identified in the Preliminary Ecological Assessment that includes a set of target notes and species lists (TEP - PEA/2022, para 3.12 and drawing G9546.002). The main habitats include:

- **Plantation and Semi-natural Broad-leaved Woodland** - provide distinctive small woodland blocks and copses that are located adjacent to the Norton Road, along the northern boundary and within the southern and south-western boundaries of LG1.
- **Dense/continuous and scattered scrub** - these generally mark the boundaries of LG1 with the most dense areas of scrub found adjacent to the Grange Estate. They tend to be dominated by a single species such as bramble, blackthorn, grey willow and nettle where bramble does not cover the ground.
- **Poor semi-improved grassland** - several small areas of neutral grassland dominated by false oat-grass and occasional great willowherb and other ruderal species. These generally mark field boundaries and are adjacent to hedgerows and are likely to have become established through the grant-funded Countryside Stewardship scheme.
- **Tall Ruderal** - are found in small quantities across LG1 along the south-eastern and south-western boundaries and adjacent to the Norton Road.
- **Swamp** - there is a small area dominated by common reed to the east of the copse on the northern boundary of LG1.
- **Dry ditches** - there are several major ditches located alongside the main hedgerows across LG1, all were dry at the time of the surveys.
- **Arable** - was recorded as the dominant habitat across LG1 and most of the arable fields appear to be used for cereal crops with cereal stubble being the predominant vegetative cover at the time of the surveys.

[19] CBC (2018) Etonbury Green Wheel Masterplan 2018, Central Bedfordshire Council. https://www.centralbedfordshire.gov.uk/migrated_images/etonbury-green-wheel_tcm3-29198.pdf

2.28 There are a variety of public parks and green spaces within the catchment of LG1 that serve the local communities of Letchworth, Baldock, Fairfield Park, Arlesey and Stotfold. There is a Greenspace Management Strategy for North Herts[20] (NHC/2022) that describes priorities for investment including the renovation of children's play facilities. Figure 2.5 illustrates the location and indicative boundaries of the principle green spaces within the vicinity of LG1 that are publicly accessible. In the absence of more detailed parks and green space strategies for NHC or CBS information has been drawn from a variety of on-line mapping sources including the Ordnance Survey Greenspace Map[21].

2.29 The Central Bedfordshire Local Plan[22] 2015-2035 identifies proposed locations for growth including strategic development sites for housing. Policy SA3 - East of Arlesey, is the nearest site to LG1 in Central Bedfordshire. This is identified on the Local Plan Policies Maps as allocated for a housing-led development consisting of approximately 2,000 dwellings, a relief road and a country park. The policy includes a set of principles of the development including:

3. A country park between the eastern edge of the development and the Settlement Envelope of Fairfield. The country park will comprise a range of different formal and informal typologies to include:

    a. Formal sports provision to the north adjacent to Chase Farm, including associated built development.
    b. Protected habitat areas and enhanced facilities and associated infrastructure to support outdoor and water-based leisure uses, including the existing sailing, swimming and diving uses, in and around the Blue Lagoon to the south.
    c. Open agricultural and/or natural greenspace in the central area, around the western boundaries of Fairfield (including the Green Lagoon), to maintain the existing countryside character and prevent coalescence between Fairfield and the development. Within this area there will be no development, other than that appropriate to open countryside.

    The extent of the country park and individual character areas are defined on the Policies Map and the location of the proposed new country park is shown on Figure 2.5.

[20] NHC (2022) Greenspace Management Strategy 2022-2027, North Herts Council. https://www.north-herts.gov.uk/sites/default/files/2022-04/Green%20Space%20Management%20Strategy%202022-2027.pdf

[21] Ordnance Survey - https://getoutside.ordnancesurvey.co.uk/greenspaces/

[22] CBC (2021) Central Bedfordshire Local Plan 2015-2035, July 2021 https://centralbedfordshire.app.box.com/s/m0skego6ypqvql90wle3p9jslp0edex3

3.0 LG1 LANDSCAPE STRUCTURE

Figure 3.1 - The Garden City Greenway crossing the centre of the LG1

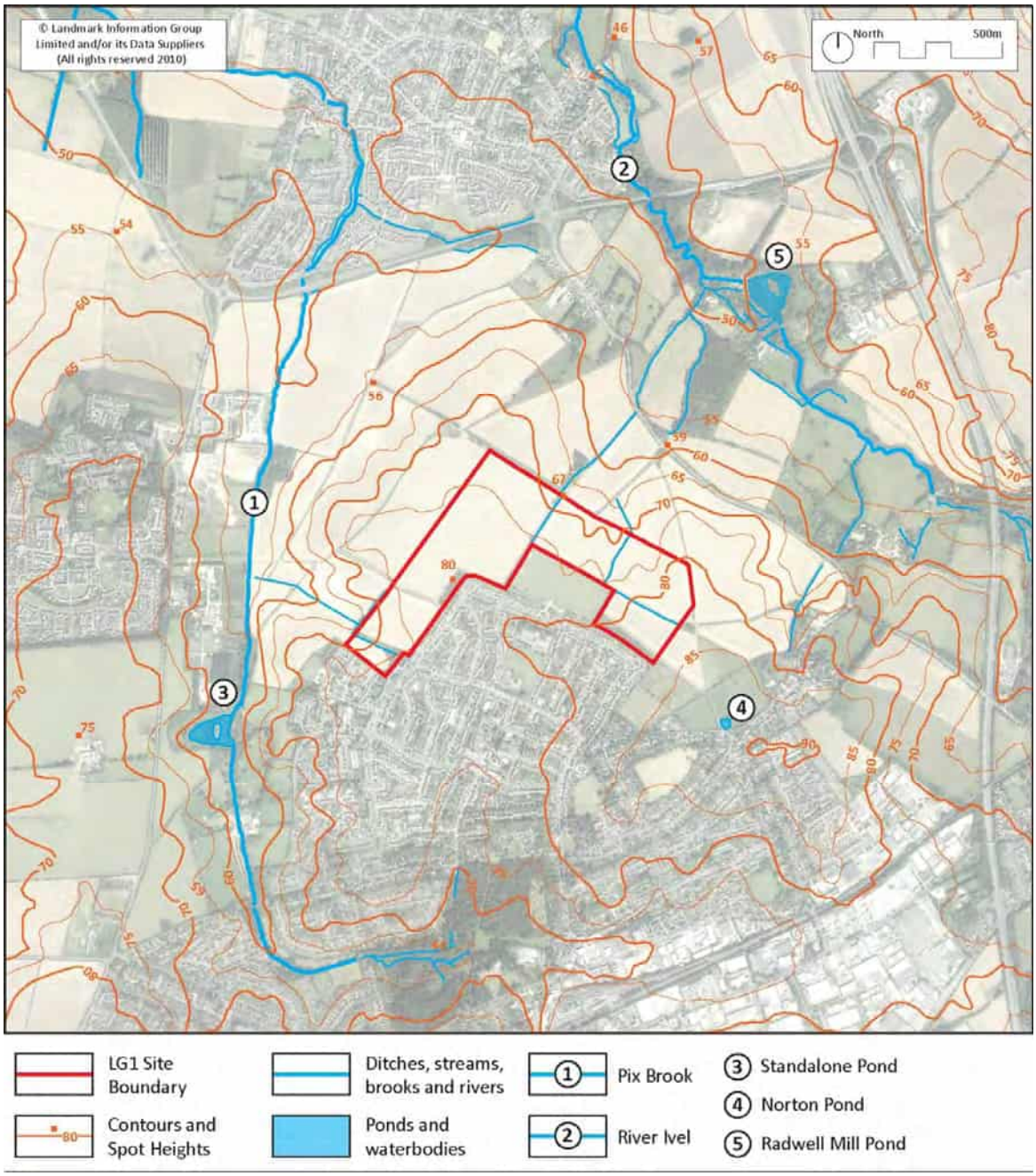
LG1 Site Description

3.1 This section describes the landscape composition and green infrastructure elements of LG1 and includes:

- Topography and Hydrology
- Geology and Soils
- Visibility and Viewpoints
- Footpath and Rights of Way
- Landscape Features

3.2 The site extends and surrounds the northern boundary of the Grange Estate and Grange Recreation Ground. It is a greenfield agricultural site under arable production with a distinct field pattern bisected by a network of mature hedgerows and shelter belts. The land slopes gently to the north offering open views to the west and north from the highest ground on the western section of the site. The site is crossed to the west, centre and east by the Garden City Greenway (Figure 3.1) that provides a popular recreational routed for walking and cycling.

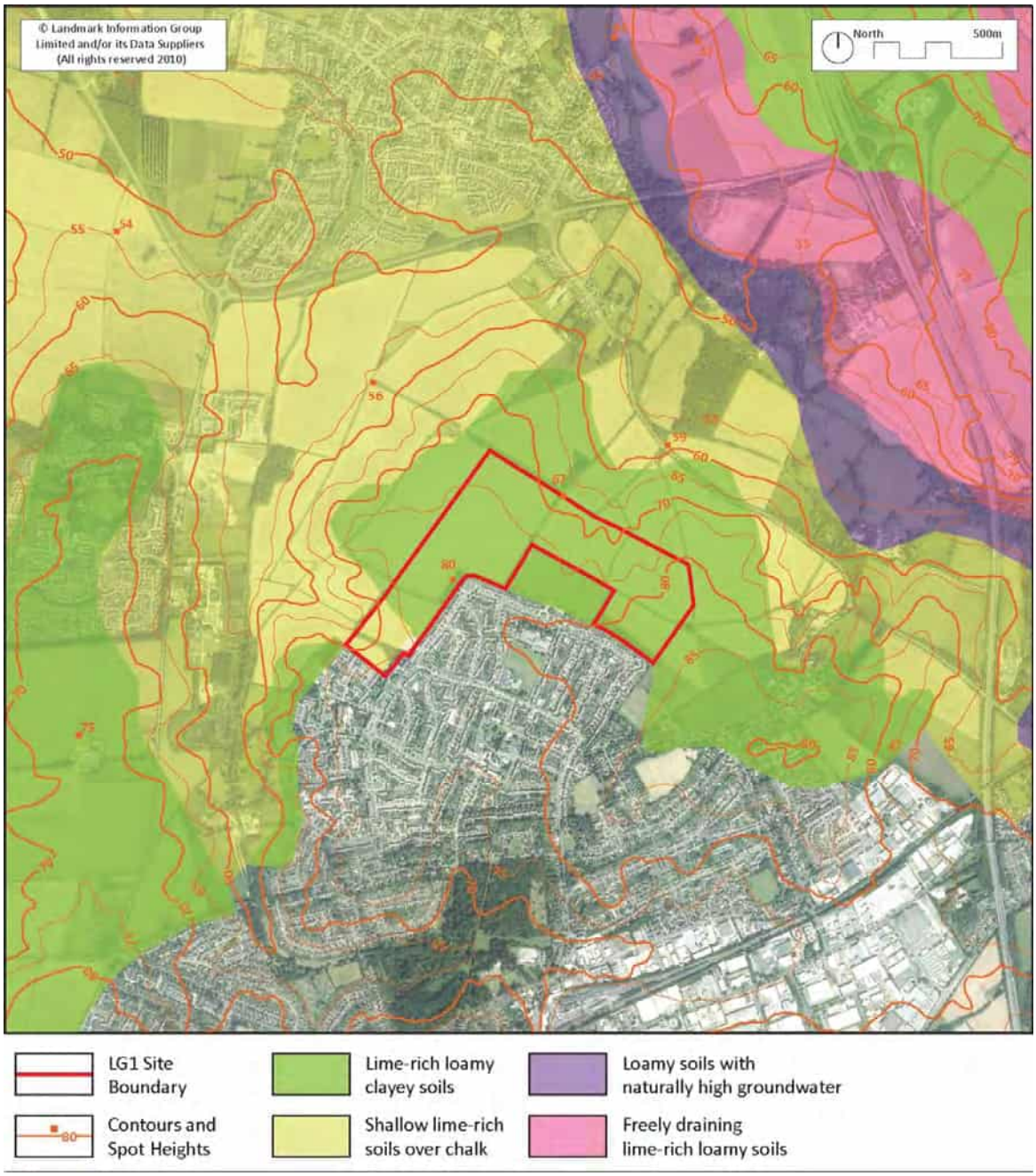
Figure 3.2 - LG1 Topographic and Hydrological Context



Topography and Hydrology

3.3 LG1 is located on high ground to the north of Letchworth and the Grange Estate. Topographically the land falls gently to the north and west and drains via a small number of drainage ditches towards the river corridors of the Pix Brook and River Ivel. The highest point on topographic survey of the site is at the south eastern corner at 83m AOD (Above Ordnance Datum) and the lowest point is at the south western corner at 65m. The lowest point on the northern boundary is at 67m AOD. There are no standing waterbodies on the site with the nearest being the Standalone Farm Pond and the Norton Pond (Figure 3.2).

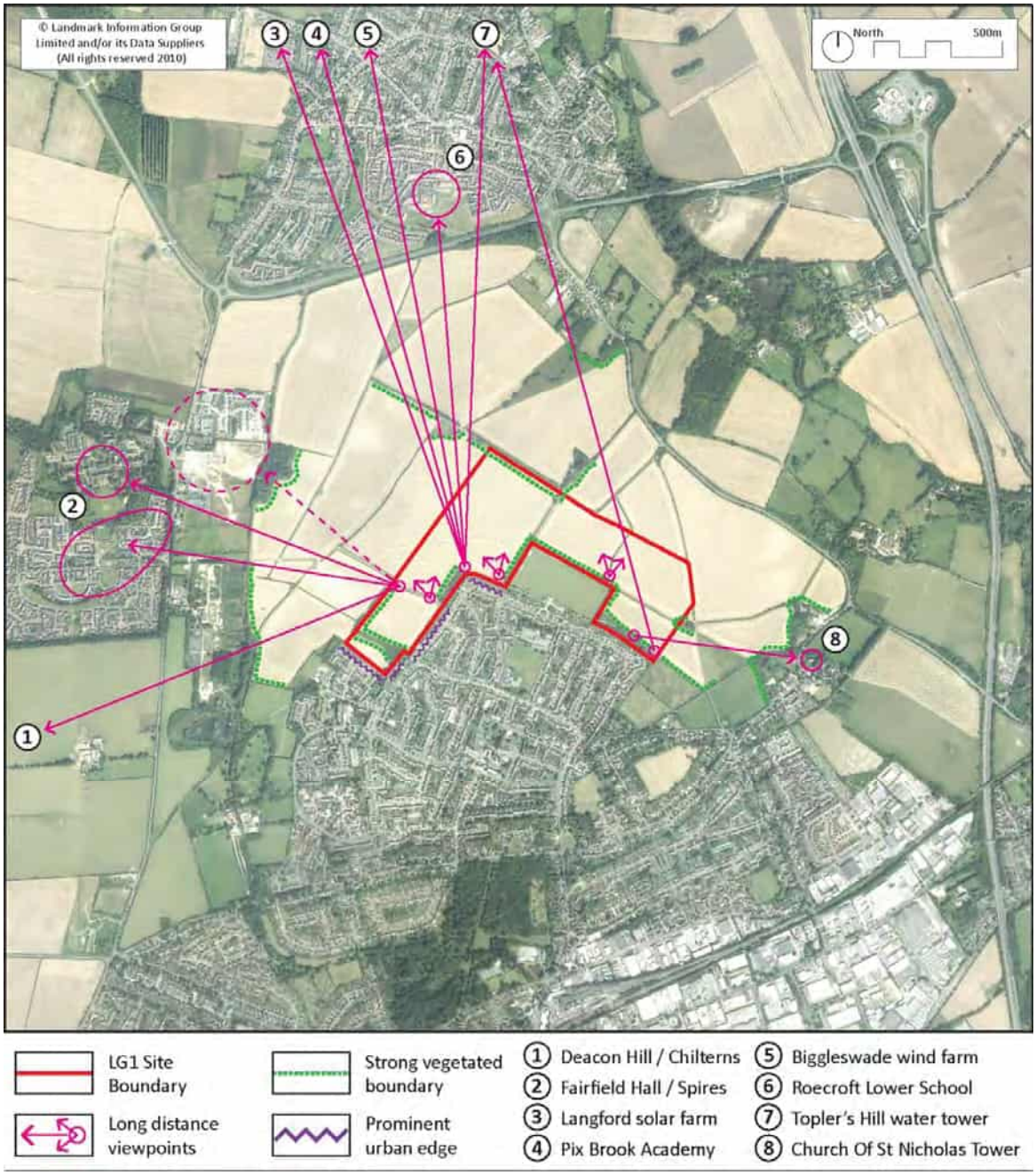
Figure 3.3 - LG1 Soils Context from BGS Soilscapes for England



Geology and Soils

3.4 The British Geological Survey (BGS) records the LG1 is located on Zig Zag Chalk Bedrock with alternations of marls and marly chalks with firm white chalk. This is mainly overlain by superficial deposits of Lowestoft Formation that provides an extensive sheet of chalky till, together with outwash sands and gravels, silts and clays. Data from the Soilscapes for England and Wales is available from the UK Soil Observatory (Figure 3.3) and indicate the soils for LG1 are predominately Lime-rich loamy and clayey soils that may have slightly impeded drainage.

Figure 3.4 - Key Views and Viewpoints from LG1



Visibility and Viewpoints

3.5 The main influences on visibility and viewpoints are the topography and the location of dense hedgerows, shelterbelts and copses. LG1 slopes gently down towards the north and west middle-distance and long-distance views open up from the western section of the site and from the Garden City Greenway (Figure 3.4). The main views to the west are towards the growing development of Fairfield Park. Views to the north include prominent buildings in Stotfold, the solar farm near Langford, the Biggleswade wind farm and the water tower at Topler's Hill. The historic church tower of St Nicholas in Norton is visible to the east.

Figure 3.5 - Images of landmarks viewed from the LG1

3.6 The most prominent landmark visible from the Garden City Greenway on the west of LG1 is the Biggleswade wind farm located 4.4 miles (7.0 Km) due north (Figure 3.5/Image A). There are approximately ten turbines that are set just beyond the crest of the rolling predominately agricultural landscape. In the foreground is the varied roofscape and townscape of Stotfold and the prominent Pix Brook Academy that has a distinct white façade.

3.7 The water tower at Topler's Hill is located 3.5 miles (5.7 Km) almost due north from LG1 and adjacent to the A1 Great North Road that is on the alignment of an historic Roman Road (Figure 3.5/Image B). The water tower is to the south of Biggleswade on high ground (77m AOD / Above Ordnance Datum) that is of a similar elevation to western side of the LG1 site (80m AOD). The water tower can be seen from both the western and eastern sections of the Garden City Greenway that cross LG1.

3.8 The most prominent middle-distance view to the west is towards the settlement of Fairfield Park and the recent development to the east of Stotfold Road including the Fairfield Park Lower School. The historic spires of Fairfield Hall located 0.9 miles (1.4 Km) from LG1 provide a distinctive silhouette surrounded by mature trees on the skyline (Figure 3.5/Image C).

3.9 The tower of St Nicholas Church at Norton Village located 0.4 miles (0.7 Km) to the east of LG1 provides an historic landmark visible from the Garden City Greenway and other footpaths (Figure 3.5/Image D). The tower is framed by mature deciduous trees and vegetation that reduce its visual prominence when the trees are in leaf during the spring and summer months.

3.10 A detailed Landscape and Visual Impact Assessment (LVIA) with verified viewpoints will accompany the LG1 Planning Application. In advance of the LVIA this initial appraisal of the landscape value and visual sensitivity of prominent views will inform the Masterplan Framework development. National Guidance[23] (NE/2014, p55) has the following definitions:

- **Landscape Value** - The relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses national or local consensus, because of its quality, special qualities including perceptual aspects such as scenic beauty, tranquillity or wildness, cultural associations or other conservation issues.

- **Sensitivity** - A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.

3.11 National Guidance[24] (NE/2019, p27) states that 'criteria and indicators will always be dependent upon the landscapes of the study area, and the development scenario(s) being considered, and therefore they must always be specifically tailored to the project'. For LG1 this appraisal of the Value and Sensitivity of views takes account of the following factors:

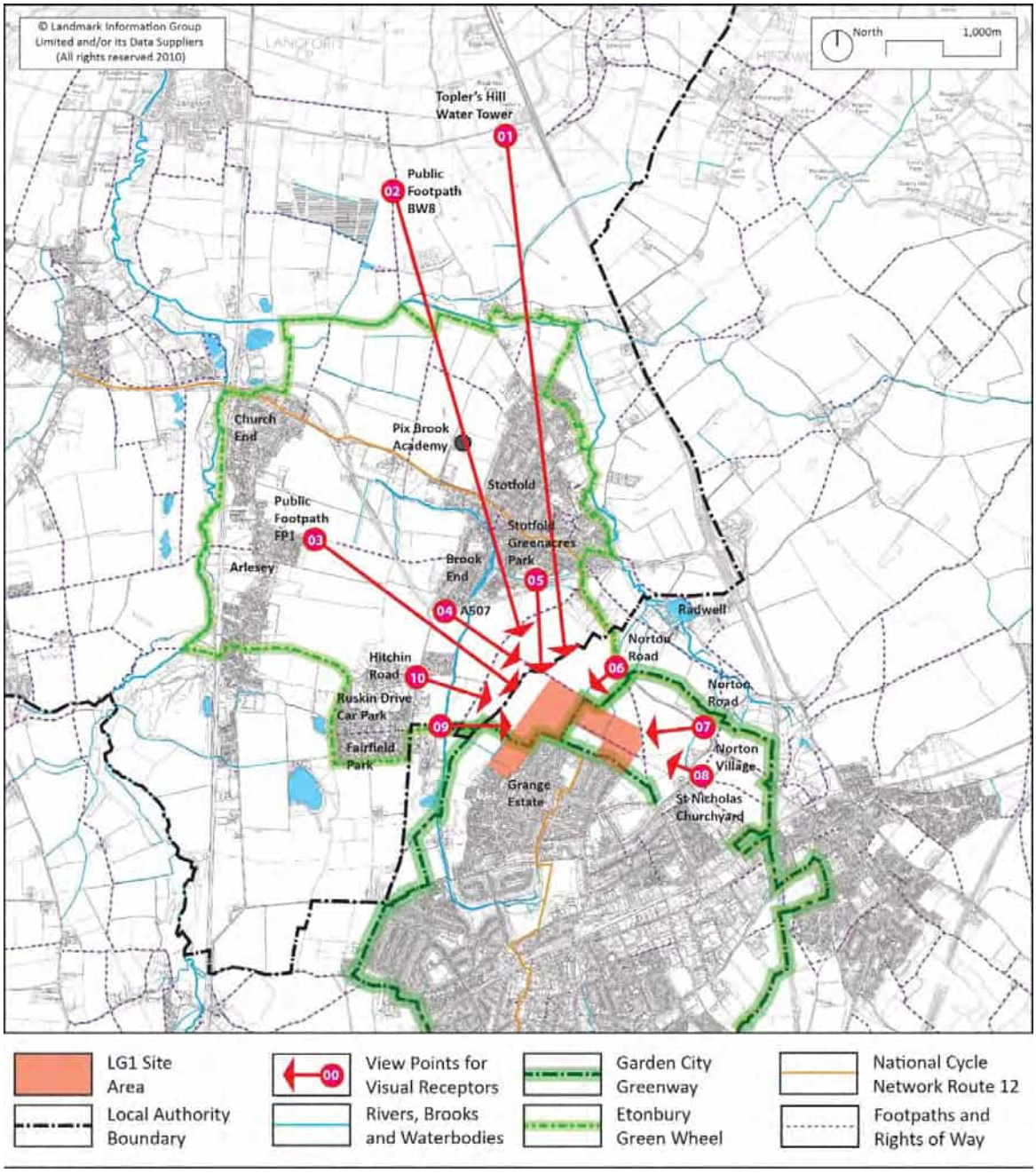
- Important or characteristic views, landmarks and focal points
- Prominent, distinctive and undeveloped skylines
- Intervisibility between LG1 and adjacent settlements
- Intervisibility between LG1 and designated or historic landscapes and features
- Intervisibility between LG1 and public rights of way, other footpaths and roads

3.12 The most prominent long-distance and skyline views from LG1 are towards the north and west of the site. These are from the more open and higher ground and particularly from the Greenway as it crosses the western section of the site (Figure 3.4/Landmarks 1, 3, 5 & 7). South-western views towards the northern extent of the Chilterns AONB at Deacon Hill require good visibility, are generally limited and glimpsed rather than prominent. Views to the north incorporate a relatively common rolling agricultural landscape interspersed with settlements, roads and utility infrastructure (water tower, solar and wind farms). These long-distance views do not include prominent designated landscapes or historic features and have a **Low Medium Landscape Value** and **Low Visual Sensitivity**.

3.13 The most prominent middle-distance views from LG1 are west towards the spires of Fairfield Hall and east towards the Church of St Nicholas Tower (Figure 3.5/Images C & D). The historic spires of Fairfield Hospital and the Church within Fairfield Hall and the Church of St Nicholas in Norton are Grade II Listed. Acknowledging their heritage value, the level of intervisibility between LG1 and these focal points and the proximity of the Norton Conservation Area these two views have a **Medium Landscape Value** and **Medium Visual Sensitivity**.

[23] Natural England, 2014. An Approach to Landscape Character Assessment. Christine Tudor, October 2014
[24] Natural England, 2019. An Approach to Landscape Sensitivity Assessment - to inform spatial planning and land management. Christine Tudor, June 2019

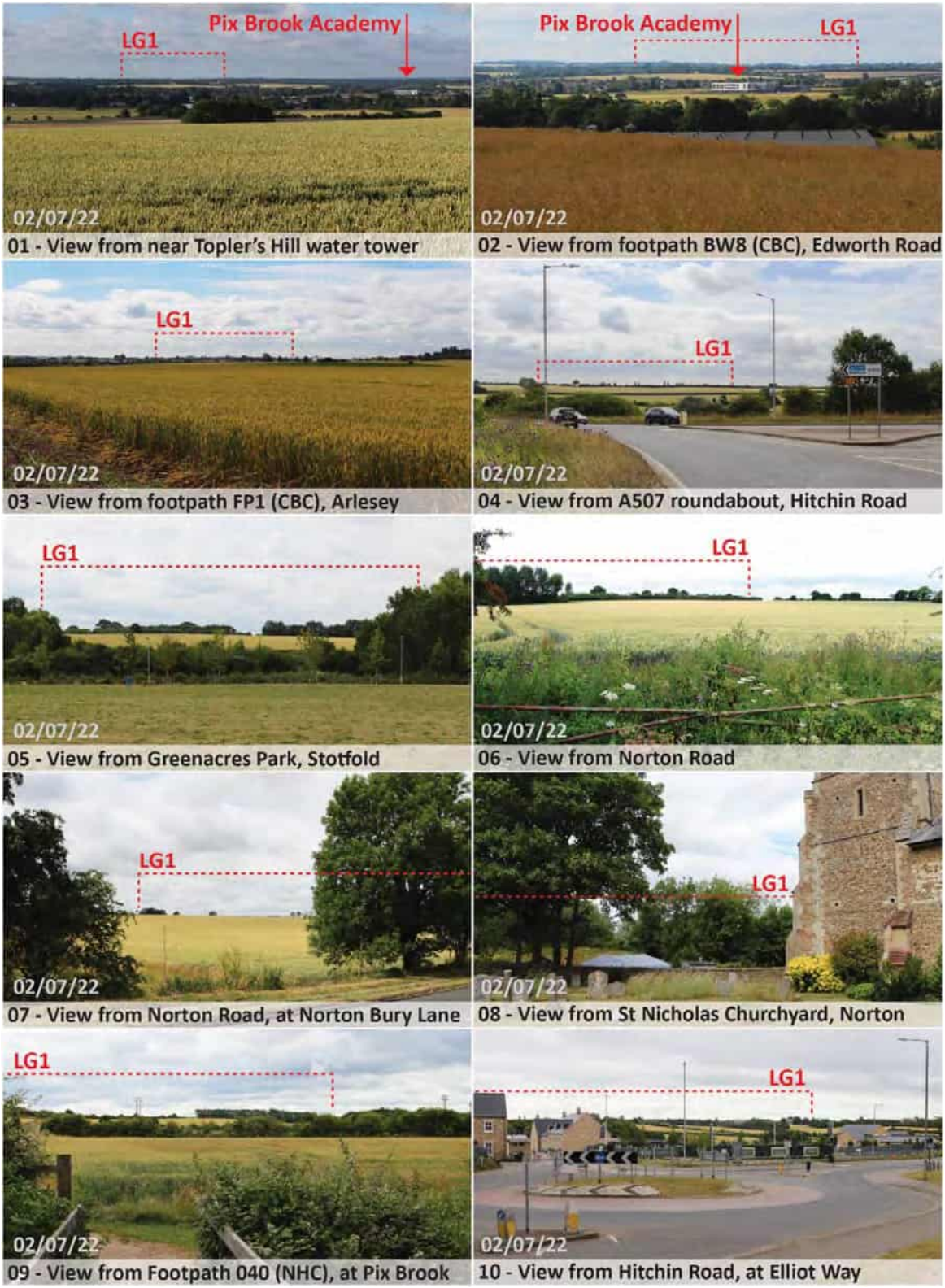
Figure 3.6 - Key Visual Receptors towards LG1



Visual Receptors

3.14 A set of visual receptors in the surrounding landscape have been selected and recorded through field survey (Figure 3.6). The chosen viewpoints are identified as either visually prominent long-distance views from LG1, such as the water tower on Topler's Hill (View 01), views towards LG1 from Footpaths (View 02, 03 & 09) or prominent near distance views from roads including the A507 (View 04), Norton Road (Views 06 & 07) and Hitchin Road (View 10).

Figure 3.7 - Views from Key Visual Receptors towards LG1



Note - The extents shown for LG1 are indicative, verified viewpoints will be provided in a technical LVIA study that will be included in the Planning Application for LG1.

3.15 Table 3.1 provides a description of each viewpoint, its landscape value and visual sensitivity. As noted, the most prominent long-distance visual receptors are from the north and north-west although the rolling topography restricts the viewshed in some locations including the Etonbury Green Wheel footpath to the north of Stotfold and Church End. Roads and footpaths to the north and west of LG1 provide a limited number of middle-distance visual receptors. The existing network of mature hedgerows, shelterbelts and woodlands within and adjacent to LG1 significantly restrict views towards the LG1 site.

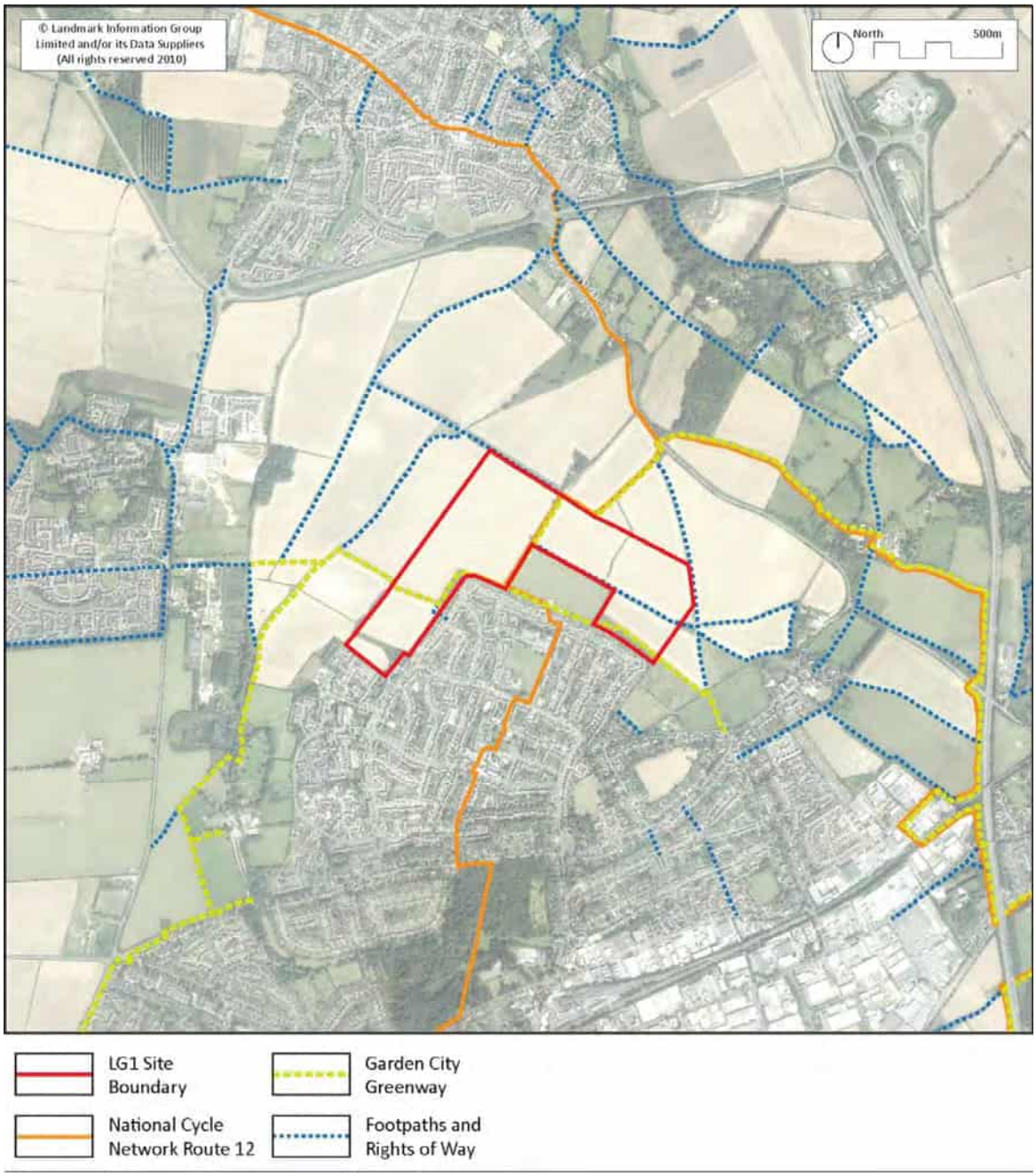
Table 3.1 - Description of key LG1 visual receptors

View	*Description*	*Landscape Value*	*Visual Sensitivity*
01	**View from near Topler's Hill water tower**	**Low**	**Low**
	LG1 is located below the horizon and is partially screened by the field pattern of hedgerows, shelterbelts and woodlands. Due to the long-distance of this view and the existing mixed pattern of settlements, partially screed by mature vegetation and within an agricultural landscape this visual receptor has Low Landscape Value and Low Visual Sensitivity.		
02	**View from footpath BW8, Edworth Road**	**Low**	**Low**
	LG1 is located below the horizon and is partially screened by the field pattern of hedgerows, shelterbelts and woodlands. The Pix Brook Academy is visually prominent in the foreground. Due to the distance this visual receptor is from LG1 and the existing mixed pattern of settlements, partially screed by mature vegetation and within an agricultural landscape this has Low Landscape Value and Low Visual Sensitivity.		
03	**View from footpath FP1 (CBC), Arlesey**	**Low**	**Low**
	LG1 is located within the skyline view of this long-distance view from footpath FP1 and is predominately screened by the field pattern of hedgerows, shelterbelts and woodlands. The foreground agricultural fields are more visually prominent due to the level topography that is predominately rural and agricultural in character and has Low Landscape Value and Low Visual Sensitivity.		
04	**View from A507 roundabout, Hitchin Road**	**Medium Low**	**Medium Low**
	LG1 is located within the skyline of this middle-distance view and predominately screened by the field pattern of hedgerows and shelterbelts. Beyond the A507 and roundabout and road infrastructure, the agricultural fields adjacent and to the north-west boundary of LG1 are visually prominent. This provides a relatively rural agricultural character and has Medium Low Landscape Value and Medium Low Visual Sensitivity.		
05	**View from Greenacres Park, Stotfold**	**Medium**	**Medium High**
	LG1 is located within the skyline of this middle-distance view from this neighbourhood park in Stotfold adjacent to Roecroft Lower School. In the foreground the A507 is fully screed by hedgerows, scrub and established trees. Additional tree planting will mature in time to further screen the southern boundary of the park. The agricultural fields to the north and west of the LG1 boundary are visually prominent and the existing hedgerows, shelter belts and mature trees adjacent to LG1 provide an important visual screen that limits		

	intervisibility and coalescence between the Grange Estate and Stotfold; this visual receptor has Medium Landscape Value and Medium High Visual Sensitivity.		
06	**View from Norton Road**	**Medium Low**	**Medium**
	The view towards LG1 is obtained through a short gap in the existing mature hedgerow along the southern boundary of LG1 that provides occasional access to the agricultural fields. The visual receptor looks towards the skyline and is oblique to the direction of travel along Norton Road. The existing mature hedgerows and woodland screen direct views of LG1 and has a Medium Low Landscape Value and Medium Visual Sensitivity.		
07	**View from Norton Road, at Norton Bury Lane**	**Medium Low**	**Medium Low**
	The view towards LG1 is obtained through a short gap in the existing mature hedgerow along the southern boundary of LG1. The visual receptor looks towards the skyline and is obliquely visible when travelling west along Norton Road. LG1 falls beyond and just below the skyline that restricts views of the site due to the height of the landform in the middle-ground. The height of the LG1 development may influence future visibility and this visual receptor has Medium Low Landscape Value and Medium Low Visual Sensitivity.		
08	**View from St Nicholas Churchyard, Norton**	**Medium**	**Medium**
	The view towards LG1 from the St Nicholas Churchyard within the Norton Conservation Area is screed by dense vegetation, mature hedgerows and deciduous trees. This visually screens and fully restricts views towards LG1 in the summer although LG1 may be marginally visible during the winter. To reflect the heritage value of the church and the designation of the Norton Conservation Area this visual receptor has a Medium Landscape Value and Medium Visual Sensitivity.		
09	**View from Footpath 040 at Pix Brook**	**Medium**	**Medium High**
	The footpath across Pix Brook connects Fairfield Park and the Greenway and is a regularly used recreational route. Views east across agricultural fields towards the skyline and LG1 are only partially screened by mature hedgerows and shelterbelts. Here there could be future intervisibility and urban coalescence between Fairfield Park and the development of LG1 and this visual receptor has a Medium Landscape Value and Medium High Visual Sensitivity.		
10	**View from Hitchin Road, at Elliot Way**	**Medium Low**	**Medium Low**
	The roundabout at the junction of the Hitchin Road and Elliot Way provides a middle-distance view towards LG1 that is increasingly framed by residential development and highway infrastructure. The existing agricultural fields and network of hedgerows and shelterbelts to the west of LG1 are partially visible. Some apartment blocks along the boundary of the Grange Estate are also visible but framed by mature vegetation. This visual receptor has a Medium Low Landscape Value and Medium Low Visual Sensitivity.		

3.16 This initial review of the most prominent visual receptors highlights the importance of the existing hedgerows, shelterbelts, woodland copses and mature trees in restricting views towards LG1. The landform and topography also have a direct influence on intervisibility particularly for middle distance views towards the north-west and western boundary of LG1 from Stotfold and the growing eastern development of Fairfield Park.

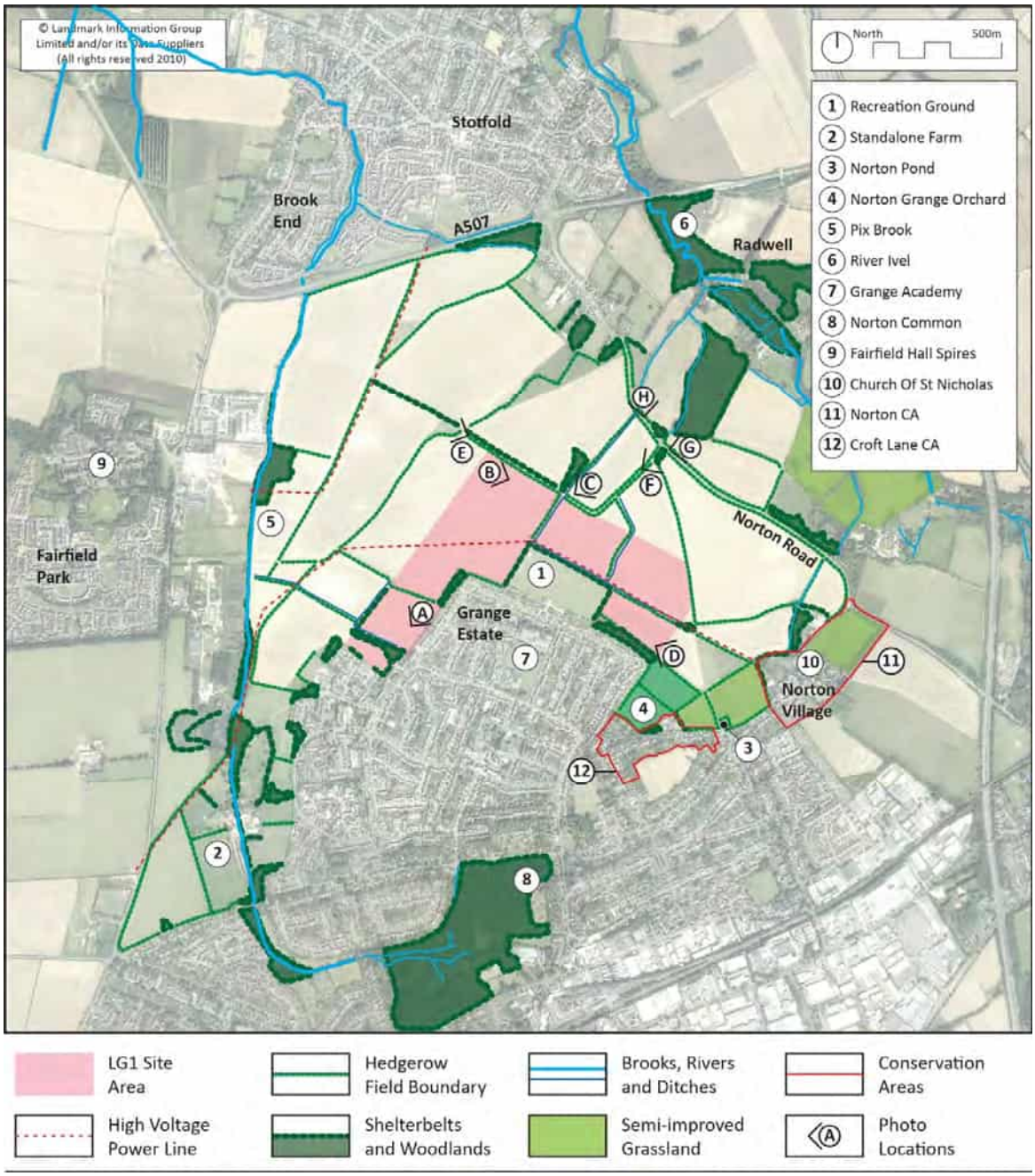
Figure 3.8 - Footpath and Cycle Network



Footpaths and Rights of Way

3.17 LG1 is well served by local and long-distance footpaths and rights of way. The most prominent route is the 13.6 mile long Garden City Greenway that circumnavigates the whole of Letchworth. This connects LG1 with Standalone Farm to the west, Radwell Meadows to the north and Norton village to the east. It can accommodate both pedestrians and cyclists and sections are also accessible for wheelchairs. An additional network of footpaths provides access to Fairfield Park, Stotfold and Radwell village. The north south National Cycle Network (NCN) Route 12 crosses the centre of LG1 connecting Letchworth with Stotfold (Figure 3.6).

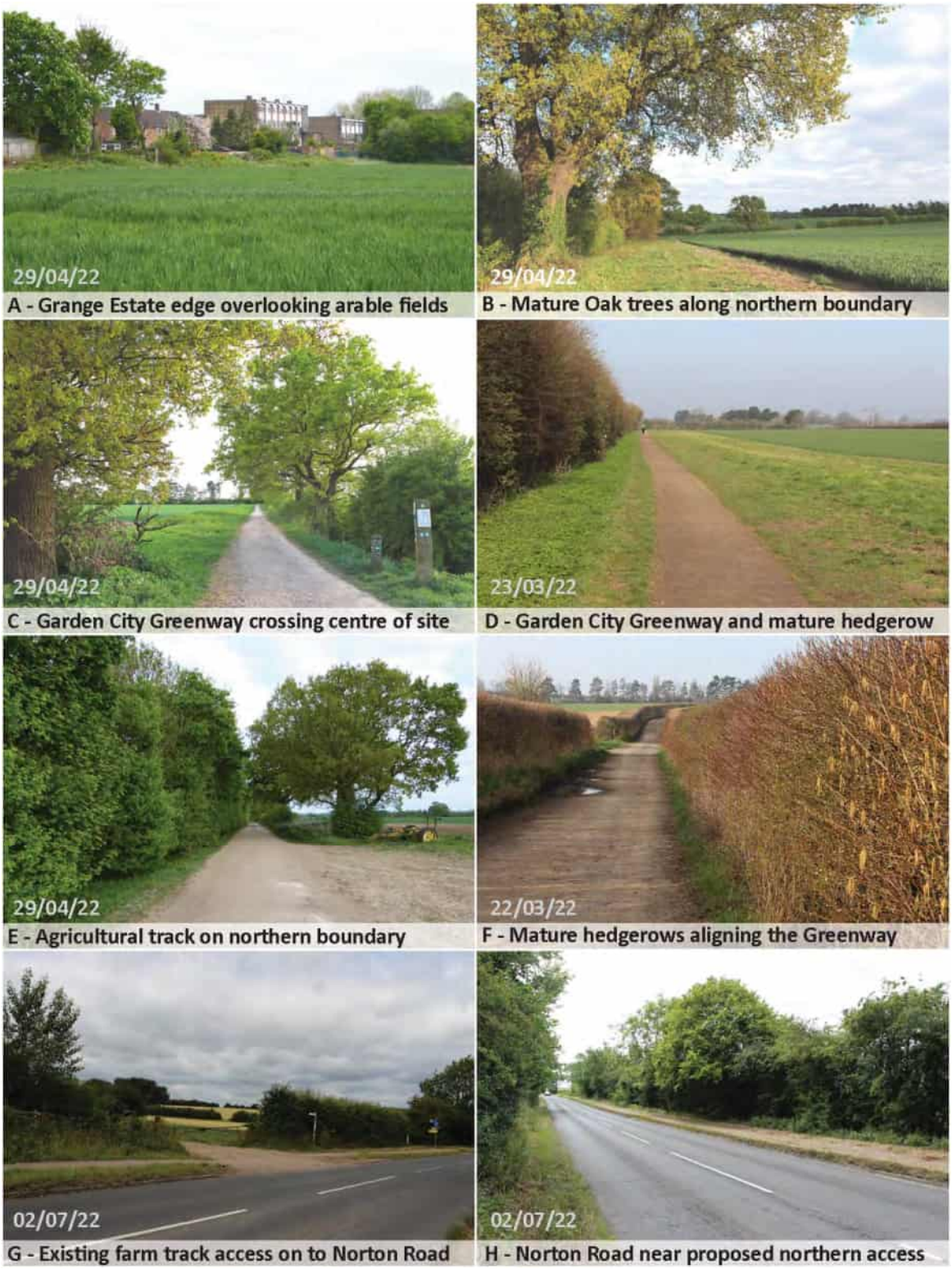
Figure 3.9 - LG1 Existing Landscape Framework



Landscape Features

3.18 The main landscape features of LG1 are defined by a synthesis of factors that include landform, hydrology, ecology and agricultural production. The field pattern is defined by mature and well managed hedgerows and more dense shelter belts that drive much of the identity of the site and this character is described in further detail in the following section. The field pattern provides variety, framing and restricting views that are most prominent within the north-west of the site from areas of higher ground where views are most open.

Figure 3.10 - Illustrative selection of site photographs



3.19 The hedgerows within and adjacent to LG1 are generally well-managed, with a mix of native species and of varying height (Figure 3.8 / Image D, F & G). Several hedgerows also include irregular spacing and variety of mature trees that add to their visual interest and ecological

value. This ecological value enhanced by strips of wildflower grasslands at the margins of some fields that have been established on set-aside land and funded through Environmental Stewardship land management grants.

3.20 There are a few shelter belts, woodland copses and thickets of scrub that are generally located at the intersection of or adjacent to hedgerows and footpaths (Figure 3.10 / Image E). The boundary between LG1 and the Grange Estate has some prominent shelter belts and scrub that provide dense screening and are likely to have been planted during the development of the estate. The western boundary has more intermittent sections of woodland and scrub that allow some clear views of homes and apartments in the Grange Estate (Figure 3.10 / Image A).

3.21 Along each side of Norton Road are mature trees and hedgerows that provide enclosure and restrict views to the adjacent farmland (Figure 3.8 / Image H). The alignment of the proposed main vehicular access to LG1 will be from the Norton Road within a section that includes access to a farm track and a crossing point for the Greenway leading to the Radwell Meadows (Figure 3.10 / Image G). This section of the road is bounded by intermittent sections of native hedgerow of varying height and a variety of mixed scrub and trees.

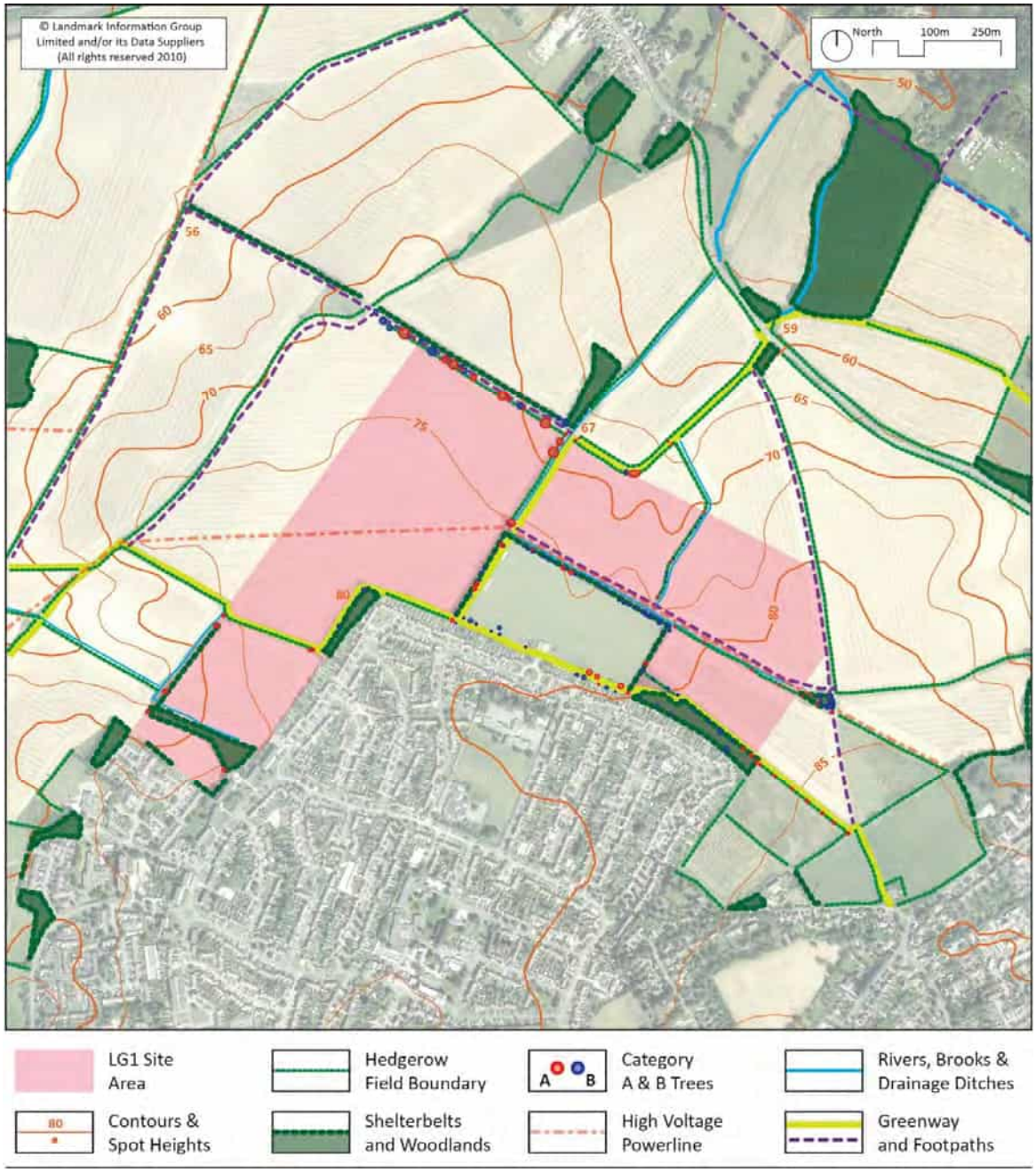
3.22 The most prominent mature trees are Common Oak (Quercus robur) that located within hedgerows and along field margins. Within the centre of LG1 there are two distinct Oak trees within the hedgerow orientated north-south alongside the Greenway. The norther boundary of LG1 to the west of the Greenway and alongside the farm track also has a number of distinctive mature Oak trees that add visual interest and ecological value to the field boundary (Figure 3.10 / Image B & E).

3.23 The Pix Brook corridor to the west of LG1 provides the most significant area of natural drainage. Whilst the Book is enclosed, and direct views of the watercourse are limited the marginal vegetation including mature trees and the occasional woodland copse provide a strong vegetated ecological corridor. Drainage ditches to the west and within the centre of the site follow the field boundaries and add ecological value but are not visually prominent.

3.24 The Garden City Greenway provides the main structure for the footpath network crossing the west, central and eastern sections of LG1 (Figure 3.10 / Image C, D and F). This network is supplemented by additional footpaths that connect to adjacent settlements. Mature hedgerows generally run alongside each path providing a partial sense of enclosure and seasonal and wildlife interest, this is enhanced by conservation strips along field boundaries. Some paths are long-established and registered Public Rights of Way (PROW), including the footpath that connects Norton Village with Radwell (PROW 31). Other paths are more informal in nature and have become established along field margins.

3.25 The Standalone Farm attraction is located close to the south west of the site that provides a visitor destination for families and children. The site has extensive parking and has direct access to the Greenway that leads northwards along the Pix Brook and towards LG1. To the east is the Norton Grange Orchard that has been planted within two adjacent fields, providing a landscape buffer between the Grange Estate and Norton Village.

Figure 3.11 - LG1 Detailed Landscape Features



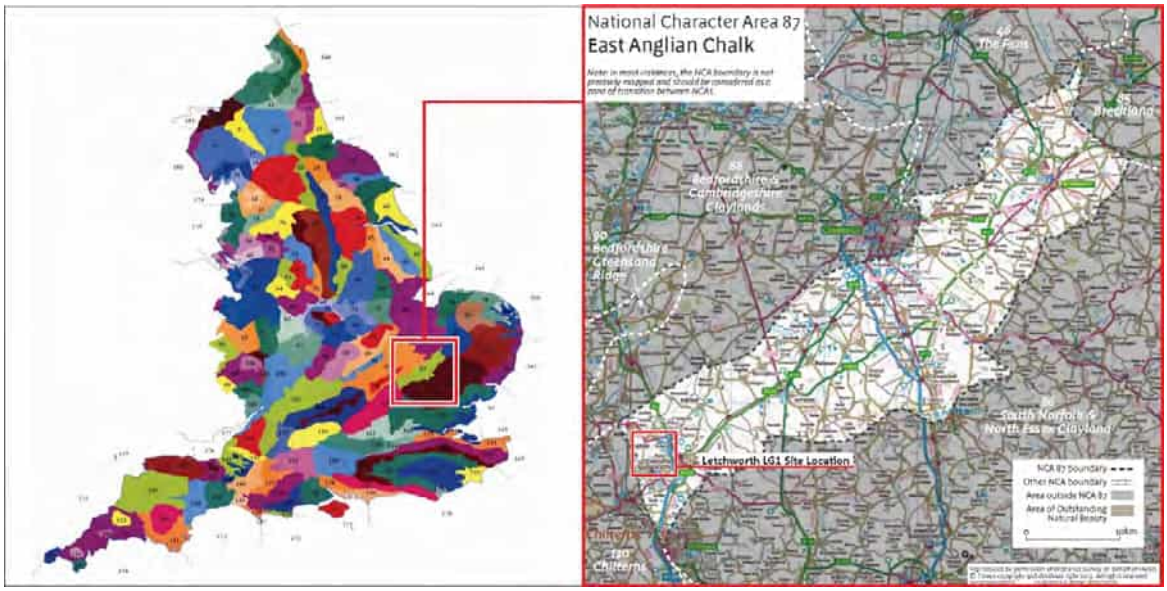
3.26 Figure 3.X provides a detail plan of the main landscape features within and adjacent to LG1. This includes hedgerows, shelter belts and areas of woodland, the Greenway, other footpaths and the route of the high voltage powerline that crosses the centre of the site. The location of Category A & B trees is taken from the BS 5837 Tree and Hedgerow Survey (PR Newson / February 2022). This indicates that the most prominent Category A trees, several of which present characteristics of Veteran Trees, are located within the hedgerows to the west of the Greenway crossing the centre of the site and along the northern boundary to the west of the Greenway.

4.0 LANDSCAPE CHARACTER

4.1 Landscape character is defined in national guidance[25] as 'a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse'. In addition, landscape character areas are 'single unique areas which are the discrete geographical areas of a particular landscape type. Each will have its own individual character and identity, even though it shares the same generic characteristics with other areas of the same type' (Natural England/2014).

4.2 A landscape character assessment is the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features or characteristics that make landscapes distinctive. In undertaking an assessment of the landscape characteristics of LG1 it is important to first refer to the framework of national and regional character profiles and assessments that provide a context to this assessment.

Figure 4.1 - National Landscape Character Area Profiles / 87 East Anglian Chalk



Source - English Nature / Natural England National Character Area Profiles (E529)

National Character Area Profiles

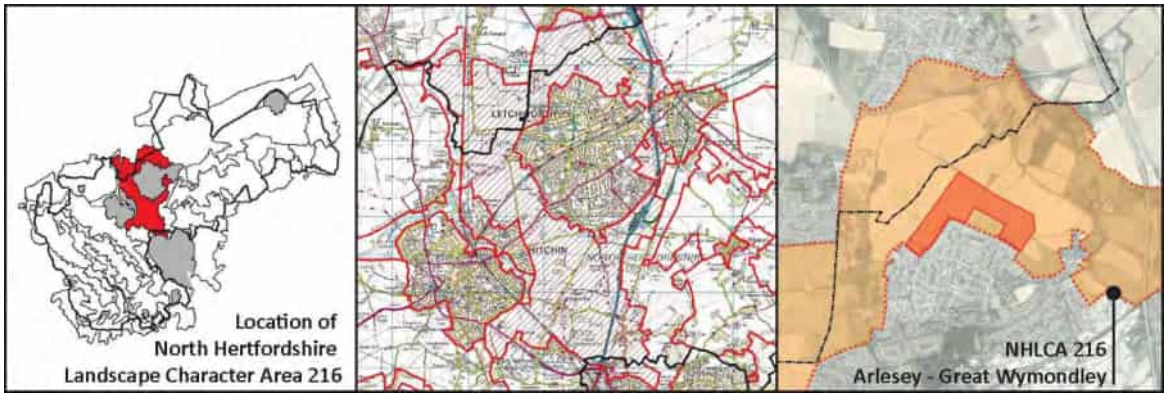
4.3 The landscape of England is divided into 159 National Character Area (NCA) Profiles that share similar landscape characteristics and qualities (Figure 4.1). Each profile describes the natural and cultural features that shape the landscape and include Statements of Environmental Opportunity (SEOs) that provide guidance on key landscape issues, opportunities and approaches to achieve sustainable growth.

[25] Natural England, 2014. An Approach to Landscape Character Assessment. Christine Tudor, October 2014. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691184/landscape-character-assessment.pdf

4.4 Letchworth and LG1 are located within NCA 87 East Anglian Chalk[26] (Natural England/2015). This is characterised by the narrow continuation of the chalk ridge that runs south-west–north-east across southern England. This creates a 'visually simple and uninterrupted landscape of smooth, rolling chalkland hills with large regular fields enclosed by low hawthorn hedges, with few trees, straight roads and expansive views to the north'. This provides a concise and simplified high-level description of the prevailing landscape character to the north of Letchworth which is one of the main settlements within the NCA.

4.5 The NCA acknowledges the national significance of Letchworth as the first designed Garden City. It notes that the main conurbations including the settlements of Baldock, Letchworth and Newmarket have the lowest scores for tranquillity (CPRE/2007[27]) which is attributed in part to the busy transport corridors that cross the NCA. The SEO recommends expanding and connecting the chalkland assemblage of semi-natural grasslands including extending buffer strips along field margins to benefit soil and water quality, reduce soil erosion, strengthen landscape character and enhance biodiversity and pollinator networks.

Figure 4.2 - North Hertfordshire Landscape Character Area 216 / Arlesey – Great Wymondley



Source - North Hertfordshire and Stevenage Landscape Character Assessment, 2011

North Hertfordshire Landscape Character Assessment

4.6 The North Herts Landscape Study[28] (Character, Sensitivity & Capacity) was agreed in 2011 as background evidence to the Local Plan review and is included in the examination document library. The study identified 37 Character Areas, omitting urban conurbations, describing the distinctive characteristics of these landscapes, providing a basis for policies and action plans to reinforce and conserve landscape characteristics.

[26] Natural England (2015) National Character Area profile: 87. East Anglian Chalk. http://publications.naturalengland.org.uk/publication/6417815967891456
[27] CPRE(2007) Tranquillity map of England https://www.cpre.org.uk/wp-content/uploads/2019/11/tranquillity_map_england_regional_boundaries_1.pdf
[28] NHC (2011) North Herts Landscape Study (Character, Sensitivity and Capacity) https://www.north-herts.gov.uk/sites/default/files/CG16%20NHerts%20Landscape%20Study%202011%20-%20Part%201.pdf

4.7 The Landscape Study provides an overview of the Geology, Soils, Topography, History, Settlement Patterns and Transport Infrastructure across North Hertfordshire. The Assessment methodology that is described in detail in the report followed past guidance for England and Scotland on Landscape Character Assessment (Countryside Agency/2002) and included desk and field studies. The Study provides an assessment of landscape sensitivity, value and capacity and LG1 is located within Area 216 Arlesey - Great Wymondley.

4.8 The character area (Figure 4.2) encloses Letchworth on its southern, western and northern sides, extending north beyond the NHC boundary into Central Bedfordshire. Land cover is predominately arable with pockets of horse grazing on urban fringes with localised pockets of amenity use and there is a sparse covering of recorded ecologically interesting sites. Wetland habitats include marsh and fen along the Pix Brook and there are some species-rich road verges with flora typical of chalky substrates such as the Norton Road. The Character Area is crossed by a network of footpaths mainly connecting urban areas and smaller settlements.

4.9 The area to the north of Letchworth contains evidence of prehistoric, Roman and medieval activity. Near to the northern perimeter of Letchworth are cropmarks of an enclosure and linear ditches, a medieval settlement containing earthworks and the 12th century church of St Nicholas. The historic agricultural landscape comprises a mixture of prairie fields with 18th century and later enclosure and post-1950s boundary loss. The landscape type is described as not being rare and exhibiting typical pressures associated with urban fringe use.

4.10 Guidelines for managing change within Character Area 216 include the creation of buffer zones between intensive arable production and areas of semi-natural habitat and the creation of links between habitat areas. This includes promoting the use of traditional field hedges and the diversity of hedgerow species and the planting of standard hedgerow trees and encouraging woodland planting, in small copses, around the fringes of sub-urban settlements.

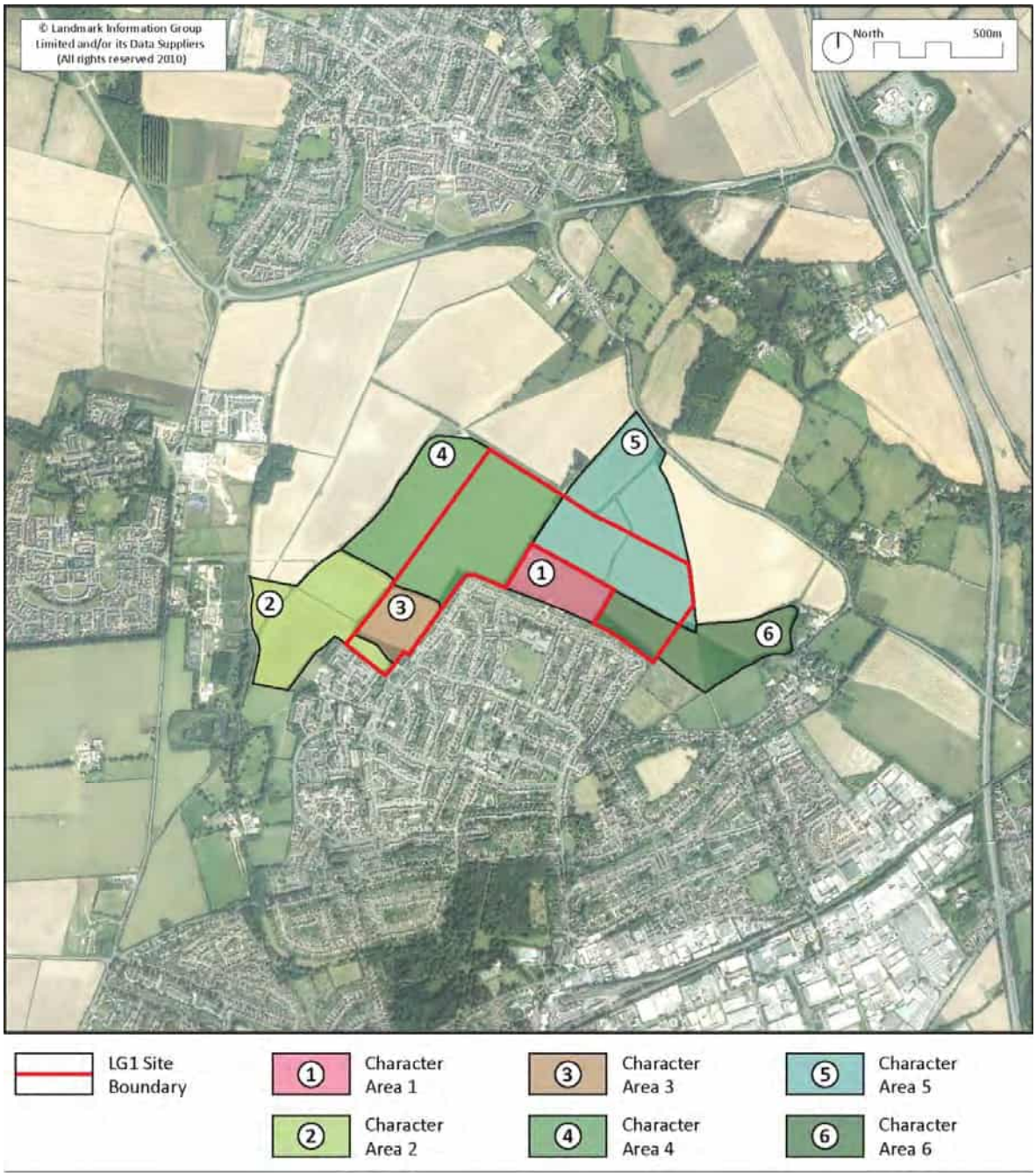
Landscape Character Methodology

4.11 This landscape character assessment follows best practice guidance (Natural England/2014) and draws on the baseline environmental data including topography, hydrology, geology and soils, public rights of way and land use presented in the preceding section. Field survey work was undertaken in March 2022 to complement the desk study research to define the individual landscape character areas.

4.12 Reference was made to a previous Landscape Sensitivity Study (LUC 2013) and Landscape Opportunities and Constraints Plan (LUC/2013) that contribute to the Local Plan review library of examination documents[29]. The previous study undertook analysis of two Landscape Units for the study area whilst this Landscape Character Assessment has adopted a finer grain assessment of six landscape character areas that are within and adjacent to the LG1 boundary.

[29] NHC Examination Library, 6. Countryside and Green Belt CG5 & CG6 https://www.north-herts.gov.uk/examination-library

Figure 4.3 - LG1 Local Landscape Character Areas



LG1 Landscape Character Areas

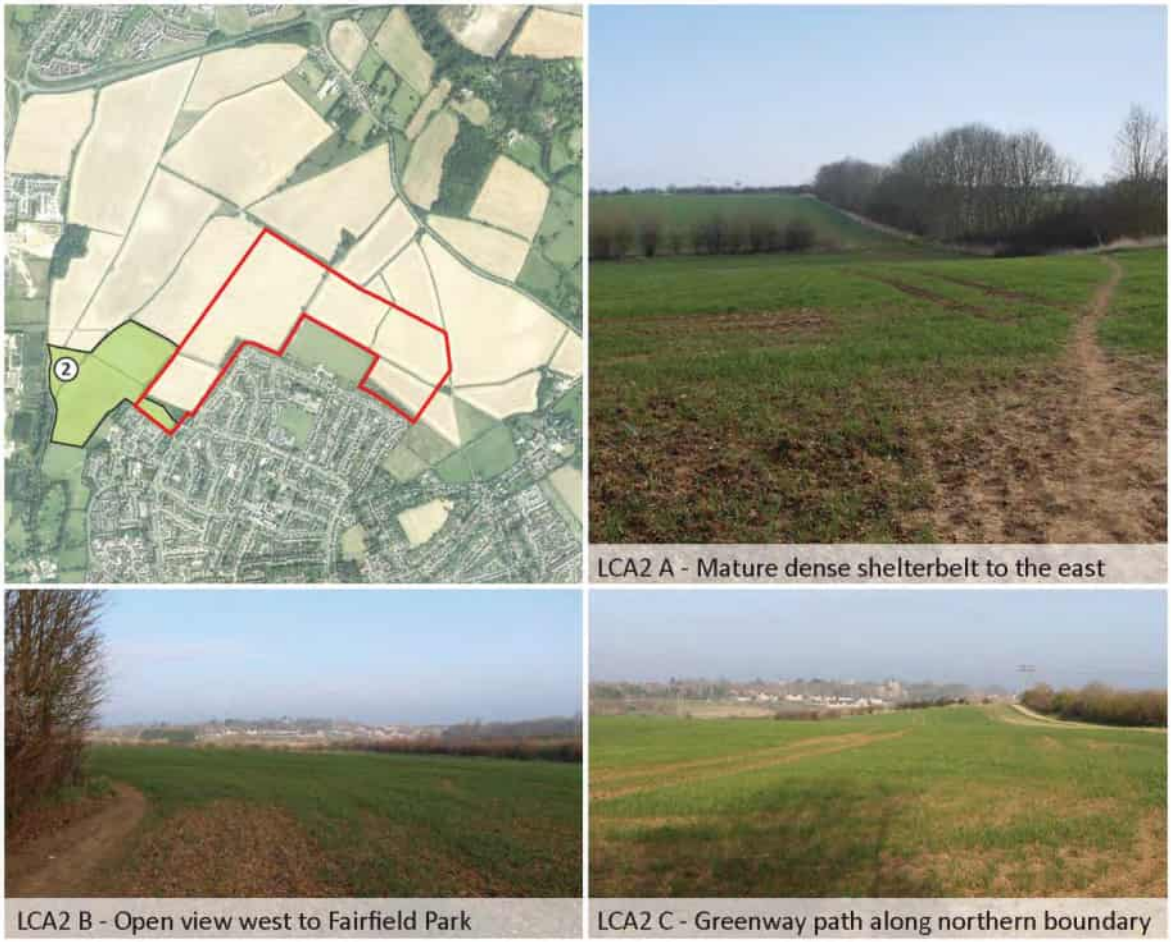
4.13 Drawing together data from the desk study, analysis of the landscape structure of the site and the field survey, LG1 has been divided into six site scale Landscape Character Areas (LCA) shown in Figure 4.3. This includes the Grange Recreation Ground as this central green space makes a significant contribution to the local landscape character although it falls outside the LG1 boundary. Each LCA is described and illustrated with reference to the criteria listed in good practice guidance.

Figure 4.4 - LG1 Landscape Character Area 1

LG1 Landscape Character Area 1

Natural Factors	A uniform recreation ground of short mown grassland with marked sports pitches framed on three sides by mature tree belts and hedgerows. These provide a strong sense of enclosure, restricting long distance views and views of LG1. The land is generally flat between 75m an 80m AOD (Above Ordinance Datum), falling very gently to the north.
Cultural / Social Factors	Hertfordshire Historic Landscape Characterisation records this area as 20th Century Leisure whilst the field boundaries feature on 1798 Ordnance Survey map. The site provides passive and active recreation and play space for the Grange Estate including five marked football pitches (Image LCA1 A), a sports pavilion and changing facilities. A toddler play area, fitness equipment (Image LCA1 C), a small basketball court and skate park are located to the west. Gravel footpaths and cycleways form part of the Garden City Greenway providing access to the surrounding fields.
Key Characteristics	The northern boundary has a distinctive belt of trees dominated by Scots Pine (Image LCA1 B). The main entrance from Gaunts Way in the south leads to an asphalt surfaced car park with approximately 50 parking bays. Residential properties and back gardens overlook the southern boundary.

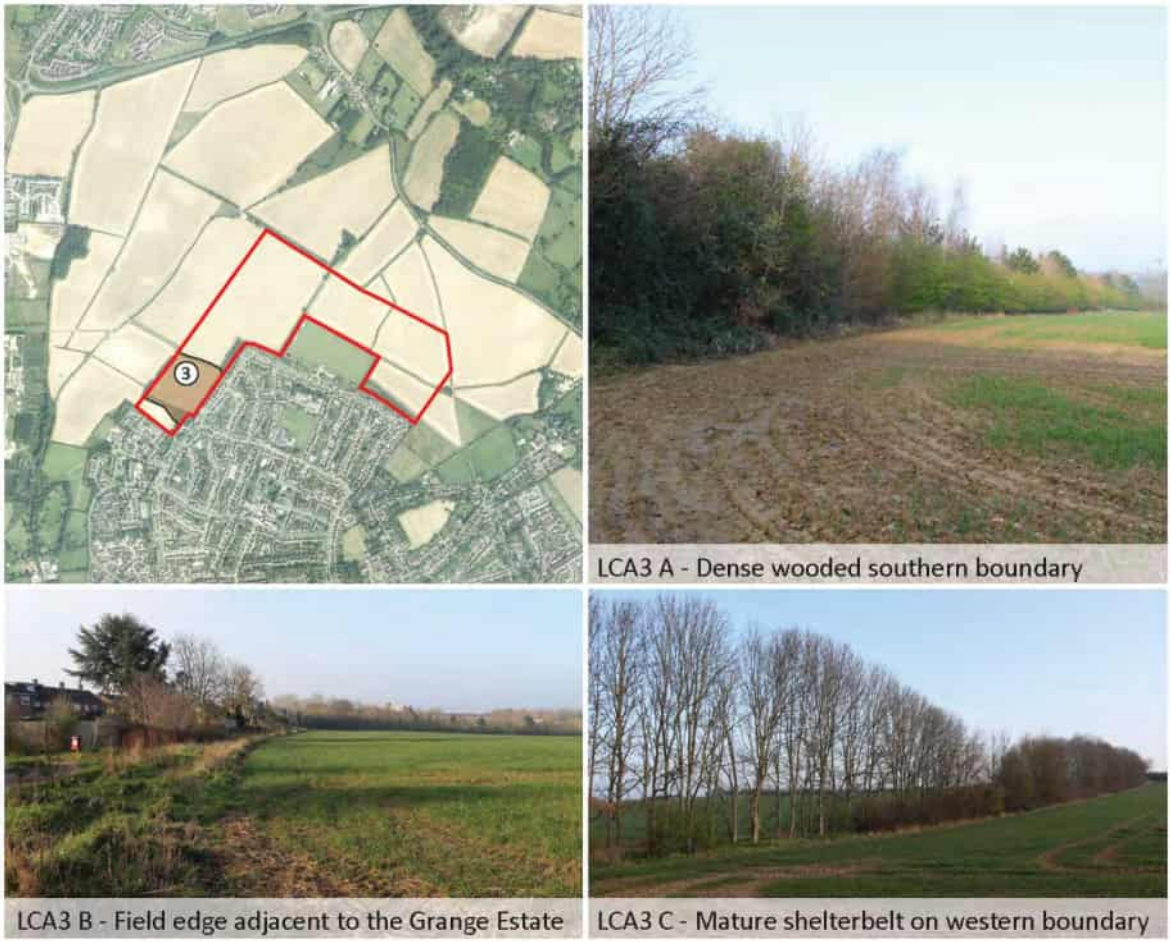
Figure 4.5 - LG1 Landscape Character Area 2



LG1 Landscape Character Area 2

Natural Factors	The area has prominent pair of rolling fields under arable cultivation bounded and subdivided by a network of hedgerows and shelter belts (Image LCA2 A). The land slopes westward falling approximately 20m from around 75m to 55m AOD at the boundary with Pix Brook. The field pattern is of moderate complexity with a finer grain towards the west.
Cultural / Social Factors	Hertfordshire Historic Landscape Characterisation records this area as formal 18th - 19th Century Parliamentary Enclosure land and the field boundaries are indicated on the 1882 Ordnance Survey Map. agricultural production. There has been subsequent mid-20th Century boundary loss. The Garden City Greenway used by pedestrians, dog walkers and cyclists runs along the western and northern boundary.
Key Characteristics	The area provides a naturally green and semi-rural buffer between the settlements of Fairfield Park and the Grange Estate. The area has long-distance skyline views towards the Chiltern Hills in the west and clear views towards the Fairfield Park (Images LCA2 B & C). The higher ground has two distinct deciduous wooded shelterbelts (Image LCA2 A) that partially screen properties on the boundary and western edge of the Grange Estate.

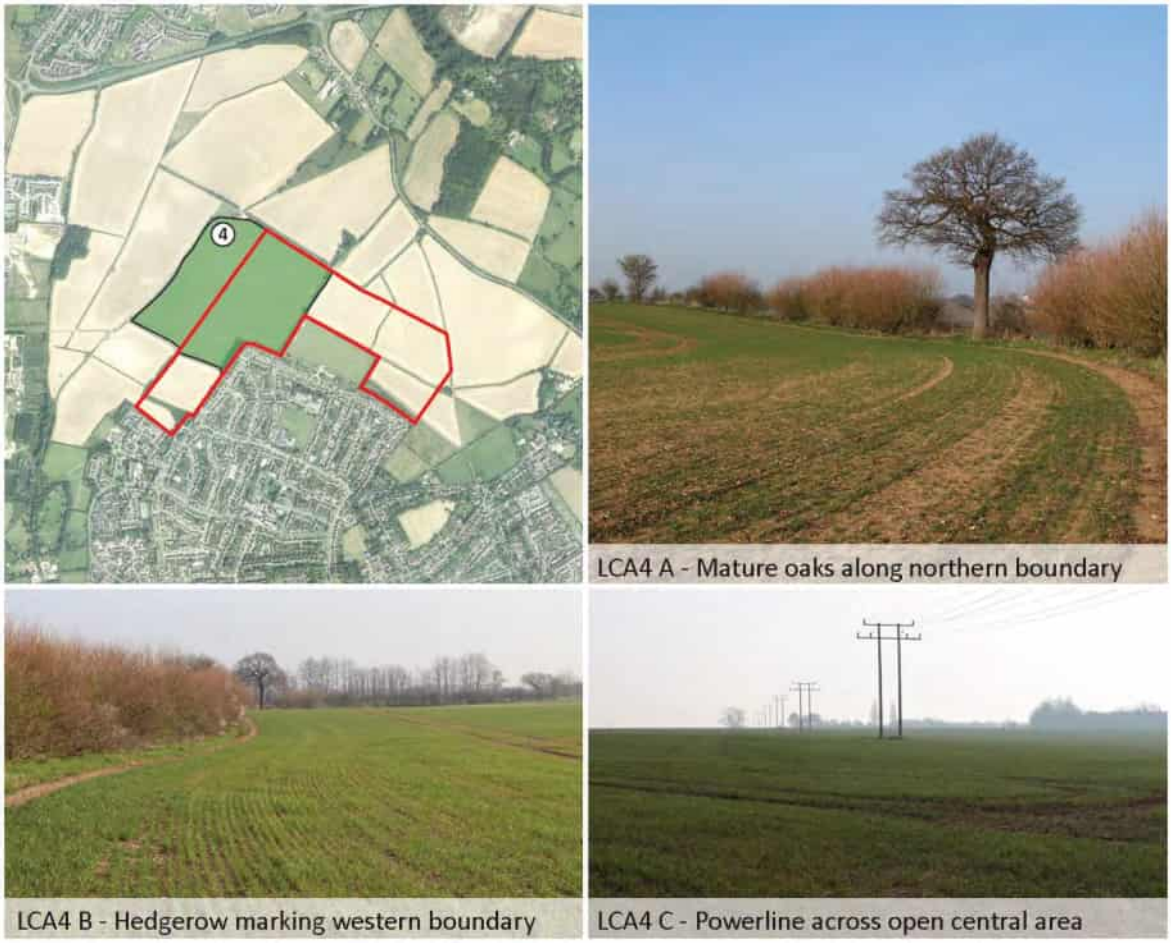
Figure 4.6 - LG1 Landscape Character Area 3



LG1 Landscape Character Area 3

Natural Factors	An enclosed and self-contained agricultural field under arable cultivation that is framed by mature woodland shelter belts on the southern and western boundaries (Images LCA3 A & C). The land falls gently to the southwest from approximately 78m to 65m AOD. The dense and mixed woodland to the south appears to be unmanaged.
Cultural / Social Factors	Hertfordshire Historic Landscape Characterisation records this area as formal 18th - 19th Century Parliamentary Enclosure land and the field boundaries are indicated on the 1882 Ordnance Survey Map. The Garden City Greenway runs along the northern boundary and is screed by the established hedgerow. This path leads to a pedestrian access to the Grange Estate at the north-east corner of the character area.
Key Characteristics	Views to the west and south are partially screened by the shelterbelts whilst northern skyline views are restricted by the modest rise in the land. In the winter months after leaf fall there are views through the western shelterbelt towards the Fairfield Park development. Properties and rear gardens on the edge of the Grange estate are clearly visible on the eastern boundary (Image LCA3 B).

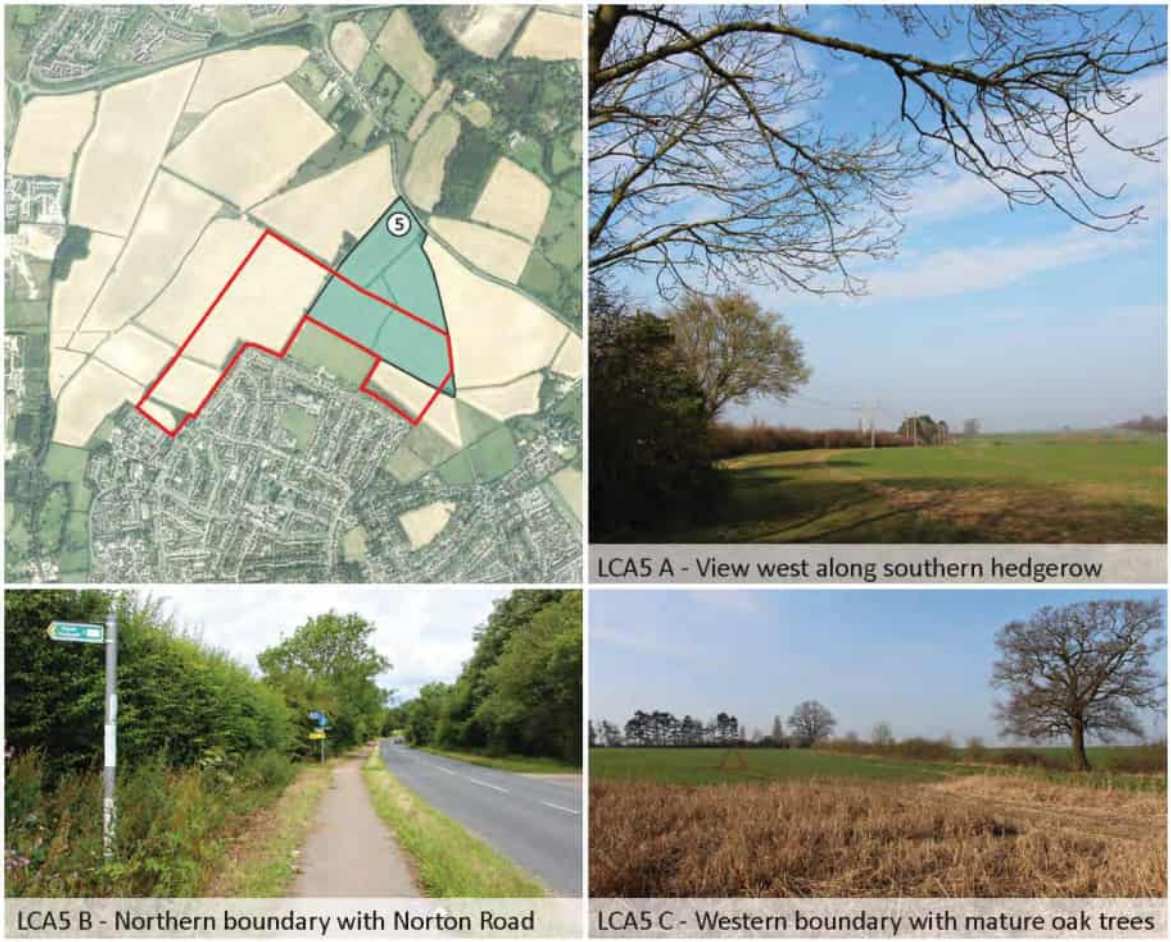
Figure 4.7 - LG1 Landscape Character Area 4



LG1 Landscape Character Area 4

Natural Factors	A significantly large and open field in comparison to the surrounding field pattern that is mainly flat, falling gradually towards the north from around 80m to 70m AOD. There are established hedgerows along all four boundaries (Image LCA4 B) whilst the northern boundary includes an irregular line of distinctive mature Oak trees (Image LCA4 A) and a secondary wooded shelterbelt beyond. Some of the field margins include an uncultivated set aside conservation strip to increase biodiverse habitat.
Cultural / Social Factors	Hertfordshire Historic Landscape Characterisation records this area as being of Post 1950 Boundary Loss and analysis of historic maps indicate the loss of several field boundaries since 1882 and 1961 (Figure 2.3). This was to create larger fields to support agricultural mechanisation. The Garden City Greenway runs along the southern and eastern boundaries. There is a wide enclosed footpath and farm track on the northern boundary and an informal footpath to the west on the far side of the mature hedgerow.
Key Characteristics	The area offers wide skyline views from south-west to north-east. Views to the Grange Estate are partially screed by vegetated boundaries. The area is crossed in the centre of by a prominent powerline (Image LCA4 C).

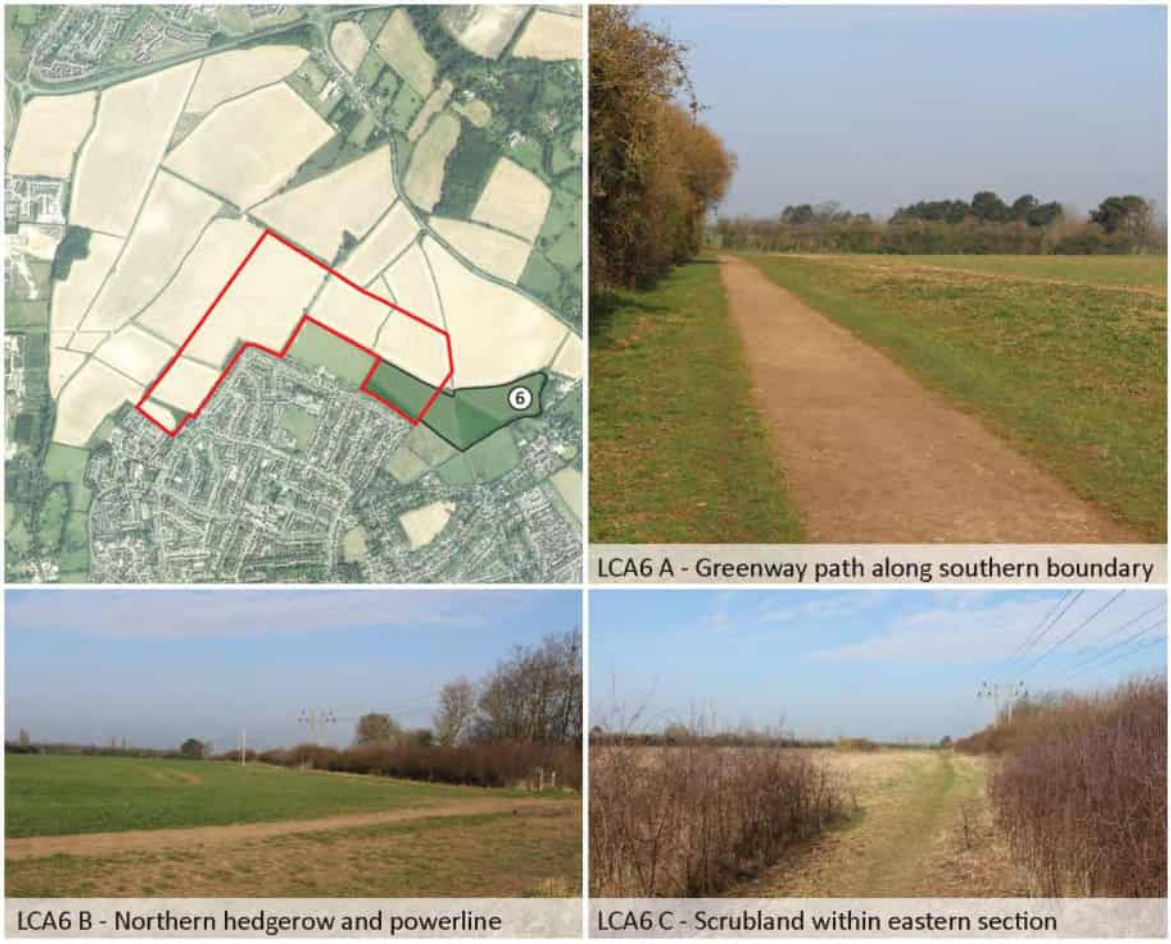
Figure 4.8 - LG1 Landscape Character Area 5



LG1 Landscape Character Area 5

Natural Factors	The higher ground to the south of these open fields at around 83m AOD is generally flat (Image LAC5 A) with a more varied topography as the land slopes down northwards towards the boundary with Norton Road (Image LCA5 B) at approximately 59m AOD. Variations in landform reflect drainage ditches running north from the Recreation Ground (LCA1). The fields are bounded by well-maintained hedgerows with a few prominent mature Oak trees on the western boundary with LCA4 (Image LCA5 C). Small dense mixed wooded copses are on the west, north and south-east boundaries.
Cultural / Social Factors	Hertfordshire Historic Landscape Characterisation records this area as formal 18th - 19th Century Parliamentary Enclosure land and field boundaries feature on the 1798 and 1882 Ordnance Survey maps (Figure 2.3). A footpath (PROW 31) connects Norton and Radwell villages on the northern boundary, the Garden City Greenway is on the western boundary.
Key Characteristics	The conifer shelter belt along the boundary with the Recreation Ground provides a distinctive southern skyline. The northern field margin includes a conservation strip providing biodiverse habitat and a mature hedgerow provides a dense visual screen to the Norton Road.

Figure 4.9 - LG1 Landscape Character Area 6



LG1 Landscape Character Area 6

Natural Factors	A flat and long predominately rectilinear character area that has a modest fall from east to west from around 85m to 80m AOD. The finer-grained field pattern is relatively featureless and bounded by dense and relatively high hedgerows (Image LCA6 B) providing structure and enclosure. A triangular section of land to the east is reverting to blackthorn scrub (Image LCA6 C).
Cultural / Social Factors	Hertfordshire Historic Landscape Characterisation records this area as formal 18th - 19th Century Parliamentary Enclosure land and most field boundaries feature on 1798 Ordnance Survey map. A footpath connecting the villages of Norton and Radwell crosses the open field at an oblique angle. The Garden City Greenway runs along the entire southern boundary linking the traditional village of Norton with the Grange Recreation Ground (Image LCA6 A). There is an access through the dense hedgerow along the southern boundary to the Norton Grange Orchard by Croft Lane.
Key Characteristics	The powerline on the far side of the northern hedgerow is a visually prominent feature. To the east the tower of St Nicholas Church provides a distinctive focal point that is framed by dense vegetation and mature trees that limit intervisibility with the Norton Conservation Area.

5.0 LANDSCAPE SENSITIVITY

5.1 Landscape sensitivity is regarded as a measure of the strength or robustness of a landscapes character and visual resource to withstand a specific and defined process of change. This assessment considers landscape sensitivity in relation to the principle of built and predominately residential development within LG1, north of Letchworth. This is a Strategic Housing Site allocated in the NHC Local Plan 2011-2031 for approximately 900 homes (NHC/2022, Policy SP15).

Landscape Sensitivity Methodology

5.2 This assessment is based on a combination of desktop study and detailed field surveys and follows the methodology set out in best practice guidance published by Natural England - An Approach to Landscape Sensitivity Assessment - to inform spatial planning and land management[30] (Natural England/2019). In this study landscape sensitivity is a term applied to:

5.3 'Landscape character and the associated visual resource, combining judgements of their susceptibility to the specific development type / development scenario or other change being considered together with the value(s) related to that landscape and visual resource. Landscape sensitivity may be regarded as a measure of the resilience, or robustness, of a landscape to withstand specified change arising from development types or land management practices, without undue negative effects on the landscape and visual baseline and their value'. (Natural England/2109, p7)

5.4 This Landscape Sensitivity Assessment is based on the landscape character assessment and analysis that is described in the preceding section. This draws on both objective and subjective opinion and interpretation of physical data and prevailing site conditions at the time of survey and therefor the information in this assessment has a degree of subjectivity. Some caution is therefore required in its interpretation reflecting the reality that landscape sensitivity is the result of a complex interaction of often unequally weighted variables.

5.5 In line with the guidance a five-point scale has been used to describe the levels of sensitivity (Table 5.1) that is applied to a set of ten Landscape and Visual sensitivity criteria. Each of the six landscape character areas or local landscape units are assessed for their prevailing sensitivities using a field survey template developed for the assessment (Annex A).

5.6 Each of the ten sensitivity criteria for each landscape character area is assessed using the five-point scale. From this, a combined sensitivity level is given for both the Landscape and Visual Assessment Criteria and an overall sensitivity level is assigned to each character area.

[30] Natural England, 2019. An Approach to Landscape Sensitivity Assessment - to inform spatial planning and land management. Christine Tudor, June 2019. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817928/landscape-sensitivity-assessment-2019.pdf

Table 5.1 - Five point Landscape Sensitivity Scale

Sensitivity Level	Definition
High	Landscape and / or visual characteristics of the assessment unit are very susceptible to change and / or its values are high or high / medium and it is unable to accommodate the relevant type of development without significant character change or adverse effects. Thresholds for significant change are very low.
Moderate-high	Landscape and /or visual characteristics of the assessment unit are susceptible to change and / or its values are medium through to high. It may be able to accommodate the relevant type of development but only in limited situations without significant character change or adverse effects if defined in the relevant land parcel summary. Thresholds for significant change are low.
Moderate	Landscape and / or visual characteristics of the assessment unit are susceptible to change and / or its values are medium / low through to high / medium and / or it may have some potential to accommodate the relevant type of development in some defined situations without significant character change or adverse effects. Thresholds for significant change are intermediate.
Moderate-low	Landscape and / or visual characteristics of the assessment unit are resilient and of low susceptibility to change and / or its values are medium / low or low and it can accommodate the relevant type of development in many situations without significant character change or adverse effects. Thresholds for significant change are high.
Low	Landscape and / or visual characteristics of the assessment unit are robust or degraded and are not susceptible to change and / or its values are low and it can accommodate the relevant type of development without significant character change or adverse effects. Thresholds for significant change are very high.
Source - Natural England, 2019. An Approach to Landscape Sensitivity Assessment - to inform spatial planning and land management. Christine Tudor, June 2019, p20-21	

Landscape Sensitivity Criteria

5.7 Six Landscape Sensitivity Criteria have been used to identify and describe the specific landscape characteristics of the site (Table 5.2). These take account of criteria described in good practice guidance and those used in previous and comparative assessments and include:

- Landform and landscape features
- Landscape pattern and complexity
- Landscape enclosure
- Historic and cultural character
- Settlements and built development
- Perceptual qualities and experience

Table 5.2 - Landscape Sensitivity Assessment Criteria

L1	**Landform and landscape features**	
	Sensitivity Measurement	**Low** - Smooth, gently undulating or relatively flat landform; the area has few distinctive or characteristic landscape features. **Medium** - Undulating landform with some distinct topographic characteristics; the area has some distinctive landscape features. **High** - Dramatic or distinctive landform and topography; the area has numerous features that are characteristic or valued.
	Comments	Assessment of the landform shape and distinctive landscape features within which the proposed development will be located. A more varied rolling and undulating topography has the ability to contain and limit visual impact. It may also increase visibility in some locations and be more sensitive to residential development in comparison to relatively flat and featureless landforms.
L2	**Landscape pattern and complexity**	
	Sensitivity Measurement	**Low** - Large scale and relatively simple landscape with a single or limited number of land uses and little variety or complexity. **Medium** - Medium scale landscape with some variation in use, texture, form and pattern providing a moderate level of complexity. **High** - Small scale landscape with a significant variety of land uses, incorporating a variety of patterns and a high degree of complexity.
	Comments	Assessment of the landscape structure and variation in field pattern, texture and land use. A small scale and fine-grained landscape with a complex variety of vegetation types and natural habitats will be more sensitive to residential development than a large scale landscape with simple pattern, texture and limited land use.
L3	**Landscape enclosure**	
	Sensitivity Measurement	**Low** - Landscape that is enclosed by mature vegetation including woodlands, shelterbelts and substantial hedgerows. **Medium** - Landscape that is semi-enclosed by vegetation including small woodlands and fragmented shelterbelts and hedgerows. **High** - Landscape that has minimal enclosure with minimal trees, small and isolated woodland copses and limited hedgerows.
	Comments	Assessment of the landscape enclosure takes account of the degree of screening that would be achieved by mature vegetation including woodland tree belts and mature hedgerows. Sites that have limited screening and enclosure would be more sensitive to residential development than those screened by substantial vegetation.
L4	**Historic and cultural character**	
	Sensitivity Measurement	**Low** - Relatively few historic and cultural features that contribute to the distinctive character and quality of the landscape. **Medium** - Some historic and cultural features that are visible and add to the particular character and identity of the landscape. **High** - Significant number of valued historic and cultural features that make a distinctive contribution to the landscape character.

	Comments	Assessment of the historic continuity of the landscape including the presence of distinct historic features or heritage designations. Pre 18th Century landscapes are considered to have greater value in pre-dating field enclosures and may originate from medieval times or earlier. Such landscapes with a strong cultural pattern would be more sensitive to residential development.
L5	**Settlements and built development**	
	Sensitivity Measurement	**Low** - Extensive presence of relatively modern built development that has a strong influence on surrounding landscape character. **Medium** - Some areas of built development or confined settlements that are interspersed within a predominantly natural landscape. **High** - Minimal or no presence of built development or settlements within the surrounding landscape.
	Comments	Assessment of the surrounding settlement form, density and vernacular character. This takes account of defined settlement edges and traditional patterns of built development that may be clustered or dispersed. Landscapes with minimal or historic settlement patterns will be more sensitive to residential development than those with extensive and modern settlements.
L6	**Perceptual qualities and experience**	
	Sensitivity Measurement	**Low** - Landscapes that have limited natural qualities with high levels of movement, noise and general disturbance. **Medium** - Landscapes that have a variety of natural characteristics but have some level of disturbance and urban influence. **High** - Landscapes that are undisturbed and have a higher degree of remoteness and tranquillity.
	Comments	Assessment of tranquillity and the sense of remoteness that is demonstrated by the variety and depth of aesthetic attributes including seasonal colour, texture, light and reflection. Landscapes that have a higher degree of remoteness and greater level of tranquillity will be more sensitivity to residential development.

Visual Sensitivity Criteria

5.8 Four Visual Sensitivity Criteria have been used to identify and describe the specific visual characteristics of the site (Table 5.3). These take account of criteria described in good practice guidance and those used in previous and comparative assessments and include:

- Skyline character and key views
- Openness to public view
- Openness to private view
- Intervisibility and coalescence

Table 5.3 - Visual Sensitivity Assessment Criteria

V1	**Skyline character and key views**	
	Sensitivity Measurement	**Low** - Limited long-distance views with enclosed sites including existing built development that offer limited visual interest. **Medium** - Some long-distance views with moderate interest and limited historic and cultural value. **High** - Presence of uninterrupted skylines and long-distance views of prominent or distinctive historic or cultural landmarks.
	Comments	Assessment of features from the site that are particularly prominent or eye-catching natural or built elements within the landscape. These may include uninterrupted skylines, long-distance views of woodlands and copses, rivers and water bodies, distinctive historic buildings such as church towers or heritage features and landmarks.
V2	**Openness to public view**	
	Sensitivity Measurement	**Low** - Area is enclosed with limited public view from adjacent footpaths, public open spaces, roads and railways. **Medium** - Area is partially enclosed with some public views from footpaths, public open spaces, roads and railways. **High** - Area is highly visible by the public from footpaths, public open spaces, roads and railways.
	Comments	Assessment of the level of public visibility from locations that allow regular and unrestricted public access including Rights of Way, parks and public open spaces, roads and public buildings. This takes account of public visibility from within the site or from the perimeters as well as the number of likely viewers.
V3	**Openness to private view**	
	Sensitivity Measurement	**Low** - Area is enclosed from private views that are predominately from residential properties, private buildings and facilities. **Medium** - Area is partially enclosed from private views. **High** - Area is very open to private views.
	Comments	Assessment of the level of private visibility that mainly relates to views from existing private homes and gardens as well as non-public buildings and facilities. This takes account of the distance of views and the number of likely viewers. Sites that are overlooked will be more sensitive to residential development.
V4	**Intervisibility and coalescence**	
	Sensitivity Measurement	**Low** - Development would have limited intervisibility and would not lead to merging or coalescence with existing settlements. **Medium** - Development would have moderate impact on maintain the separation between settlements. **High** - Development would have high potential for coalescence.
	Comments	Assessment of the visual relationships and inter-visibilities across character areas and potential for reducing separation and merging of existing built environment and new residential development. Sites that would increase the perception of coalescence of settlements will be more sensitive to residential development.

Landscape Sensitivity Findings

5.9 An on-site assessment of the Landscape and Visual Sensitivity of the six character areas was completed in March 2022. This was undertaken following the described methodology and the completion of field survey assessment sheets (Annex A). Whilst each of the six character areas is assessed in their entirety, the appraisal pays particular attention to that part of the area that falls within the LG1 boundary. Table 5.4 provides a summary of the comparative landscape and visual sensitivity for each of the landscape character areas using the defined five-point scale and the data is also illustrated on a set of plans (Figures 5.1 and 5.2).

Table 5.4 - Landscape and Visual Sensitivity Assessment Summary

Character Unit	Landscape Sensitivity	Visual Sensitivity	Combined Sensitivity
1	Low	Medium Low	Low
2	Medium Low	Medium	Medium Low
3	Low	Medium Low	Low
4	Medium	Medium	Medium
5	Medium	Medium Low	Medium Low
6	Medium Low	Medium Low	Medium Low

5.10 In summary Landscape Sensitivity was assessed as being between Low to Medium sensitivity across the six character areas. Visual Sensitivity was assessed as Medium Low to Medium, whilst the Combined Sensitivity was assessed as Low to Medium sensitivity. None of the character areas was assessed as being either Medium-High or High for either Landscape Character or Visual Sensitivity.

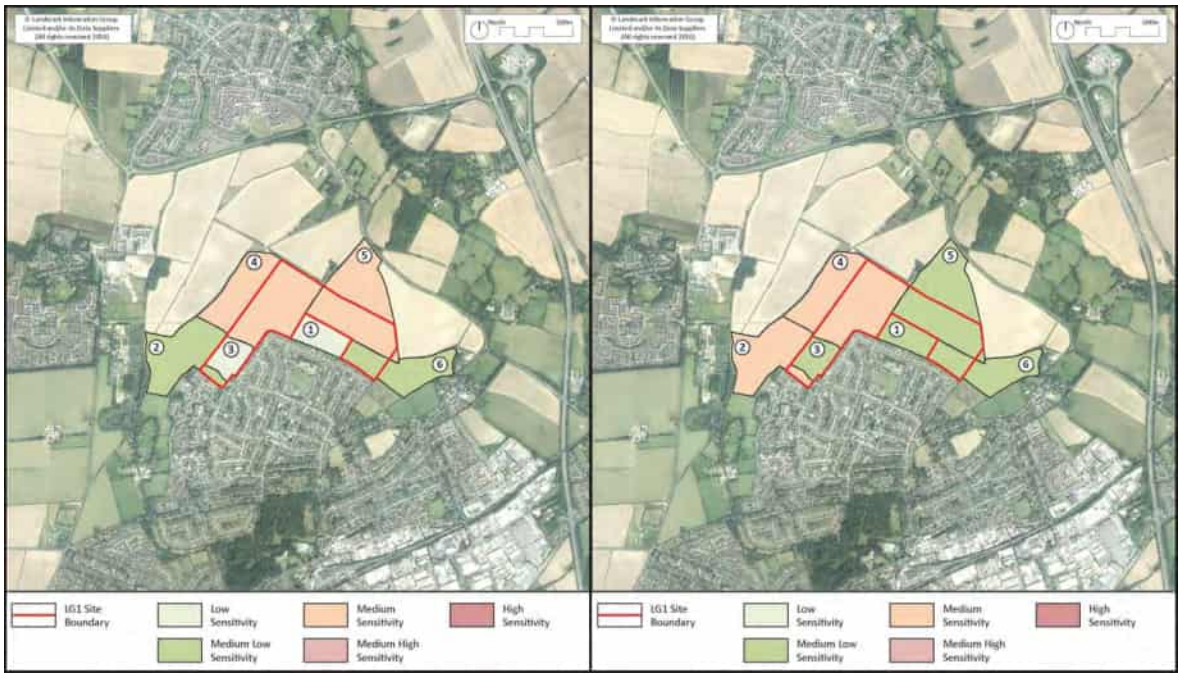
5.11 These results generally reflect the sensitivity analysis undertaken previously (LUC/2013) that recorded both Low and Low Moderate sensitivity. This preceding study was undertaken at a coarser scale that assigned two landscape character units to the entire study area. This assessment has been undertaken at a finer scale of six character units and records a slightly higher sensitivity for the most prominent north-western character area (LCA 4).

5.12 The key factors that have influenced the sensitivity assessment take account of the findings of the Built Heritage Assessment (Turley/2022) and Preliminary Ecological Appraisal (TEP/2022). The assessment also considers - topography; the level of enclosure attributed to hedgerows, shelterbelts and woodland planting; the prominence of open skylines and long-distance views; public visibility from the local network of footpaths; visibility from private properties; and perceived coalescence between existing communities and future residential led development.

5.13 Detailed results for all ten assessment criteria and for each of the six landscape character areas are attached to this report (Annex B). This includes a written analysis for both Landscape and Visual Sensitivity that take account of the survey criteria that follow the structure of the site survey template. A summary of the assessments are as follows.

Figure 5.1 - LG1 Landscape and Visual Sensitivity Assessment

Landscape Sensitivity **Visual Sensitivity**



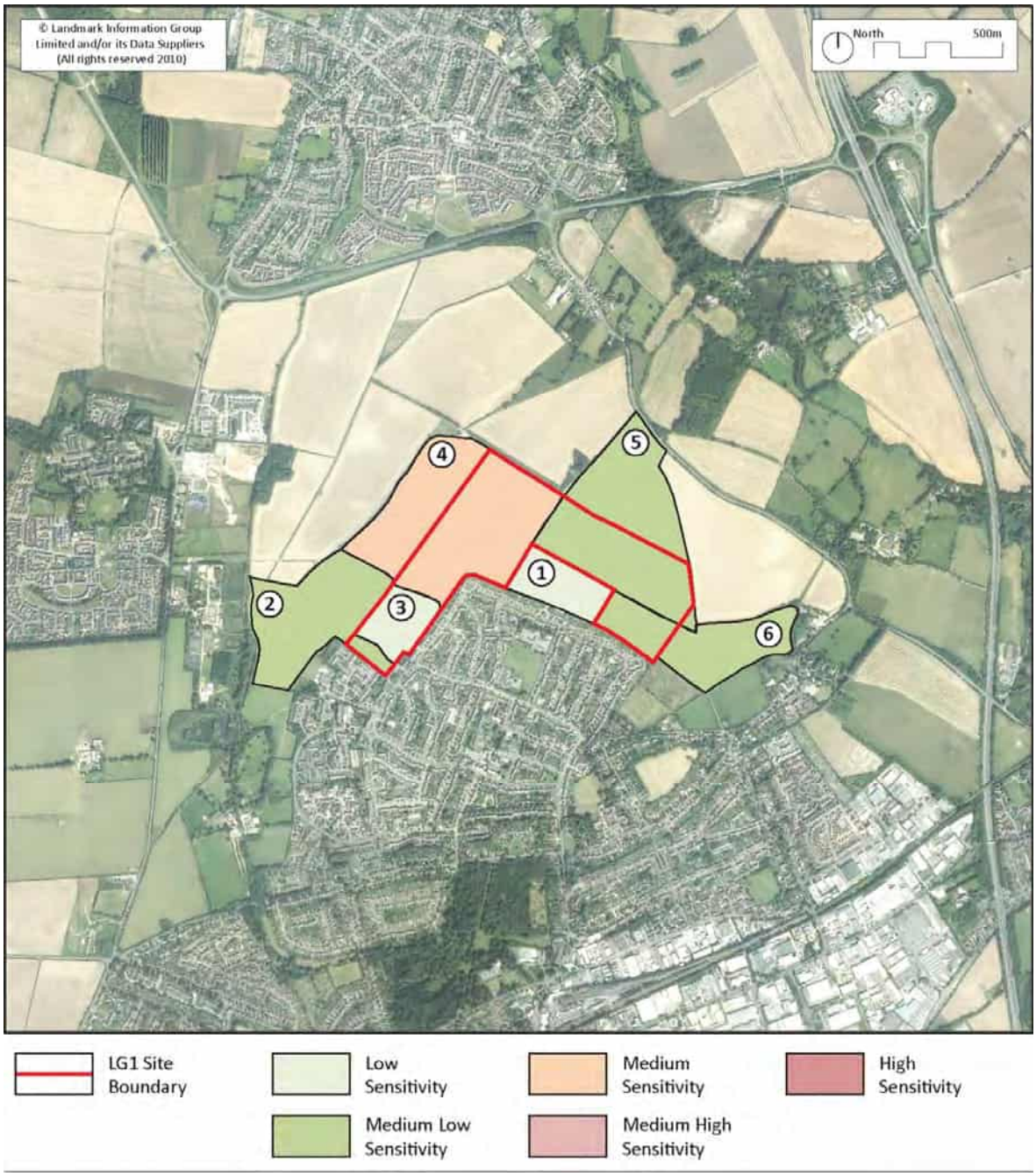
LG1 - Landscape Sensitivity Assessment

5.14 The two most northern character areas (LCA 4 & 5) record **Medium Landscape Sensitivity** that reflects the more varied topography and semi-open field pattern. Each is partially but not fully enclosed by mature hedgerows, marking historic field boundaries, and shelterbelts with limited proximity to settlements. The character areas to the south and adjacent to the Grange Estate (LCA 1 & 3) record **Low Landscape Sensitivity** attributed to their more uniform terrain and field pattern and level of enclosure. The most western and most eastern character areas (LCA 2 & 6) have a relatively varied field pattern and LCA 2 in the west has a more distinct topography. These have a **Medium Low Landscape Sensitivity** that takes account of the proximity in the west to Fairfield Park, the Croft Lane and Norton Conservation Areas in the east and the relative enclosure provided by mature vegetation, shelterbelts and hedgerows.

LG1 - Visual Sensitivity Assessment

5.15 The two most western character areas (LCA 2 & 4) record **Medium Visual Sensitivity** taking account of the long-distance and open views northwards to Stotfold and beyond and the visual proximity to the expanding development around Fairfield Park. The other character areas to the east (LCA 1, 3, 5 & 6) record **Medium Low Visual Sensitivity** as these are generally more enclosed. There is limited intervisibility between adjacent settlements with hedgerows and mature vegetation restricting views to Croft Lane and Norton Conservation Areas and heritage assets. Most character areas are open to regular public view from footpaths including the Garden City Greenway that is well used. The character areas adjacent to the Grange Estate (LCA 1-4) are also open to private view from a small number of residential properties.

Figure 5.2 - LG1 Combined Landscape and Visual Sensitivity Assessment



Overall Sensitivity

5.16 The combined Landscape and Visual Sensitivity assessment (Figure 5.2) indicates that Character Area 4 is recorded as **Medium Sensitivity** as this is the most visually prominent location. It is relatively open to both public and private views from nearby and at a distance. Character Areas 2, 5 and 6 are recorded as **Medium-Low Sensitivity** whilst character areas 1 and 3 have **Low Sensitivity**. Recommendations to address the Overall Sensitivity are provided in the following section.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 This landscape character and sensitivity study provides the environmental baseline to inform the preparation of the masterplan framework and supporting landscape and green infrastructure proposals for LG1. The following landscape and green infrastructure recommendations reflect and respect the existing landscape characteristics and landscape sensitivities of the site and take account of Local Plan policy. The recommendations should also protect and enhance existing environmental assets, achieve a net gain for biodiversity, promote visual amenity and increase the recreational resources of the site and wider context.

6.2 The strategic green infrastructure network (Figure 2.5) indicates how the site provides a point of connection between the Grange Estate, surrounding agricultural fields and the adjacent settlements of Fairfield Park, Stotfold, Radwell and Norton Village. Central to this connectivity is the Garden City Greenway that provides an important recreational route and green infrastructure corridor that is further enhanced by the evolving plans for the Etonbury Green Wheel to the north. The Corridor of the Pix Brook in the west and the River Ivel to the north east provide strategic drainage and ecological networks that have a direct influence on the landform and landscape character of the site and its surrounding environmental context.

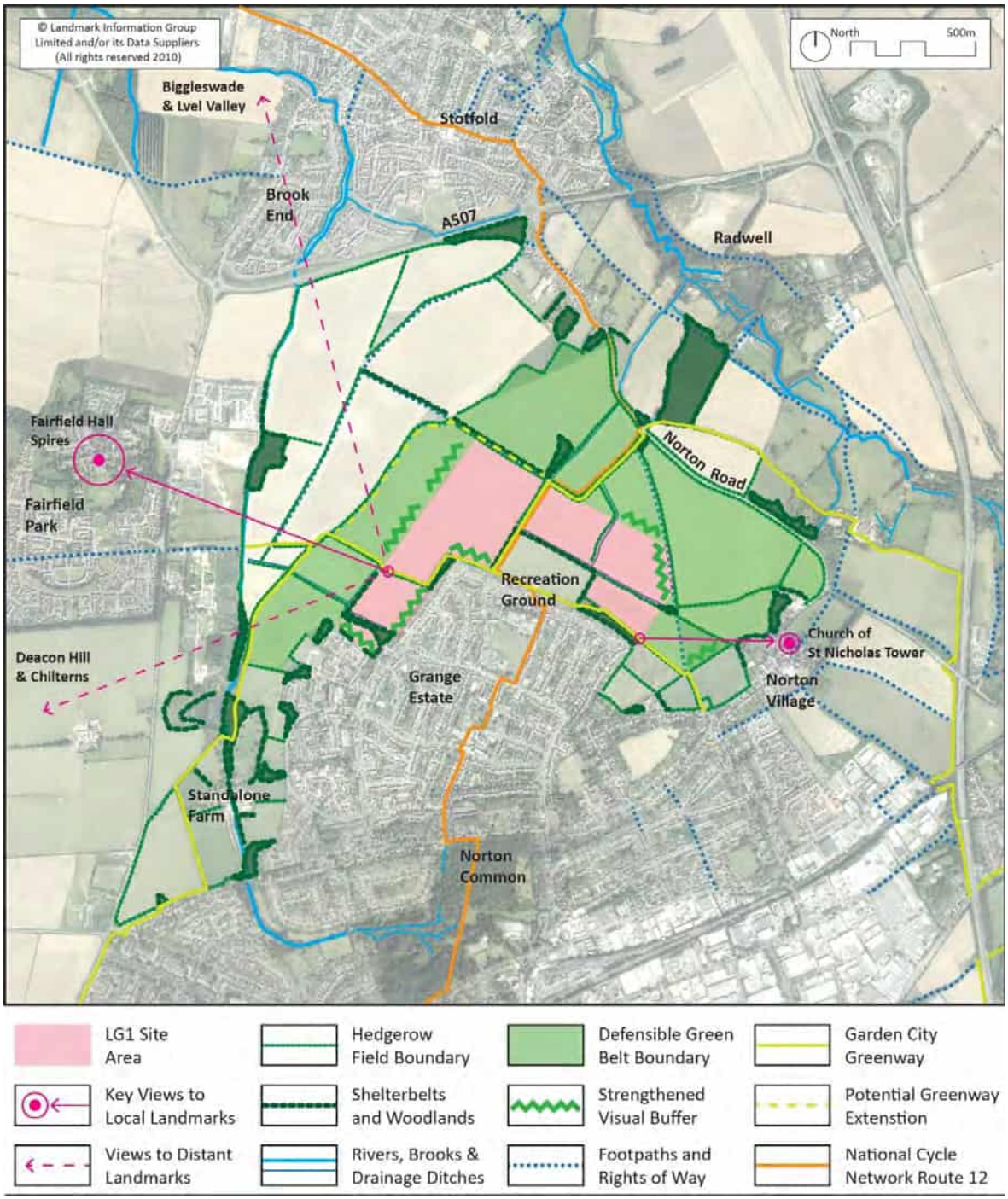
6.3 The landscape character of the site reflects qualities of both the National Landscape Character Area Profile for East Anglian Chalk (NCA 87) and the county assessment for Arlesey and Great Wymondley (North Hertfordshire Character Area 216). The county character guidelines promote opportunities to improve links between habitat areas, the use of traditional and diverse field hedges and the planting of small woodland copses around the fringes of sub-urban settlements and such measures should be included in the masterplan framework.

6.4 The six landscape character areas of LG1 and its immediate setting (Figure 4.3) highlight the qualities and characteristics of the current field pattern, hedgerows and shelterbelts as well as the variations in the gently rolling landform and the presence of medium and long-distance views particularly to the west and the north. The sensitivity assessment indicates the site has a predominately low to medium low sensitivity (Figure 5.2). This reflects the findings of the previous sensitivity assessment (LUC/2013) and emphasises the prominence of the north-western section of the site (Landscape Character Area 4). This character area is assessed to have medium sensitivity due to its prominence with the highest elevation and offering both long views out from and towards this area of LG1.

Embrace Garden City Principles in the landscape masterplan

6.5 Local Plan policy for LG1 (NHC/2022, Policy SP15) emphasises the need to follow and implement Garden City Principles (NHC/2022, Appendix 5) in the future extension of Letchworth. This should include a generous landscape setting with mature trees and hedges contributing to a comprehensive green infrastructure framework (Figure 6.1). This should create a clear sense of place and integrate the site into the surrounding landscape, providing a long-term defensible Green Belt boundary, particularly to the north-west and east of the site.

Figure 6.1 - LG1 Landscape Recommendations Framework Plan



Strengthen existing landscape buffers

6.6 A long-term landscape buffer and defensible Green Belt Boundary should be established immediately to the west, north and east of LG1 to integrate the future development into the surrounding landscape. Visual buffers using existing and new hedgerow and tree planting

should be used to strengthen existing vegetated screening and protect existing views particularly towards the western and eastern boundaries from adjacent settlements. It is assumed that the original planning of the Grange Estate included some vegetated buffers along sections of the northern and western boundaries with the open fields to reduce visual impact. Over time these have matured to provide sections of dense and wooded scrub providing some ecological value and they continue to screen views towards the estate. Where feasible these should be retained and strengthened on the western boundary of the Grange Estate where the existing urban development is more prominent (Figure 3.10, image A).

Protect and enhance the Garden City Greenway

6.7 The Garden City Greenway provides an important recreational resource for the Grange Estate, Letchworth and adjacent communities. In addition to the footpath and cycling route itself, full account should be given to the wider green corridor of the Greenway that includes mature hedgerows and trees, shelterbelts and set-aside conservation margins of adjoining arable fields. This wider green corridor should be protected and where feasible enhanced to establish a linear park, enlarging the network of walking and cycling routes including maintaining and increasing connectivity with the Etonbury Green Wheel. This will extend the longer distance recreational network towards Radwell, Stotfold and Fairfield Park. In the future this network is expected to connect to the proposed new country park that will form part of the allocated housing development of Arlesey (Figure 2.5).

6.8 To maintain the rural quality of the existing Greenway it is proposed to add an additional section of the Greenway beyond the north-west boundary of LG1 and adjacent to the historic alignment of the Stortfold Parish Boundary. The route of the National Cycle Network Route 12 should be retained and enhanced where this crosses the centre of LG1. This route should be integrated with the Greenway corridor and the proposed northern road access and should be used to promote a safe and appropriately lit active travel route from LG1 to the Grange Estate and on to the centre of Letchworth.

Expand recreational facilities and resources

6.9 The Grange Recreation Ground that is immediately adjacent to LG1 is already a popular and well used public green space for active and passive recreation including play areas and football pitches and a regular 5Km Parkrun that extends into the surrounding footpath network. The landscape masterplan for LG1 should take account of these existing facilities and where feasible enhance current provision to increase the recreational offer particularly for children and young adults. The masterplan framework should incorporate additional play areas for children of different ages, improving social interaction and promoting more active and healthy lifestyles.

Strengthen ecological networks and increase habitat diversity

6.10 The masterplan framework should seek to improve the connectivity and diversity of ecological networks to meet the statutory requirement to deliver biodiversity net gain (BNG) as well as

emerging national planning policy for establishing local nature recovery networks. The Pix Brook corridor is beyond the site boundary but contributes to an important ecological network that could be strengthened by maintaining and extending connectivity with hedgerows, shelterbelts and woodland copses. The diversity of habitats should be extended with the introduction of swales, wetlands and areas of open water that would form part of the SuDS. The introduction of grasslands and wildflower meadows should include opportunities to protect, create and enhance chalk grasslands where feasible to reflect prevailing National and North Hertfordshire landscape character profiles and objectives.

6.11 The Preliminary Ecological Assessment (TEP/November 2022, Section 5) describes a set of appropriate and proportionate measures for habitat enhancement. These recommendations will be updated following further surveys through 2023 (TEP/2022, para 5.2) and the Biodiversity Net Gain (BNG) assessment. New areas of species-rich wildflower meadow, native woodland, and native scrub could be created on site to complement and strengthen these existing habitats. Any sustainable drainage features created on site should be done so with an aim of establishing semi-naturalised habitats, including permanent areas of water, native aquatic and marginal planting and varying bank grading, providing breeding habitat for amphibians (as noted in para 6.13). Additional man-made habitat features including hibernacula, log piles, bat, bird and invertebrate boxes should also be incorporated within the development proposals to improve refuge opportunities for a range of species.

Integrate sustainable drainage within existing drainage pattern

6.12 The relatively flat or gently sloping topography (Figure 3.2) provides limited constraint on development and access within the site. In this respect careful attention should be paid to drainage and surface water management. The site naturally drains to the north and to the west through an existing network of ditches that are aligned with the field boundaries. This pattern should provide an initial framework for sustainable drainage systems (SuDS), utilising the natural landfall and paying particular attention to the shallow gradients within the north-west of the site.

6.13 The introduction of swales, detention basins and attenuation ponds as part of a gravity-fed SuDS will need to be carefully planned within the existing topography. Where feasible such features should be designed to extend and enhance existing drainage systems, expand the variety of habitats within the site and provide additional amenity and ecological value.

Respect views towards locally prominent landmarks

6.14 The most prominent medium and long-distance views are to the west and north and whilst these provide visual interest the landmarks of the Biggleswade wind farm, and Topler's Hill water tower have limited cultural significance. Western and eastern views towards the historic spires of Fairfield Hall and the St Nicholas Church tower in Norton Village offer local heritage interest and should be respected within the masterplan framework. Attention should be given to the medium-distance and long-distance views towards the north-western section of the site from surrounding visual receptors (Figure 3.6) The exact positioning of vegetated landscape

buffers to reduce perceived coalescence with Fairfield Park and Stotfold should be identified as part of the detailed Landscape and Visual Impact Assessment (LVIA) for the site.

Protect and expand the existing hedgerow network

6.15 The existing network of historic field boundaries, hedges and shelterbelts are a significant environmental and amenity resource within and surrounding LG1. They make an important contribution to landscape character and connectivity, articulating views, providing screening and defining visual envelopes within sections of the site. They also provide cover for wildlife and distinct microclimate for plant species and this habitat diversity is further enhanced where hedgerows and drainage ditches are combined. The masterplan framework should seek to protect, maintain and enhance the existing hedgerow structure wherever possible. It is acknowledged that crossing points will need to be established bisecting existing hedgerows for access, circulation and infrastructure and these should be carefully planned to minimise impact on this significant environmental characteristic and resource. Additional hedgerow planting should be used to offset any loss and enhance ecological networks and strengthen visual buffers. In addition, the analysis of the historic field boundaries and existing hedgerows (Figure 2.3) indicates potential locations to introduce new hedgerows where they have been removed in the past.

Protect and manage existing mature trees

6.16 The initial Arboriculture Survey for LG1 (PR Newson/2022) identifies the most prominent mature trees within the site including a number that have characteristics of veteran trees. These are mainly mature Oak trees that are located within the central hedgerow adjacent to the Greenway and along the northern boundary. The location of Category A and B trees are shown on the Detailed Landscape Features Plan (Figure 3.11). The survey notes that trees within the proposed development site are not afforded the protection of either Conservation Status or Tree Preservation Order. Wherever possible distinctive trees of prominent or veteran character and stature should be retained and protected to provide distinctive mature features within the masterplan framework.

ANNEX A - Field Survey Template

	Landscape Character Area Unit	No	Date	Time
	Photos	Weather		Surveyor
	Landscape Sensitivity Criteria	**Sensitivity**	**Description**	
L1	Landform and landscape features	L / M / H		
L2	Landscape pattern and complexity	L / M / H		
L3	Landscape enclosure	L / M / H		
L4	Historic and cultural character	L / M / H		
L5	Settlements and built development	L / M / H		
L6	Perceptual qualities and experience	L / M / H		
	Visual Sensitivity Criteria	**Sensitivity**	**Description**	
V1	Skyline character and key views	L / M / H		
V2	Openness to public view	L / M / H		
V3	Openness to private view	L / M / H		
V4	Intervisibility and coalescence	L / M / H		
	Overall Sensitivity and Comments	L / M / H		

ANNEX B - Individual Landscape and Visual Assessments for LG1

	LG1 - Landscape Character Area 1			Overall Sensitivity		**Low**
	Landscape Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
L1	Landform and landscape features	●				
L2	Landscape pattern and complexity	●				
L3	Landscape enclosure	●				
L4	Historic and cultural character	●				
L5	Settlements and built development		●			
L6	Perceptual qualities and experience		●			
	Landscape Sensitivity Assessment			Overall Landscape Sensitivity		**Low**
	This Landscape Character Area incorporates the Grange Recreation Ground. Whilst it is outside the LG1 site boundary it is included in the sensitivity assessment due to its prominent location. It is an open and relatively featureless green space surrounded by hedgerows and shelterbelts, aligned on historic field boundaries, providing a high degree of enclosure. As a public green space it complements the suburban qualities of the Grange Estate offering a well-used area for active and passive recreation and is assessed as **Low Landscape Sensitivity**.					
	Visual Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
V1	Skyline character and key views	●				
V2	Openness to public view				●	
V3	Openness to private view		●			
V4	Intervisibility and coalescence	●				
	Visual Sensitivity Assessment			Overall Visual Sensitivity		**Medium Low**
	The enclosed Recreation Ground offers negligible long distance and skyline views but has a high degree of openness to public view through its regular and intensive use for both passive and active recreation. The southern boundary with car park is overlooked by private properties whilst the risk of coalescence with neighbouring settlements is negligible due to its enclosed location and open space protection and is assessed as **Medium Low Visual Sensitivity**.					

	LG1 - Landscape Character Area 2			Overall Sensitivity		**Medium Low**
	Landscape Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
L1	Landform and landscape features		●			
L2	Landscape pattern and complexity		●			
L3	Landscape enclosure	●				
L4	Historic and cultural character	●				
L5	Settlements and built development		●			
L6	Perceptual qualities and experience			●		
	Landscape Sensitivity Assessment			Overall Landscape Sensitivity		**Medium Low**
	Located to the west of LG1 this includes a relatively small and self-contained section of the character area that falls within the development boundary. This area has a relatively level landform and uniform historic field pattern enclosed by a mature wooded shelterbelt along the boundary with LCA 3. The boundaries with the adjacent Grange Estate provide a semi-open urban edge to the site and the topography of the wider character area falls west towards the Pix Brook corridor. This is the most ecologically distinctive feature framed on the east by a relatively open pattern of arable fields marked by well-maintained hedgerows providing a semi-rural aesthetic quality and the area is assessed as **Medium Low Landscape Sensitivity**.					
	Visual Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
V1	Skyline character and key views		●			
V2	Openness to public view			●		
V3	Openness to private view			●		
V4	Intervisibility and coalescence	●				
	Visual Sensitivity Assessment			Overall Visual Sensitivity		**Medium**
	The character area has a semi-enclosed skyline with some medium and long-distance views north-west towards Fairfield Park and west towards the distance hills of the northern Chilterns. Openness to public view is prominent along the Greenway footpath adjacent to the Pix Brook although wider visibility is partially contained by the sloping landform. This limits views into the self-contained proportion of the character area within the LG1 boundary. Private views are gained from properties along the boundary with the Grange Estate. Potential coalescence between the Grange Estate and Fairfield Park is limited as development is restricted to within the LG1 boundary and the area is assessed as **Medium Visual Sensitivity**.					

	LG1 - Landscape Character Area 3	Overall Sensitivity			**Low**	
	Landscape Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
L1	Landform and landscape features	●				
L2	Landscape pattern and complexity	●				
L3	Landscape enclosure		●			
L4	Historic and cultural character	●				
L5	Settlements and built development	●				
L6	Perceptual qualities and experience		●			
	Landscape Sensitivity Assessment	Overall Landscape Sensitivity			**Low**	
	The rectangular arable field has a relatively flat topography sloping to the south-west with minimal landscape features and a well-defined sense of enclosure. There are mature wooded shelter belts along the southern and western boundaries with LCA 2 whilst the northern edge with LCA 4 is marked by a dense, low and well-maintained hedgerow. The influence of the existing built development of the Grange Estate is clear along the eastern boundary which reduces the perceived rural qualities of the character area which is assessed as having **Low Landscape Sensitivity**.					
	Visual Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
V1	Skyline character and key views		●			
V2	Openness to public view		●			
V3	Openness to private view		●			
V4	Intervisibility and coalescence	●				
	Visual Sensitivity Assessment	Overall Visual Sensitivity			**Medium Low**	
	The boundaries to this character area are clearly defined with some long distance and open skyline views across lower sections of the wooded shelterbelts and at points of access to adjacent fields. These provide framed and long-distance views towards Fairfield Park. The residential properties along the boundary with the Grange Estate are clearly visible including views over the southern shelterbelt to western apartment buildings. The Greenway footpath runs along the entire northern boundary and a section of the eastern boundary and whilst partially screened by a hedgerow provides clear public views as well as private views from the adjacent properties. The character area is relatively self-contained with limited risk of coalescence between the Grange Estate and Fairfield Park, the area is assessed as having **Medium Low Visual Sensitivity**.					

	LG1 - Landscape Character Area 4	Overall Sensitivity			**Medium**	
	Landscape Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
L1	Landform and landscape features			●		
L2	Landscape pattern and complexity	●				
L3	Landscape enclosure				●	
L4	Historic and cultural character		●			
L5	Settlements and built development			●		
L6	Perceptual qualities and experience			●		
	Landscape Sensitivity Assessment	Overall Landscape Sensitivity			**Medium**	
	This is the most extensive and prominent character area with a flat topography that falls gently towards the northern boundary. The boundaries are marked by hedgerows of varying height and density with the northern boundary having most densely wooded edge that includes an irregular line of distinctive mature trees that are predominantly oak with some ash and field maple. A prominent powerline runs diagonally across the field from the south-west corner to the middle of the eastern boundary. Surrounding settlements and existing built development is less evident from within this character area which has perceived natural and tranquil qualities and is assessed as having **Medium Landscape Sensitivity**.					
	Visual Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
V1	Skyline character and key views				●	
V2	Openness to public view			●		
V3	Openness to private view		●			
V4	Intervisibility and coalescence			●		
	Visual Sensitivity Assessment	Overall Visual Sensitivity			**Medium**	
	The elevated and prominent location provides a distinct skyline character providing long distance northern views towards Biggleswade and Fairfield Park and distant hills to the west. Footpaths along the northern, southern and eastern boundaries including the Greenway provide open public views although some are partially obscured by hedgerows. A wide and established footpath and farm track within a mature vegetated avenue provides a strong visual buffer to the northern boundary. There is some openness to longer distance views from the settlements of Fairfield Park and Stotfold although views from the Grange Estate are generally screened by mature vegetation. The character area is assessed as having **Medium Visual Sensitivity**.					

	LG1 - Landscape Character Area 5			Overall Sensitivity	**Medium Low**	
	Landscape Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
L1	Landform and landscape features			●		
L2	Landscape pattern and complexity		●			
L3	Landscape enclosure			●		
L4	Historic and cultural character	●				
L5	Settlements and built development			●		
L6	Perceptual qualities and experience		●			
	Landscape Sensitivity Assessment			Overall Landscape Sensitivity	**Medium**	
	This character area has a distinctive rolling landform that falls northwards towards the boundary with the Norton Road. A drainage ditch runs alongside the prominent shelterbelt with mature conifers that marks the southern edge with the Recreation Ground (LCA 1). Two ditches falling with the gradient of the land run perpendicular to the southern boundary northwards along field margins. The area is partially enclosed with hedgerows marking historic field boundaries, a prominent dense and well-maintained double hedgerow either side of the Greenway also serves as cycle route and farm track. There is limited evidence of surrounding settlements or built development and the area has perceived natural qualities although tranquillity is reduced by the presence of the Norton Road, it is assessed as having **Medium Landscape Sensitivity**.					
	Visual Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
V1	Skyline character and key views		●			
V2	Openness to public view			●		
V3	Openness to private view	●				
V4	Intervisibility and coalescence	●				
	Visual Sensitivity Assessment			Overall Visual Sensitivity	**Medium Low**	
	The character area offers an open skyline with views to the middle distance whilst long distance views are limited by the lower topography and the woodlands around Radwell that screen views to the north. The footpath network along the western, northern and eastern boundaries provide open public views where these are not obscured by hedgerows. Private views are very limited and screened by mature vegetation. The risk of coalescence is restricted within the LG1 boundary and the distance to Norton and Stotfold, the area is assessed as having **Medium Low Landscape Sensitivity**.					

	LG1 - Landscape Character Area 6			Overall Sensitivity	**Medium Low**	
	Landscape Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
L1	Landform and landscape features		●			
L2	Landscape pattern and complexity	●				
L3	Landscape enclosure	●				
L4	Historic and cultural character		●			
L5	Settlements and built development			●		
L6	Perceptual qualities and experience		●			
	Landscape Sensitivity Assessment			Overall Landscape Sensitivity	**Medium Low**	
	The character area has a generally simple, flat and uniform field pattern with limited landscape features. The boundaries are marked by mature hedgerows marking historic field boundaries that provide a clear sense of enclosure. This includes a dense belt of woodland and scrub along the southern boundary that provides a strong vegetated screen to the Grange Estate. Whilst most of the land is used for arable crops there is a triangular section of scrubland that has had limited management. The proximity of the Croft Lane and Norton Conservation Areas, listed buildings and distinct tower of the Church of St Nicholas, provide some adjacent historic character and the area is assessed to have **Medium Low Landscape Sensitivity**.					
	Visual Sensitivity Criteria	Low	Medium Low	Medium	Medium High	High
V1	Skyline character and key views		●			
V2	Openness to public view			●		
V3	Openness to private view	●				
V4	Intervisibility and coalescence		●			
	Visual Sensitivity Assessment			Overall Visual Sensitivity	**Medium Low**	
	The enclosed character generally restricts medium or long-distance views. The Church of St Nicholas tower in Norton Village is clearly visible to the east above the densely vegetated field boundary and there are limited framed views of Topler's Hill water tower in the north. The Greenway runs along the southern boundary and gives open public views across the site, public visibility is increased with the footpath (PROW 31) linking Norton Village with Radwell that bisects the site towards the east. Private views from surrounding properties are screened by dense hedgerows and mature vegetation. There is limited risk of coalescence and intervisibility between the Grange Estate and Norton Village as the LG1 boundary is aligned with the eastern edge of the Grange, the area is assessed as having **Medium Low Landscape Sensitivity**.					

Appendix E

Green infrastructure audit

Letchworth Garden City | LG1 Development Site

Green Infrastructure Audit

Prepared by

Letchworth Garden City Heritage Foundation

EcoResponsiveEnvironments

Peter Neal Consulting Ltd

First Draft

31 July 2023

Version	Date	Issued by	Description
1.0	31/07/2023	Peter Neal	First Draft for ERE and Client Review

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CONTENTS

1 Introduction **4**
- Purpose of the Study
- Methodology

2 Green Infrastructure Policy Context **7**
- National Planning Policies and Guidance
- Fields in Trust Open Space Standards
- Natural England Green Infrastructure Framework
- Local Green Infrastructure Policies and Strategies
- Strategic Green Infrastructure Network

3 Green Infrastructure Typologies..... **19**
- Amenity Green Space
- Allotments and Community Gardens
- Cemeteries and Churchyards
- Provision for Children and Young People
- Natural and Semi-Natural Greenspace
- Parks and Gardens
- Outdoor Sports Facilities

4 Green Infrastructure Assessment **22**
- Quantity of Green Infrastructure
- Quality of Green Infrastructure
- Accessibility to Green Infrastructure

5 Green Infrastructure Standards for LG1 ..... **34**
- Fields in Trust Open Space Guidelines
- Natural England Green Infrastructure Framework
- Sport England Planning for Sport Guidance

6 Green Infrastructure Network Recommendations..... **41**

Annex A - Site Survey Reference Plan 48
Annex B - Site Survey Schedule of Sites 49
Annex C - Site Survey Quality Assessment Criteria 52
Annex D - Individual Site Survey Sheets 53

The Croft Lane Community Orchard (Site NG06)

1.0 INTRODUCTION

1.1 This Green Infrastructure Audit has been prepared jointly by the Letchworth Garden City Heritage Foundation (LGCHF), EcoResponsive Environments and Peter Neal Consulting Ltd. It forms part of the Planning Baseline and evidence base that will inform the development of the future masterplan framework for LG1. This is a strategic 45 ha (112 acre) housing site allocated in the adopted Local Plan 2011-2031 (NHC/2022) for a new neighbourhood of approximately 900 homes. It is located to the north of the Grange Estate and on the northern boundary of Letchworth Garden City. The planning objectives for the site are described in Policy SP15: Site LG1 - North of Letchworth Garden City.

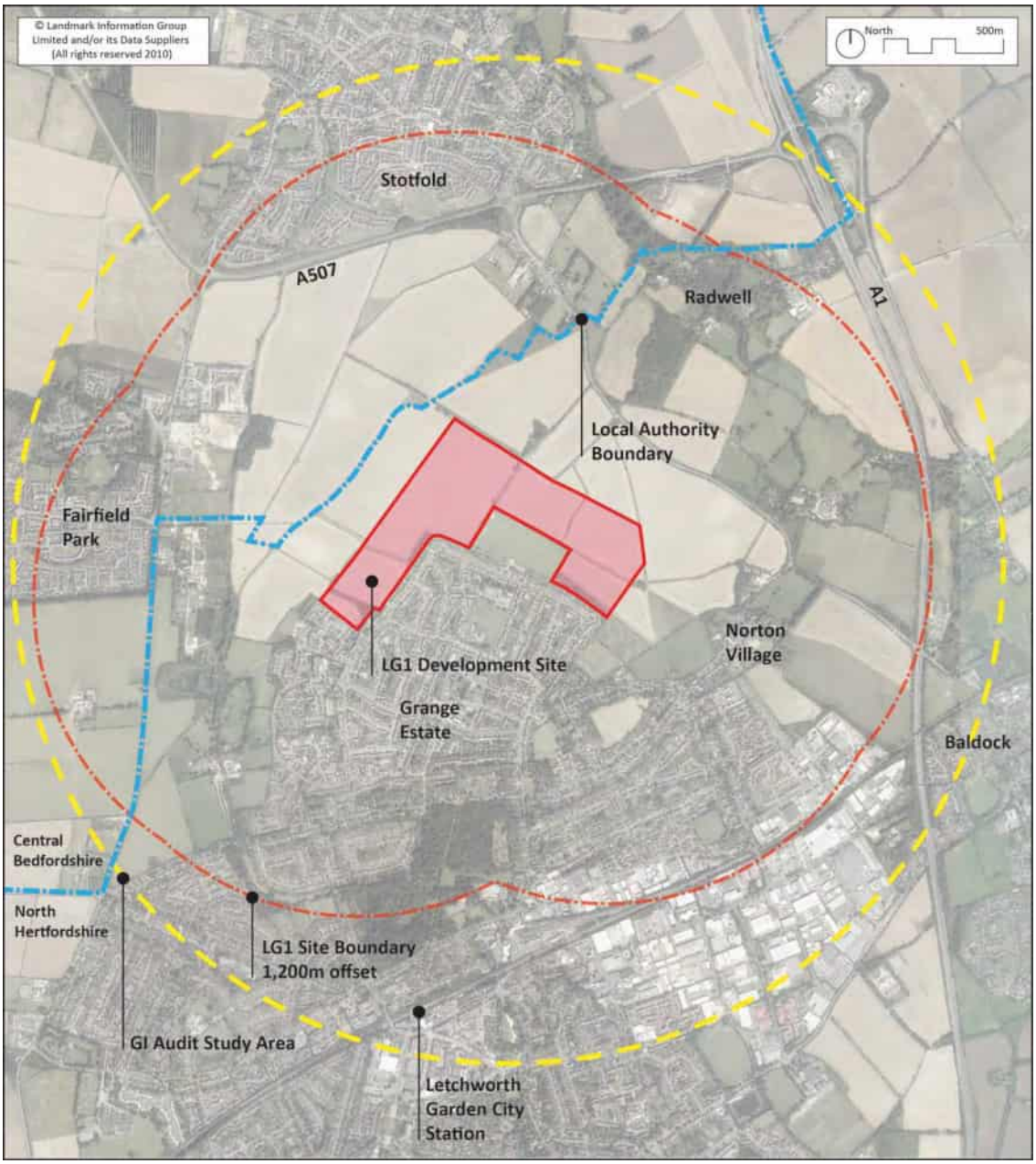
Purpose of the study

1.2 The key objectives of this study as defined by North Herts Council (NHC) are to identify and assess the quality of the existing and proposed green infrastructure network. This includes a variety of public open spaces, and the study will:

- Define and map the existing (and planned) strategic and local green infrastructure in the surrounding area, its location, typologies, function, design character, quality and accessibility;
- Undertake an assessment of deficiencies and accessibility;
- Undertake and agree green space standards for the new development with NHC based on Fields in Trust and site and contextual analysis; and

- Map out opportunities to expand and enhance the network in association with the masterplan structure, informed by the townscape, movement, drainage landscape, heritage impact and ecological analysis to create a multi-functional green infrastructure network within and around the site.

Figure 1.1 - GI Audit Catchment and Study Area



1.3 This report should be read alongside the Landscape Character and Sensitivity Study (ERE/Peter Neal Consulting, 25 January 2023) that provides a detailed assessment of the landscape and green infrastructure context of LG1. That report concludes with a set of recommendations and a Landscape Framework Plan. This report provides additional detail on the existing and future

provision of green infrastructure and specifically the public open spaces by typology reflecting prevailing open space planning standards.

Methodology

1.4 The methodology and scope for this study has been agreed by NHC and Place Services (Essex County Council). The study includes a review of relevant planning studies and associated data, a set of site surveys undertaken in January to July 2023 and analytical GIS mapping undertaken by LGCHF and Peter Neal Consulting. It takes account of relevant national guidance, described in section 2, including Fields in Trust Guidelines for Outdoor Sport and Play in England (FIT/2020).

1.5 The study area for the survey is defined by a 1.2km offset of the LG1 site boundary that is the maximum Fields in Trust access standard for outdoor sports facilities. This includes open spaces in both North Hertfordshire and Central Bedfordshire - see Figure 1.1. All the sites are publicly accessible, apart from allotments and some natural green spaces, and mainly 0.2 Ha or larger in size, with the exception of children's play areas. Most sites are included in NHC and Central Bedfordshire Council (CBC) current open space strategies and audits, described in section 2.

1.6 Each site is given a unique refence code relating to the typology and the information recorded for each site includes the name, location, typology, local authority reference code, size and description. The open space typologies included in this audit are:

- AG - Amenity Green Space
- AL - Allotment
- CC - Churchyard & Burial Ground
- CP - Children's Play
- NG - Natural & Semi-natural Green Space
- PG - Parks and Gardens
- SF - Outdoor Sports Facilities

A location plan for all sites surveyed is provided in Section 4 (Page 23), the survey template for recording details of each site is provided in Annex A, a full schedule of sites is provided in Annex B, and the full set of survey sheets and site descriptions is provided in Annex C.

1.7 Outline assessments of quality were included for each survey and take account of Green Flag Award[1] criteria. This provides a nationally recognised quality standard for parks and green spaces and this study uses a five-point scoring system for each criteria which takes account of:

- Access and Safety
- Character and Design
- Boundaries and Hard Landscape
- Planting and Soft Landscape
- Standards of Maintenance

[1] Keep Britain Tidy (2022) The Green Flag Award - https://greenflagaward.org/

Fairfield Park, Amenity Green Space (Site AG02)

2 GREEN INFRASTRUCTURE POLICY CONTEXT

2.1 LG1 is located on the northern boundary of Letchworth between the suburban neighbourhood of the Grange Estate and open agricultural fields. The site is close to the boundary of North Herts Council (NHC) whilst much of the northern and western context of the site falls within Central Bedfordshire Council (CBC).

Planning Policy Context

2.2 The landscape and green infrastructure context and catchment of the site encompasses a variety of urban, suburban and rural qualities. These include public open spaces for recreation, an extensive network of footpaths and a national cycle route (NCN12), a community orchard, a mosaic of arable fields bounded by established hedgerows and shelter belts, modest river corridors, woodlands and a small number of local nature reserves. There is an established and prominent pattern of settlements to the north, west and east of the site that include Stotfold, Fairfield Park, Radwell and Norton Village. There are some prominent housing development sites on the eastern boundary of Fairfield Park and to the west of the LG1 site.

2.3 The planning policy context for this audit includes national policies and design guidance for green infrastructure and public open space. Local Plans provide the immediate planning context for the site and include specific policies for the provision of green infrastructure. This is reinforced by sub-regional and local strategies and design guides and their planning objectives are summarised in this section.

National Planning Policy Framework

2.4 The National Planning Policy Framework[2] (NPPF - MHCLG/2021) defines green infrastructure as 'a network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity' (NPPF, page 67). The provision of public open space is seen as a means to enable and support healthy lifestyles 'for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling' (NPPF, para 92 c).

2.5 National planning policies for open space and recreation promote 'access to a network of high quality open spaces and opportunities for sport and physical activity [which] is important for the health and well-being of communities, and can deliver wider benefits for nature and support efforts to address climate change' (NPPF, para 98). Planning polices and decisions 'should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks' (NPPF, para 100). Furthermore, in conserving and enhancing the natural environment, planning measures should address climate change mitigation and adaptation and 'take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure' (NPPF, para 175).

National Design Guide

2.6 The National Design Guide[3] (NDG - DLUHC/2021) emphasises the importance of incorporating Nature within development masterplans (Section N1-N3) and provides guidance on the design of Public Spaces (Section P1-P3). Well-designed places 'integrate existing and incorporate new natural features into a multifunctional network that supports quality of place, biodiversity and water management, and addresses climate change mitigation and resilience'. It is important to 'prioritise nature so that diverse ecosystems can flourish to ensure a healthy natural environment that supports and enhances biodiversity' (NDG, para 91).

2.7 The NDG highlights the value of creating connected networks of accessible green space for recreation and active travel which can also support a more sustainable approach to surface water management and providing wildlife corridors to improve biodiversity. Design guidance for public space promotes the creation of a hierarchy of spaces for different activities that encourages use and social interaction, and it is important that these spaces feel safe, secure and attractive for all users. This can be achieved by having active frontages from buildings and ensuring there is natural surveillance from windows, front gardens and entrances that face, overlook and provide direct access to public space.

[2] MHCLG (2021) National Planning Policy Framework, revised on 20 July 2021, Department for Levelling Up, Housing and Communities. https://www.gov.uk/government/publications/national-planning-policy-framework--2
[3] DLUHC (2021) National Design Guide, Last updated 30 January 2021, , Department for Levelling Up, Housing and Communities. https://www.gov.uk/government/publications/national-design-guide

Building for a Healthy Life

2.8 Building for a Healthy Life[4] (BFHL - Homes England/2020) provides an update to Building for Life 12 design guidance for 'creating places that are better for people and nature'. The guidance is structured around 12 criteria that include three topics that directly **relate** to the design of public space and green infrastructure.

- Natural Connections - that encourage the creation of 'places that are well integrated into the site and their wider natural and built surroundings'.
- Well defined streets and spaces - that promote a strong framework of connected and well overlooked streets and spaces. These should be 'enclosed by buildings and/or structural landscaping, taking care to ensure that front doors and the principal facades of buildings face streets and public spaces'.
- Green and blue infrastructure - should be planned at the outset rather than incorporated at the end of development. This can facilitate habitat creation, better surface water management, facilities for play and active recreation as well as opportunities for growing food.

Fields in Trust Open Space Standards

2.9 Fields in Trust (FIT) provide established and nationally recognised planning standards and Guidance for Outdoor Sport and Play. Beyond the Six Acre Standard[5] (FIT/2020) helps 'to ensure that the provision of outdoor sport, play and informal open space is of a sufficient size to enable effective use; is located in an accessible location and in close proximity to dwellings; and of a quality to maintain longevity and to encourage its continued use' (FIT/2020, page 5).

2.10 These standards have been adopted by NHC and are referenced in the North Hertfordshire Local Plan (NHC/2022, para 11.27, footnote 132). They provide quantity and accessibility standards for a variety of types of open space including playing pitches, equipped and designated play areas, parks and gardens, amenity green space and natural and semi-natural space. Section 5 of this report describes the application of these standards in detail.

Natural England Green Infrastructure Framework

2.11 Natural England (NE) has published an extensive suite of green infrastructure guidance as part of their Green Infrastructure Framework[6] (NE/2023). This includes a set of principles, standards, maps and a planning and design guide to improve the provision of green spaces and green infrastructure. The standards define what good green infrastructure should look like and

[4] Homes England (2020) Building for a Heathy Life - Birkbeck, D., Kruczkowski, S. with Jones, P., McGlynn, S. and Singleton, D, published 8 June 2020.
https://www.udg.org.uk/sites/default/files/publications/files/14JULY20%20BFL%202020%20Brochure_3.pdf
[5] Fields in Trust (2020), Guidance for Outdoor Sport and Play, Beyond the Six Acre Standard, England, November 2020 - https://www.fieldsintrust.org/Upload/file/guidance/Guidance-for-Outdoor-Sport-and-Play-England.pdf
[6] Natural England (2023) Green Infrastructure Framework - Principles and Standards for England.
https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx

explain 'how to plan it strategically to deliver multiple benefits for people and nature. When used together, these Green Infrastructure Standards will help stakeholders to deliver the 15 Green Infrastructure Principles and enable everyone to benefit from good green infrastructure provision'. Section 5 of this report provides further detail on the content of these standards.

North Herts Green Infrastructure Policy

2.12 At a local level the following list of documents describe the planning strategies and policies that have been adopted by NHC for the protection and enhancement of green infrastructure and open space across the district in general and for Letchworth and LG1 specifically. The key planning objectives are to protect and improve the existing green infrastructure network to benefit recreation, sustainable travel and ecological connectivity. The adopted Local Plan provides the principal planning policy and this is supported by a set of focused strategies, assessments and reviews that are used to guide the future provision of open space and green infrastructure.

- North Hertfordshire Local Plan 2011-2031 (NHC/2022)
- North Hertfordshire Open Space Review & Standards (NHC/2016)
- North Hertfordshire Playing Pitch Strategy, Assessment Report (NHC/2015)
- North Hertfordshire Playing Pitch Strategy & Action Plan (NHC/2018)
- Greenspace Management Strategy for North Herts 2022-2027 (NHC/2022)
- NHC Open Space Settlement Profile, Letchworth Garden City (2022)
- North Hertfordshire District Green Infrastructure Plan (LUC/2009)
- Hertfordshire Strategic Green Infrastructure Plan (LUC/2011)

2.13 **North Hertfordshire Local Plan 2011-2031**[7] was adopted in November 2022 (NHC/2022) and provides the current planning framework for the district. The overview acknowledges that 'The quality of the District's natural and historic environment, its open spaces and countryside are highly valued by its residents' (para 2.81). Direct reference to polices 'that encourage the provision of open space within new development to promote healthy lifestyles, sport, play and recreation' is given in the Foreword (page 1). The plan includes a set of Strategic Policies (SP) and development management policies for the Natural Environment (NE) that are relevant to this study. Particular attention should be given to Policy NE6 that sets out the requirements for providing new and improved open space within development proposals.

2.14 **Policy SP9**: Design and Sustainability - requires masterplans and planning applications for strategic housing sites to create an 'accessible multi-functional green infrastructure network' (SP9 / para c, vi, page 69-70) that provides:

- a key structuring and functional place-making feature supporting healthy lifestyles, sport, play and recreation linking into the wider Green Infrastructure Network; and

[7] NHC (2022) Local Plan 2011-2031, adopted 8 November 2022. https://www.north-herts.gov.uk/north-herts-local-plan-2011-2031

- a high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network.

2.15 **Policy SP12**: Green infrastructure, landscape and biodiversity - will ensure the natural environment is protected and enhanced whilst there is significant growth during the plan period (page 78). This includes the need to respect landscape character, scenic beauty and locally sensitive features as well as:

d) Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and seek opportunities for ensure measurable net gains for biodiversity.
e) Protect other open spaces and support provision of new and improved open space.

2.16 **Policy SP15**: Site LG1 - North of Letchworth Garden City - provides the policy framework for this strategic housing site that is allocated for a new neighbourhood of approximately 900 homes (page 87-88). Future provision of open space within the development integrated within the masterplan framework should contributing to meeting the requirements of this policy including:

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained and any hedgerow losses kept to a minimum
i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach
j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east
k) Diversion and / or re-provision of the Letchworth Greenway to provide a revised route around the new urban edge

2.17 **Policy NE1**: Strategic green infrastructure - seeks to protect, conserve and where possible enhance the strategic green infrastructure network associated with development. Avoiding loss, fragmentation, severance or negative impact on the function of the network. The creation of new strategic green infrastructure should be accompanied by a plan for long-term maintenance and management (page 149).

2.18 **Policy NE5**: Protecting open space - ensures that planning permission will only be granted for any proposed loss of green space, providing that it can be demonstrated that the open space is surplus to requirements. Any loss should be mitigated against by either direct provision elsewhere or financial contributions towards new or existing open space (page 155).

2.19 **Policy NE6**: New and improved open space - states that planning permission will be granted where provision for new and/or improved open space:

a) Meets the needs arising from the development having regard to the Council's open space standards and other relevant guidance;
b) Contributes towards improving the provision, quality and accessibility of open space
c) Incorporate any necessary open space buffer(s) for landscape, visual, ecological or air quality reasons.

Any on-site provision must include a long-term maintenance and management plan. This policy is followed by a list of the types of open spaces (Para 11.25) that relate to this policy, these are described in further detail in Section 3 - Green Infrastructure Typologies.

2.20 **North Hertfordshire Open Space Review & Standards**[8] (NHC/2016) provides an update to the 2009 Open Space Sport and Recreation Facilities assessment that was based on past national planning guidance (PPG17 - Planning for Open Space, Sport and Recreation[9]). This was used to determine the overall provision in the District of the quantity, quality and accessibility of open space. The assessment included detailed analysis of six settlement sub-areas including Letchworth Garden City that was recorded to have 210.59 hectares of open space in total. It was also recorded to have the lowest level of open space provision of the six analysis areas (6.33ha per 1,000 persons). Outdoor Sports Facilities account for the greatest type of provision (110.59ha), whilst the lowest types of provision are for Children and Young People (2.28ha) and Parks and Gardens (4.27ha) (NHC/2016, para 14.4).

2.21 **North Hertfordshire Playing Pitch Strategy, Assessment Report**[10] (NHC/2015) provides a review of all the main playing pitch sports, including Football, Cricket and Tennis, as well as some non-pitch sports, including Bowls, Skate parks and Golf courses. It was prepared in accordance with Sport England's Playing Pitch Strategy Guidance: An Approach to Developing and Delivering a Playing Pitch Strategy. Whilst out of date, this provided a review of existing provision, standards of quality and projected future demand for sports facilities although the report did not provide any recommendations on future provision.

2.22 **North Hertfordshire Playing Pitch Strategy & Action Plan**[11] (NHC/2018) provides a set of strategic recommendations and an action plan for future investment in sports facilities based on the assessment undertaken in 2015. This review was completed five years ago and at that time the assessment for Letchworth noted a shortfall in cricket pitch provision for Letchworth (page 2), an overplay in adult football pitches in the Grange Playing Field (page 54) and Letchworth and Hitchin were identified as suitable locations for an additional G3 football turf pitch (page 31).

[8] NHDC (2016) Open Space Review & Standards, 2016 https://www.north-herts.gov.uk/sites/default/files/OSC4%20North%20Hertfordshire%20Open%20Space%20Review%20%26%20Standards%202016.pdf
[9] ODPM (2006) PPG17, Planning for Open Space, Sport and Recreation, Office for the Deputy Prime Minister, 5th https://webarchive.nationalarchives.gov.uk/ukgwa/20120919132719/http://www.communities.gov.uk/documents/planningandbuilding/pdf/ppg17.pdf
[10] NHDC (2015) North Hertfordshire District Council, Playing Pitch Strategy, August 2015 https://www.north-herts.gov.uk/sites/default/files/OSC1%20North%20Hertfordshire%20Playing%20Pitch%20Strategy%20Assessment%20Report.pdf
[11] NHDC (2018) North Hertfordshire Playing Pitch Strategy & Action Plan, adopted 18/12/18 https://www.north-herts.gov.uk/sites/default/files/North%20Hertfordshire%20PPS%20Strategy%20%26%20Action%20Plan.pdf

2.23 **Greenspace Management Strategy** for North Herts 2022-2027[12] (NHC/2022) sets out the vision, aims, high-level principles and strategic objectives for managing green spaces owned by NHC or maintained on behalf of other organisations. The six strategic aims of the strategy includes a set of agreed objectives for 'good design, greenspace planning, management and maintenance, and provision in new housing sites that reflect the landscape, townscape and heritage character and qualities of the district'.

2.24 The strategy concludes with a table of actions for different typologies of green space including a focus on town centre parks and increased investment in playground provision. There is an increasing priority to improve the environmental and ecological performance of parks and open spaces. This will be achieved by changing the methods and intensity of management regimes and introducing additional habitats and promoting biodiversity net gain. NHC is unlikely to adopt new open spaces created through development unless it compliments existing service arrangements or meets a strategic gap in the existing green space network.

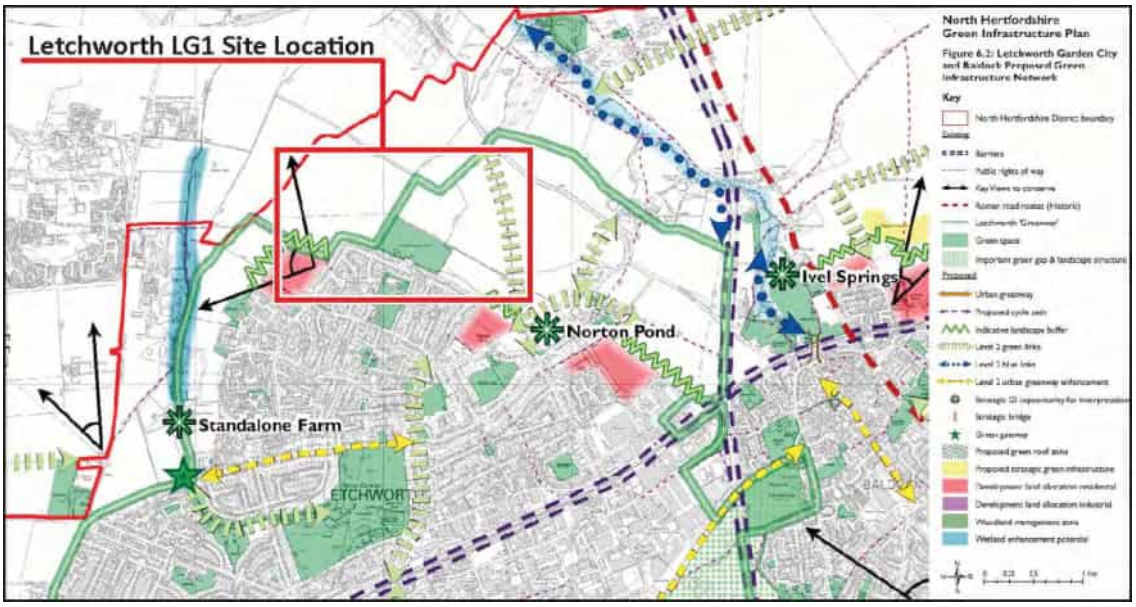
2.25 **NHC Open Space Settlement Profile, Letchworth Garden City**[13] (2022) provides a detailed analysis by PPG17 typology of existing open space provision. Its purpose is to ensure that there is suitable access to open space for residents as the population increases in the future. The assessment of current provision is based on the adopted Fields in Trust standards where applicable. Letchworth currently has a deficit on all typologies including parks and gardens, outdoor sports, children's play, amenity green space and natural / semi-natural green space when compared to the FIT standards (NHC/2022, page 4, Table 2).

2.26 The Settlement Profile includes open space projections for the main allocated development sites in Letchworth including LG1. The future population projection for this site is 2,160 people, requiring an additional 12.1 hectares of new open space across various typologies based on FIT standards (page 28, para 6.3). The assessment identifies a slight deficit of allotments in the north of Letchworth that could be addressed within the LG1 site (page 30, para 74). It also recommends a Neighbourhood Equipped Area for Play (NEAP) is located within or close to LG1 (page 31, para 75). An analysis of this assessment is provided in Section 5.

2.27 **North Hertfordshire District Green Infrastructure Plan**[14] (LUC/2009) provides a review of Green Infrastructure assets including designated sites, green spaces and recreation grounds. The Strategic Green Infrastructure Network Plan (LUC/2009, Fig 4.1) indicates the significance of the Garden City Greenway whilst more detailed proposals within the Letchworth Garden City and Baldock Green Infrastructure Network are shown in Figure 2.1 (LUC/2009, Fig 6.2). The plan predates the current allocation of LG1 but includes landscape buffers and Level 2 green links from Norton Village towards Stotfold and Radwell Meadows. Norton Pond is identified as a Strategic Opportunity for green infrastructure interpretation and key views from the west towards Fairfield Park are recommended to be conserved.

[12] NHC (2022) Greenspace Management Strategy 2022-2027, North Herts Council. https://www.north-herts.gov.uk/sites/default/files/2022-04/Green%20Space%20Management%20Strategy%202022-2027.pdf
[13] NHC (2022) Open Space Settlement Profile, Letchworth Garden City, November 2022, Unpublished.
[14] LUC (2009) North Hertfordshire District Green Infrastructure Plan. Final Report for North Hertfordshire District Council. https://www.north-herts.gov.uk/sites/northherts-cms/files/NHE15%20Green%20Infrastructure%20Report%20August%202009_Part1.pdf

Figure 2.1 - Excerpt of Letchworth Garden City and Baldock Proposed Green Infrastructure Network



Source - LUC (2009) North Hertfordshire District Green Infrastructure Plan, Figure 6.2

2.28 **Hertfordshire Strategic Green Infrastructure Plan**[15] (LUC/2011) provides an overview of existing strategic green infrastructure assets within the County, including consideration of green infrastructure assets and proposals which are nationally or regionally significant. It describes opportunities for creating or enhancing green infrastructure and outlines a series of potential projects to deliver a variety of environmental benefits for the county.

2.29 The study includes a county wide Hertfordshire & GreenArc Green Infrastructure Strategic Highlights Plan (page 49, Figure 3.1) that indicates strategic opportunities for green infrastructure investment. For Letchworth and on land to the north of LG1 this includes opportunities for urban greening in existing built-up areas; reference to the Chalk Arc project to enhance chalk grasslands and escarpments; and, improving environmental connectivity along existing river corridors including the River Ivel.

Central Bedfordshire Green Infrastructure Policy

2.30 The catchment for this green infrastructure audit for LG1 extends beyond the North Herts boundary into Central Bedfordshire Council, as indicated in Figure 1.1 - GI Audit Catchment and Study Area. Whilst NHC policy provides the principal planning framework for LG1 it is important to take account of adjacent planning objectives and initiatives. A concise review of CBC open space and green infrastructure planning policy is provided including reference to the following documents:

[15] LUC (2011) Hertfordshire Strategic Green Infrastructure Plan (Incorporating the GreenArc Area), Hertfordshire County Council, https://www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/landscape/hertfordshire-strategic-gi-plan-2011.pdf

- Central Bedfordshire Local Plan 2015-2035 (CBC/2021)
- Bedfordshire and Luton Strategic Green Infrastructure Plan (BLGIC/2007)
- Mid-Bedfordshire Green Infrastructure Plan (Greensand Trust/2008) (GT/2008)
- Central Bedfordshire Design Guide, Section 2, Green Infrastructure (CBC/2014)
- Central Bedfordshire Leisure Strategy (CBC/2014)

2.31 **Central Bedfordshire Local Plan 2015-2035**[16] (CBC/2021) includes Policy EE1: Green Infrastructure (page 160) that requires all major development proposals should protect existing green infrastructure, take account of existing strategies and plans and demonstrate a net gain in provision. 'Where possible high quality, multifunctional green infrastructure will be integrated within developments, incorporating sustainable drainage systems and enhancing biodiversity, the historic environment, landscape character, the Rights of Way network and design quality, and making provision for the ongoing and effective management of this green infrastructure'.

2.32 The Local Plan makes specific reference to the strategic importance of the Etonbury Green Wheel. This connects with the Letchworth Garden City Greenway that runs through the centre of the site as illustrated in Figure 2.2 - Current Strategic Green Infrastructure Network for LG1. Other strategic opportunities within CBC and adjacent to LG1 include a new Country Park for Arlesey and Stotfold, a long distance 'Great North Cycleway', and access and open space networks around Biggleswade, Sandy, and the Arlesey, Stotfold and Fairfield areas (page 30, para 6.3.3). Detailed planning objectives for the proposed country park are described in Policy SA3: East of Arlesey which will include a range of different formal and informal green infrastructure typologies (SA3, page 64, para 3).

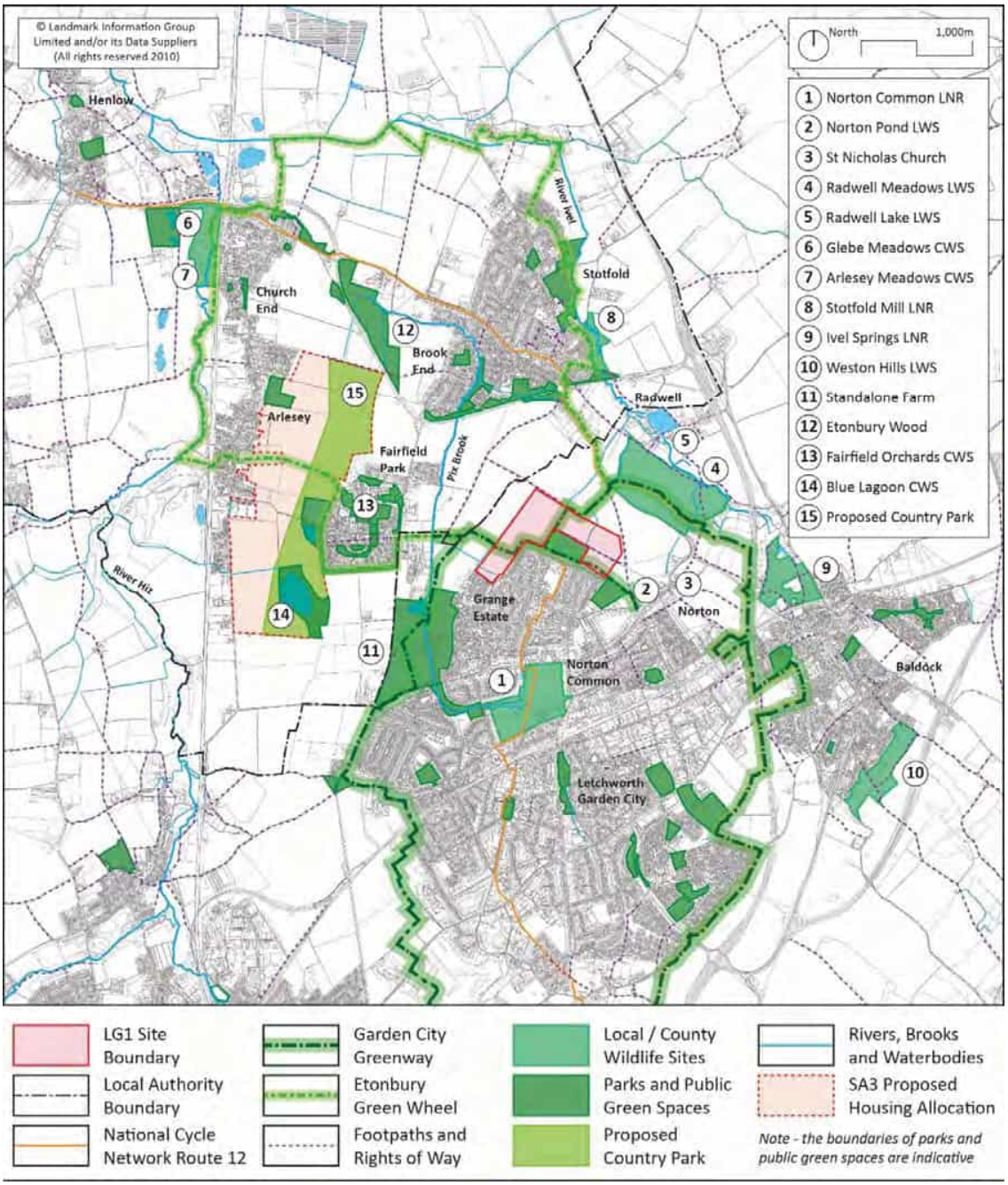
2.33 **Bedfordshire and Luton Strategic Green Infrastructure Plan**[17] (BLGIC/2007) prepared by the BLGI Consortium provides a strategic green infrastructure framework for Bedfordshire and Luton up to 2021. Whilst out of date the plan identifies the area south of Arlesley and Stotfold and adjacent to LG1 as a location for Strategic Urban Fringe Landscape Enhancement (page 33, figure L2) and an area deficient in strategic accessible green space (page 63, figure G2,).

2.34 The plan notes that landscape quality of the urban fringe countryside is a key influence on how the overall character of Bedfordshire & Luton's landscape is perceived and enjoyed. 'New development on the edges of settlements has the potential to be visually intrusive, particularly in the early years before landscape mitigation schemes mature'. This is evident in the visually intrusive eastward expansion of Fairfield Park illustrated in Figure 2.3. The plan recommends implementing substantial landscape frameworks in advance of development of the major urban expansions to mitigate their impact (page 28, para 2.3.16).

[16] Central Bedfordshire Council (2021) Local Plan 2015-2035, adopted July 2021 https://www.centralbedfordshire.gov.uk/info/153/central_bedfordshire_local_plan_2015_to_2035/1034/adopted_local_plan

[17] BLGIC (2007) Bedfordshire and Luton Strategic Green Infrastructure Pan Bedfordshire and Luton Green Infrastructure Consortium. https://bedsrcc.org.uk/wp-content/uploads/2015/03/Beds_and_Luton_Strategic_Green_Infrastructure_Plan_P1_tcm5-15234.pdf

Figure 2.2 - Current Strategic Green Infrastructure Network for LG1



2.35 **Mid-Bedfordshire Green Infrastructure Plan**[18] (GT/2008) identifies the landscape in Central Bedfordshire to the north and west of LG1 to be a priority Landscape Opportunity Area. These are areas where the most advantage can be gained from green infrastructure investment in conservation, enhancement or renewal including the enhancement of the rural-urban fringe,

[18] Greensand Trust (2008) Mid-Bedfordshire Green Infrastructure Plan https://bedsrcc.org.uk/wp-content/uploads/2015/03/Mid-Beds-GI-Plan-ii.pdf

transport corridors and improvements in hedgerows and field boundaries. The Green Infrastructure Plan also identifies opportunities to improve habitat networks and in particular woodland, wetlands and waterways and other priority habitats. These include opportunities to protect, create and enhance chalk grasslands. Further design guidance for green infrastructure is provided in the Central Bedfordshire Design Guide (CBC/2014) that is currently being updated.

Figure 2.3 - Visually intrusive eastward expansion of Fairfield Park towards Pix Brook

2.36 **Central Bedfordshire Design Guide, Section 2, Green Infrastructure**[19] (CBC/2014) provides guidance on how to embed high quality green infrastructure, climate change and sustainability principles into the design and development process. It promoted a joined-up and integrated approach to planning and design and encourages the early adoption of green infrastructure and sustainability principles in the development process to deliver a wide variety of social, environmental and economic benefits. The guide references the 'Rolling Chalk Farmland' character of the landscape within CBC and adjacent to LG1, highlighting opportunities for landscape renewal and reestablishing physical and visual connections to chalk hills (page 6, Fig 2.1 and page 15, para 2.02.24).

[19] CBC (2014) Central Bedfordshire Design Guide, Section 2, Green Infrastructure, Climate Change Adaptation & Sustainable Buildings, Adopted 18 march 2014. https://www.centralbedfordshire.gov.uk/migrated_images/green-infrastructure_tcm3-2096.pdf

2.37 **Central Bedfordshire Leisure Strategy**[20] (CBC/2014) was adopted in March 2014 and covers the following sections:

- Chapter 1 - Indoor Leisure Facilities Strategy SPD
- Chapter 2 - Recreation and Open Space Strategy, Part 1 and 2 and Appendices
- Chapter 2 - Play Provision Guidance, September 2022
- Chapter 3 - Playing Pitch Strategy, Part 1 and 2 and Appendices
- Chapter 4 - Physical Activity Strategy, 2020-2026

Some documents have been added and updated since adoption in 2014. For this study the Recreation and Open Space Strategy provides the main reference. This sets out both the evidence base and the strategic direction for the provision of recreation and open spaces facilities in Central Bedfordshire. The strategy provides a set of local quantity, quality and accessibility standards for each typology that are summarised in Table 2.1.

Table 2.1 - Central Beds Council Local Green Space Standards by Typology

	Open Space Typology HOP = Head of Population	Quantity Guideline (Hectares per 1,000 HOP) [1]	Walking Guideline (Metres from dwelling) [1]
1.0	Countryside Recreation Sites	3.19 Ha	20 min Drive
2.0	Urban Parks - major centres	0.22 Ha	720 m
3.0	Urban Parks - minor centres	0.39 Ha	20 min Drive
4.0	Large Formal Recreation Areas	1.17 Ha	480 m
5.0	Informal Recreation Areas	2.50 Ha	480 m
6.0	Small Amenity Spaces	0.58 Ha	240 m
7.0	Children's Play Spaces	0.11 Ha	480 m
8.0	Provision for Young People	0.043 Ha*	480 m
9.0	Allotments	0.37 Ha	480 m
*	This may be a typographic error and should read 0.43 Ha rather than 0.043 Ha		

Source: Central Bedfordshire Council (2014), Leisure Strategy, Chapter 2, page 40, Table 5.1

2.38 These open space standards vary from FIT standards adopted by NHC. The typologies used are not entirely comparable to the PPG17 typologies used by NHC and some access standards include both driving and walking times and distances. Some quantity standards are significantly higher than those adopted by NHC. For example, Countryside Recreation Sites 3.19 Ha / 1,000 HOP (CBC) compared to Natural and Semi-Natural greenspace 1.80 Ha / 1,000 HOP (NHC). Other standards are lower than those adopted by NHC. For example, Urban Parks 0.22 - 0.39 Ha / 1,000 HOP (CBC) compared to Parks and Gardens 0.80 Ha / 1,000 HOP (NHC).

[20] Central Bedfordshire Council (2014), Leisure Strategy, Adopted March 2014
https://www.centralbedfordshire.gov.uk/info/81/leisure_and_countryside/437/leisure_strategy

Amenity Green Space by Sorrel Drive, Stotfold (Site AG03)

3 GREEN INFRASTRUCTURE TYPOLOGIES

3.1 Green Infrastructure includes a variety of different green space elements that contribute to a network of public open spaces, and these are generally referred to as green infrastructure typologies. Current national planning guidance does not provide a standard list of typologies although many local authorities, including NHC, continue to follow a common list that was first introduced in previous national planning guidance (PPG17 - Planning for Open Space, Sport and Recreation).

3.2 The Companion Guide to PPG17[21] (ODPM/2006, Annex A, page 73) provided a comprehensive set of descriptions of these green space typologies which are summarised in Table 3.1. This defines a 'primary purpose' for each typology although in practice many green spaces serve several different yet complimentary uses. The principle of multi-functional green space or green infrastructure is increasingly being recognised and promoted in planning and design guidance. This reflects a more integrated approach to green infrastructure provision that incorporates a wide variety of social, environmental and economic uses and benefits.

3.3 The Green Infrastructure Framework (NE/2023) emphasises the importance of multiple functions, describing that 'green infrastructure should deliver a range of functions and benefits

[21] ODPM (2006) Assessing needs and opportunities: a companion guide to PPG17, Office of the Deputy Prime Minister, 5th May 2006, Annex A - Open Space Typology, page 73. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7660/156780.pdf

for people, nature and places, address specific issues and to meet their needs. Multifunctionality (delivering multiple functions from the same area of GI) is especially important in areas where provision is poor quality or scarce' (NE/2023, The 15 Green Infrastructure Principles).

Table 3.1 - Typology of Green Spaces proposed by PPG17

	PPG17 Typology	Primary purpose
01	Parks and gardens	Accessible, high-quality opportunities for informal recreation and community events
02	Natural and semi-natural greenspaces, including urban woodland	Wildlife conservation, biodiversity and environmental education and awareness
03	Green corridors	Walking, cycling or horse riding, whether for leisure purposes or travel, and opportunities for wildlife migration
04	Outdoor sports facilities	Participation in outdoor sports, such as pitch sports, tennis, bowls, athletics or countryside and water sports
05	Amenity greenspace	Opportunities for informal activities close to home or work or enhancement of the appearance of residential or other areas
06	Provision for children and young people	Areas designed primarily for play and social interaction involving children and young people, such as equipped play areas, ball courts, skateboard areas and teenage shelters
07	Allotments, community gardens and urban farms	Opportunities for those people who wish to grow their own produce as part of the long-term promotion of sustainability, health and social inclusion
08	Cemeteries, disused churchyards and other burial grounds	Quiet contemplation and burial of the dead, often linked to the promotion of wildlife conservation and biodiversity.
Source: ODPM (2006) Assessing needs & opportunities: a companion guide to PPG17, page 11		

3.4 The scope for this GI Audit includes seven common green space typologies listed in the introduction (para 1.6). These align with the types of open spaces referenced in NHC Local Plan Policy NE6: New and improved open space (NHC/2022. Page 156 Para 11.25). These have also been used in the NHC Open Space Settlement Profile for Letchworth Garden City (para 4).

3.5 Central Bedfordshire Council has adopted a different set of typologies for green space that are listed in the Local Plan (CBC/2021, para 15.13.12). Chapter 2 of the Central Bedfordshire Leisure Strategy (CBC/2014) has nine types of green space including Countryside Recreation

Sites, Large Formal Recreation Areas and Small Amenity Spaces. In addition, CBC Definitive Map for Leisure Open Space Sites[22] available as an online mapping resource, includes 13 typologies. To maintain continuity across both local authorities this study follows NHC typologies and Table 3.2 indicates how these are cross reference with CBC typologies.

Table 3.2 - Comparison of GI Typologies for North Hertfordshire and Central Bedfordshire

	NHC Green Space Typologies[1]	**CBC Green Space Typologies**[2]
AG	Amenity Green Space	Informal Recreation
		Small Amenity Space
AL	Allotments and Community Gardens	Allotments and Community Gardens
CC	Cemeteries and Churchyards	Cemeteries & Burial Grounds
CP	Provision for Children and Young People	Children's Play Space
		Facilities for Young People and Teenagers
		Young and Teenage Outdoor Sport Facilities
NG	Natural and Semi-Natural Greenspace	Countryside Sites
PG	Parks and Gardens	Urban Parks & Gardens
SF	Outdoor Sports Facilities (including schools)	Outdoor Sport
		Outdoor Sport (Club)
		Outdoor Sport (Education)
		Larger Recreation Spaces
1	North Hertfordshire Local Plan 2011-2031, Para 11.25 https://www.north-herts.gov.uk/sites/default/files/2022-12/North%20Hertfordshire%20Local%20Plan%202011-2031.pdf	
2	Central Bedfordshire Definitive Map (on-line), Leisure Open Space Sites https://www.centralbedfordshire.gov.uk/info/82/countryside/424/definitive_map	

3.6 Each site surveyed for this GI Audit is given a unique four-character code. A two letter prefix indicating its typology (AG - Amenity green Space, AL - Allotments and Community Gardens, etc.) In total 91 separate sites have been mapped a surveyed for this audit. The selection of sites has taken account of both the NHC and CBC mapping. This has required some interpretation of the data and where appropriate some small contiguous sites have been combined and assigned a single code and this is illustrated on the survey reference plan of all sites (Figure 4.1).

[22] Central Bedfordshire Definitive Map (on-line), Leisure Open Space Sites https://www.centralbedfordshire.gov.uk/info/82/countryside/424/definitive_map

Norton Common Natural Green Space and Local Nature Reserve (Site NG13)

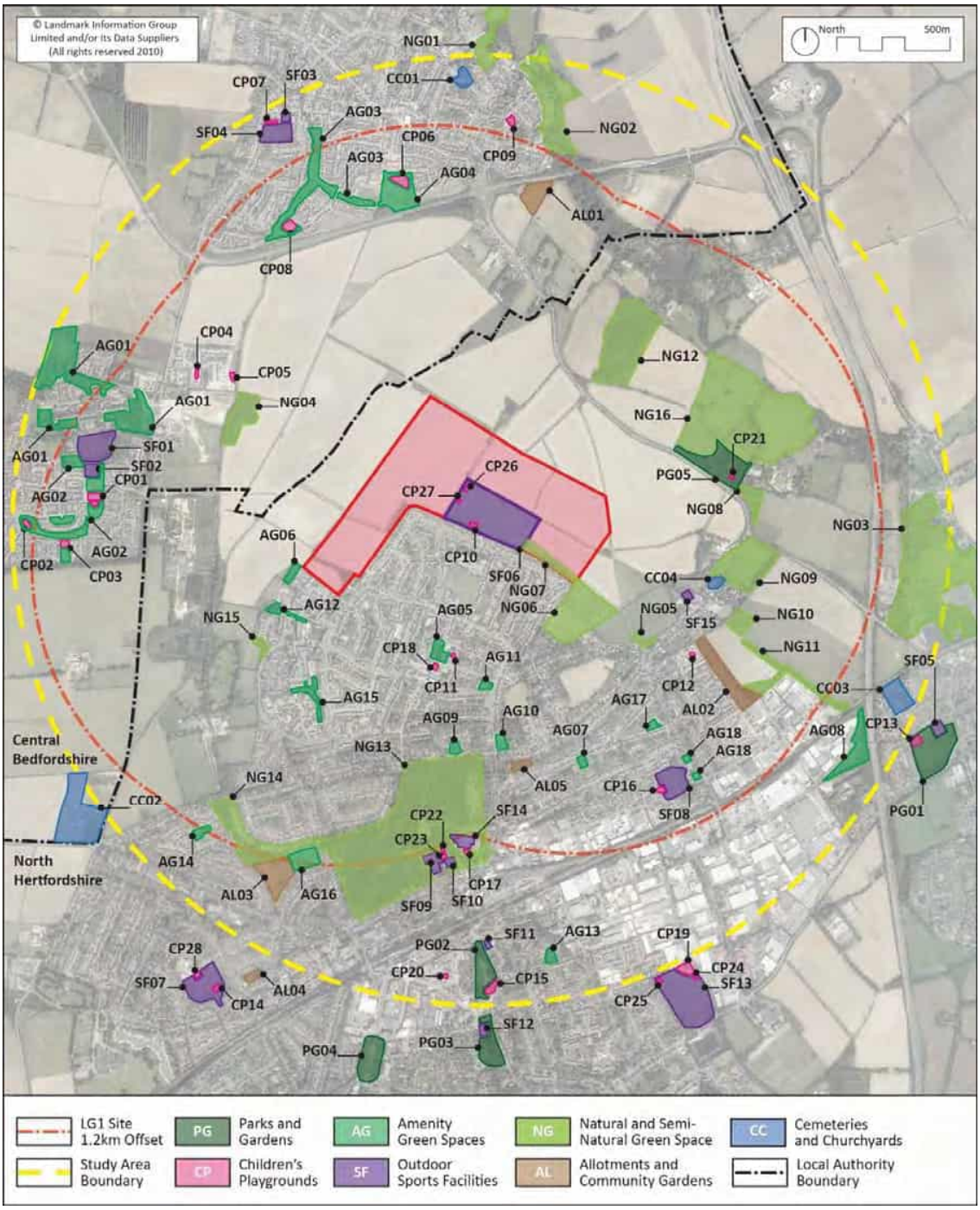
4 Green Infrastructure Assessment

4.1 Local authority registers and online maps of public open space were used to identify all survey sites within the study area. This was complemented by local knowledge for LGCHF and fieldwork and generally included sites of 0.2 Ha and larger. Sites smaller than this threshold, which were mainly areas for children's play, were also included where they provided an important contribution to the open space network. All survey sites are shown on Figure 4.1 and the corresponding schedule is provided in Table 4.1.

4.2 The site assessments were undertaken in line with the methodology set for the audit (See para 1.4-1.7). The principal green infrastructure typology of each site followed the local authority designation where this was available or was assigned following the site survey. The size of each site was recorded using local authority data and where absent was calculated using CAD or on-line mapping. The quality of each site was recorded at the time of survey using a 25-point scale. Sites scoring 0-9 are considered to be poor, those scoring 10-19 considered medium and those scoring 20-25 can be considered to be high quality.

4.3 Accessibility for each typology has been mapped to illustrate the pattern of spatial provision and identify areas of deficiency in access. The offset for each typology is based on FIT access standards (Figure 5.2 and 5.3). For example, an offset of 480m is used for Amenity Green Spaces and each offset is drawn from the centre point of each site and the offset areas are combined. These are shown in Figures 4.2 - 4.7.

Figure 4.1 - GI Audit Location of Sites



4.4 Most sites have full and free public access with the exception of all the Allotments (AL01-05) and some sports facilities, such as Bowling Greens (Sites SF02, 03, 05,11, 12 and 15). Some Natural and Semi-Natural Green Spaces including some woodlands managed by LGCHF have limited public access and not all are served by footpaths (Sites NG04, 08, 10 and 11).

Table 4.1 - GI Audit Schedule of Green Infrastructure Sites

Typology	Code	LA	LA Ref	Site Name	Quality	Size / HA
Amenity GS	AG01	CBC	351+	Fairfield Hall Green Spaces	19	7.35
Amenity GS	AG02	CBC	679+	Fairfield Park Green Spaces	20	2.99
Amenity GS	AG03	CBC	N/A	Sorrel Drive Green Spaces	18	3.10
Amenity GS	AG04	CBC	N/A	Greenacres Park Green Space	12	2.14
Amenity GS	AG05	NHC	N/A	Pelican Way Grange Green Space	8	0.65
Amenity GS	AG06	NHC	L/AM01	Land at Avocet	13	0.28
Amenity GS	AG07	NHC	L/AM02	Cromwell Green	12	0.20
Amenity GS	AG08	NHC	L/AM03	Works Road	16	1.40
Amenity GS	AG09	NHC	L/AM05	Westholme	23	0.28
Amenity GS	AG10	NHC	L/AM06	Eastholme	23	0.37
Amenity GS	AG11	NHC	L/AM07	Linden Gardens (Linden Green)	13	0.19
Amenity GS	AG12	NHC	L/AM10	Western Close	8	0.43
Amenity GS	AG13	NHC	L/AM12	Ridge Road	20	0.21
Amenity GS	AG14	NHC	L/AM27	Beech Hill	15	0.29
Amenity GS	AG15	NHC	L/AM38	Robin Walk, Dunlin and Swift Close	12	0.53
Amenity GS	AG16	LGCHF	N/A	Cowslip Hill	16	1.20
Amenity GS	AG17	NHC	L/AM02	Common View	18	0.22
Amenity GS	AG18	NHC	L/P15	Temple Gardens, Green Lane	12	0.17
Allotment	AL01	CBC	651	Norton Road Allotments	17	1.22
Allotment	AL02	NHC	L/A01	Norton Road / Green Lane	17	1.55
Allotment	AL03	NHC	L/A03	Runnalow Norton Allotments	20	1.59
Allotment	AL04	LGCHF	L/A05	Saffron Hill	19	0.17
Allotment	AL05	LGCHF	L/A02	Common View / Norton Way North	17	0.01
Churchyard	CC01	CBC	4319	St Mary's Churchyard, Stortfold	20	0.41
Churchyard	CC02	NHC	L/C01	Wilbury Hills Cemetery	21	2.70
Churchyard	CC03	NHC	N/A	Baldock Cemetery	12	1.26
Churchyard	CC04	NHC	NO/C01	St Nicholas Churchyard, Norton	18	0.23
Children's Play	CP01	CBC	685/B	Central Urban Play Area (Hitchin Road) - NEAP	20	0.92
Children's Play	CP02	CBC	680/A	Crescent of Trees West & East Play Area - NEAP	16	0.09
Children's Play	CP03	CBC	681	Bronte Avenue, Figure of 8 Play Area - LAP	20	0.24
Children's Play	CP04	CBC	4643	Beatrice Place Play Area - LAP	14	0.06
Children's Play	CP05	CBC	4644	Leopold Corner Play Area - LAP	17	0.04
Children's Play	CP06	CBC	4634	South Green Play Area - NEAP	15	0.28
Children's Play	CP07	CBC	655	Hitchin Road Recreation Ground Play Area - LEAP	8	0.06
Children's Play	CP08	CBC	4203	Pix Brook Play Area - NEAP	19	0.23
Children's Play	CP09	CBC	4198	Prince William's Close Play Area - LAP	9	0.14
Children's Play	CP10	NHC	L/P44	Grange Recreation Ground Play Area - LAP	10	0.03

Children's Play	CP11	NHC	L/P38-9	Pelican Way, Grange, Play Area - LAP	8	0.03
Children's Play	CP12	NHC	NL/P41	Hartington Place Play Area - LAP	14	0.01
Children's Play	CP13	NHC	N/A	Avenue Park Play and Splash Park, Baldock - LEAP	18	0.19
Children's Play	CP14	NHC	LP/20	Play Area at Icknield Way - LEAP	18	0.08
Children's Play	CP15	NHC	LP/27	Play Area at Howard Park Gardens - NEAP	20	0.21
Children's Play	CP16	NHC	LP/31	Play Area at Green Lane (Pascal Way) - NEAP	18	0.08
Children's Play	CP17	NHC	LP/36	Norton Common Play Area - LAP	15	0.03
Children's Play	CP18	NHC	LP/39	Play Area at the Grange - Other/MUGA etc	10	0.02
Children's Play	CP19	NHC	LP/30	Play Area at Baldock Road Rec Ground - NEAP	17	0.14
Children's Play	CP20	LGCHF	N/A	Play Area at The Wynd (Openshaw Way) - LAP	18	0.03
Children's Play	CP21	LGCHF	N/A	Radwell Meadows Play Area - LAP	17	0.02
Children's Play	CP22	NHC	N/A	Norton Common Skate Park - Other/MUGA etc	15	0.06
Children's Play	CP23	NHC	N/A	Norton Common Sports Court - Other/MUGA etc	15	0.06
Children's Play	CP24	NHC	N/A	Baldock Road Skate Park - Other/MUGA etc	11	0.04
Children's Play	CP25	NHC	N/A	Sports Court Baldock Rec - Other/MUGA etc	13	0.01
Children's Play	CP26	NHC	L/P43	The Grange Skate Park - Other/MUGA etc	10	0.03
Children's Play	CP27	NHC	L/P43	The Grange Basketball Court - Other/MUGA etc	9	0.04
Children's Play	CP28	NHC	L/P21	Sports Court at Icknield Way - Other/MUGA etc	14	0.06
Natural / S-N GS	NG01	CBC	659	Millennium Green, Stotfold	9	2.38
Natural / S-N GS	NG02	CBC	350+	Stotfold Water Mill Local Nature Reserve	15	8.22
Natural / S-N GS	NG03	NHC	N/A	Ivel Springs Local Nature Reserve	13	17.98
Natural / S-N GS	NG04	LGCHF	N/A	Norton Well (The Boffy)	16	2.08
Natural / S-N GS	NG05	LGCHF	N/A	Norton Pond	14	0.20
Natural / S-N GS	NG06	LGCHF	L/N06	Croft Lane Community Orchard, Norton	18	4.41
Natural / S-N GS	NG07	LGCHF	N/A	Grange Woodland Scrub Belt	15	0.95
Natural / S-N GS	NG08	LGCHF	N/A	Nortonbury Woodland	15	2.02
Natural / S-N GS	NG09	LGCHF	N/A	Meadow by St. Nicholas Church	14	3.69
Natural / S-N GS	NG10	LGCHF	N/A	Woodland by St Nicholas Primary School	10	0.80
Natural / S-N GS	NG11	LGCHF	N/A	Woodland near Blackhorse Road	16	4.10
Natural / S-N GS	NG12	LGCHF	N/A	Woodland near Radwell Air Strip	16	7.31
Natural / S-N GS	NG13	NHC	L/N05	Norton Common	22	25.17
Natural / S-N GS	NG14	NHC	L/N07	Woodland by Wilbury Road	18	4.59
Natural / S-N GS	NG15	NHC	L/N04	Woodland by Southern Way	8	0.31
Natural / S-N GS	NG16	NHC	N/A	Radwell Meadows Local Wildlife Site	14	18.32
Parks and Gardens	PG01	NHC	N/A	Avenue Park Baldock	21	2.85
Parks and Gardens	PG02	NHC	LP/02	Howard Park Gardens	23	1.51
Parks and Gardens	PG03	NHC	LP/03	Howard Park Memorial Garden	22	1.35
Parks and Gardens	PG04	NHC	LP/06	Broadway Gardens	23	1.62
Parks and Gardens	PG05	LGCHF	RW/P02	Radwell Meadows Country Park	20	4.70
Sports Facilities	SF01	CBC	687	Letchworth Garden City Cricket Club	19	1.58
Sports Facilities	SF02	CBC	688	Fairfield Bowling Green	22	0.17

Sports Facilities	SF03	CBC	654	Stotfold Bowling Green	18	0.14
Sports Facilities	SF04	CBC	653	Hitchin Road Recreation Ground	12	1.20
Sports Facilities	SF05	NHC	N/A	Baldock Town Bowls Club	19	0.29
Sports Facilities	SF06	NHC	L/P01	Grange Recreation Ground	17	6.19
Sports Facilities	SF07	NHC	L/P16	Wilbury Recreation Ground	16	2.28
Sports Facilities	SF08	NHC	L/P32	Green Lane Recreation Ground	17	1.60
Sports Facilities	SF09	NHC	L/P34	Norton Common Tennis Courts	19	0.40
Sports Facilities	SF10	NHC	L/P46	Norton Common, Willian Bowls Club	21	0.40
Sports Facilities	SF11	NHC	L/P28	Birds Hill Bowling Green	20	0.08
Sports Facilities	SF12	NHC	L/P26	Letchworth Garden City Bowls Club	22	0.24
Sports Facilities	SF13	NHC	L/P16	Baldock Road Recreation Ground	15	4.35
Sports Facilities	SF14	NHC	L/P37	Norton Common Lido	15	0.05
Sports Facilities	SF15	N/A	N/A	Three Horseshoes Bowling Club	7	0.14

Quantity of Green Infrastructure

4.5 The combined area of the 91 sites surveyed total approximately 168 hectares with most sites located within North Herts, reflecting the majority catchment of the study. Natural and Semi-Natural Green Space represents the largest area by typology (68%), Amenity Green Space is the second largest (14%) and Outdoor Sports Facilities if the third largest (13%). Table 4.1 provides the breakdown of total area of green space by typology and local authority.

Table 4.2- Analysis of Open Space Provision within Study Area

		Total Sites		North Herts		Central Beds	
	Type of Open Space	No.	Ha	No.	Ha	No.	Ha
1.0	Amenity Green Space	18	21.96	14	6.38	4	15.58
2.0	Allotments	5	4.73	4	3.51	1	1.22
3.0	Cemeteries and Churchyards	4	4.60	3	4.19	1	0.41
4.0	Children's Play	28	3.23	19	1.17	9	2.06
5.0	Natural / Semi-N Green Space	16	102.53	14	91.93	2	10.60
6.0	Parks and Gardens	5	12.03	5	12.03	0	0
7.0	Outdoor Sports Facilities	15	19.60	11	16.51	4	3.09
	Totals	91	168.68	70	135.72	21	32.96

Quality of Green Infrastructure

4.6 The assessment of quality was measured on a 25-point scale that takes account of access and safety; design and character; boundaries and hard landscape, planting and soft landscape; and

standards of maintenance. The average quality score for all 91 sites is approximately 17/25 reflecting medium quality of condition in general. Parks and Gardens recorded the highest average quality (21.8/25) whilst Children's Play and Natural and Semi-Natural Green Spaces recorded the lowest average quality (14.6/25)

4.7 In total 16 sites were recorded as high quality, 67 sites as medium quality and 8 sites as low quality. Children's play recorded the highest number of low-quality sites (4/28). Average standards of quality are generally similar across both local authorities when taking all typologies into account although there are variations in average quality across individual typologies. Table 4.2 provides the breakdown of average quality of green space by typology and local authority and for all sites.

Table 4.3- Analysis of Open Space Average Quality Scores within Study Area

		Total Sites		North Herts		Central Beds	
	Type of Open Space	No.	Score	No.	Score	No.	Score
1.0	Amenity Green Space	18	15.4	14	14.9	4	17.3
2.0	Allotments	5	18.0	4	18.3	1	17.0
3.0	Cemeteries and Churchyards	4	17.8	3	17.0	1	20.0
4.0	Children's Play	28	14.6	19	14.2	9	15.3
5.0	Natural / Semi-N Green Space	15	14.6	13	15.0	2	12.0
6.0	Parks and Gardens	5	21.8	5	21.8	0	0.0
7.0	Outdoor Sports Facilities	15	17.3	11	17.1	4	17.8
	Average		17.1		16.9		17.1

Accessibility to Green Infrastructure

4.8 A spatial mapping analysis of the access to green infrastructure by typology of green infrastructure was based on FIT open space accessibility standards. This indicates that the LG1 site is only partially served by the current provision of open spaces. The site has good access to Outdoor Sports Facilities due to the close proximity of the Grange Recreation Ground and the 1,200m access standard. The site is also has good standards of access to Natural and Semi-Natural Green Space as there are several sites within close proximity (e.g, Radwell Meadows and Woodland and the Croft Lane Community Orchard).

4.9 LG1 has limited access to existing Children's Play facilities. It is poorly served by existing LAPs and LEAPs that have 100m and 400m access standards. The site is better served by MUGAs and other facilities for teenagers due to the proximity of the facilities in the Grange Recreation Ground, although these are of poor quality. LG1 also has very limited access to Amenity Green Space, much of this typology is located within the Grange Estate and just beyond the 480m access standard.

4.10 LG1 has poor access to Parks and Gardens, such as Howard Park in the centre of Letchworth or Avenue Park in Baldock as these are located significantly beyond the 710m access standard. The site is just beyond the access standard for Allotments, such as the Norton Road and Green Lane Allotments, as these are also located outside the 800m access standard. Mapping for these green infrastructure typologies are shown in Figures 4.2 to 4.7

Figure 4.2 - Amenity Green Space Accessibility Analysis (480m)

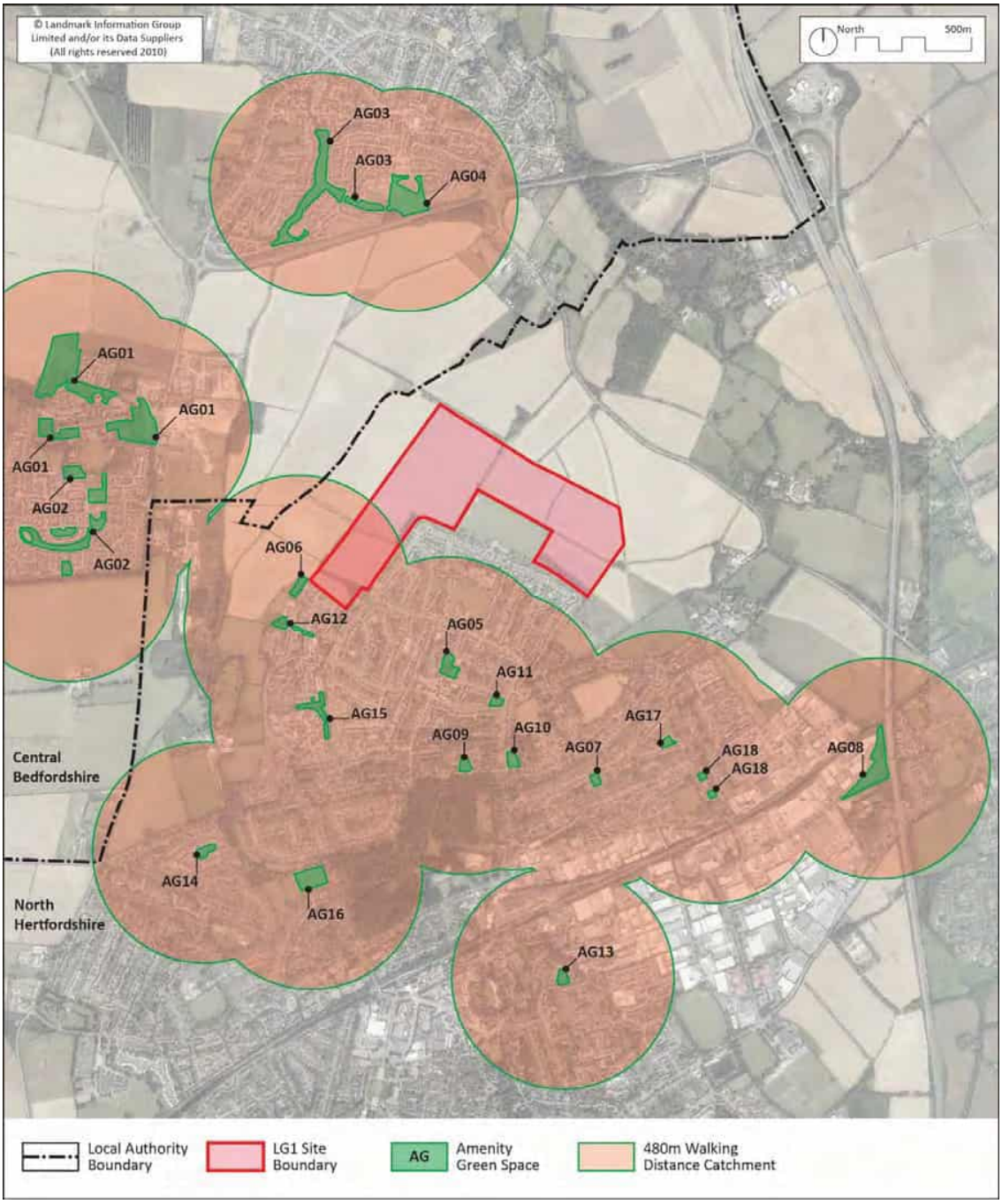


Figure 4.3 - Allotment Accessibility Analysis (800m)

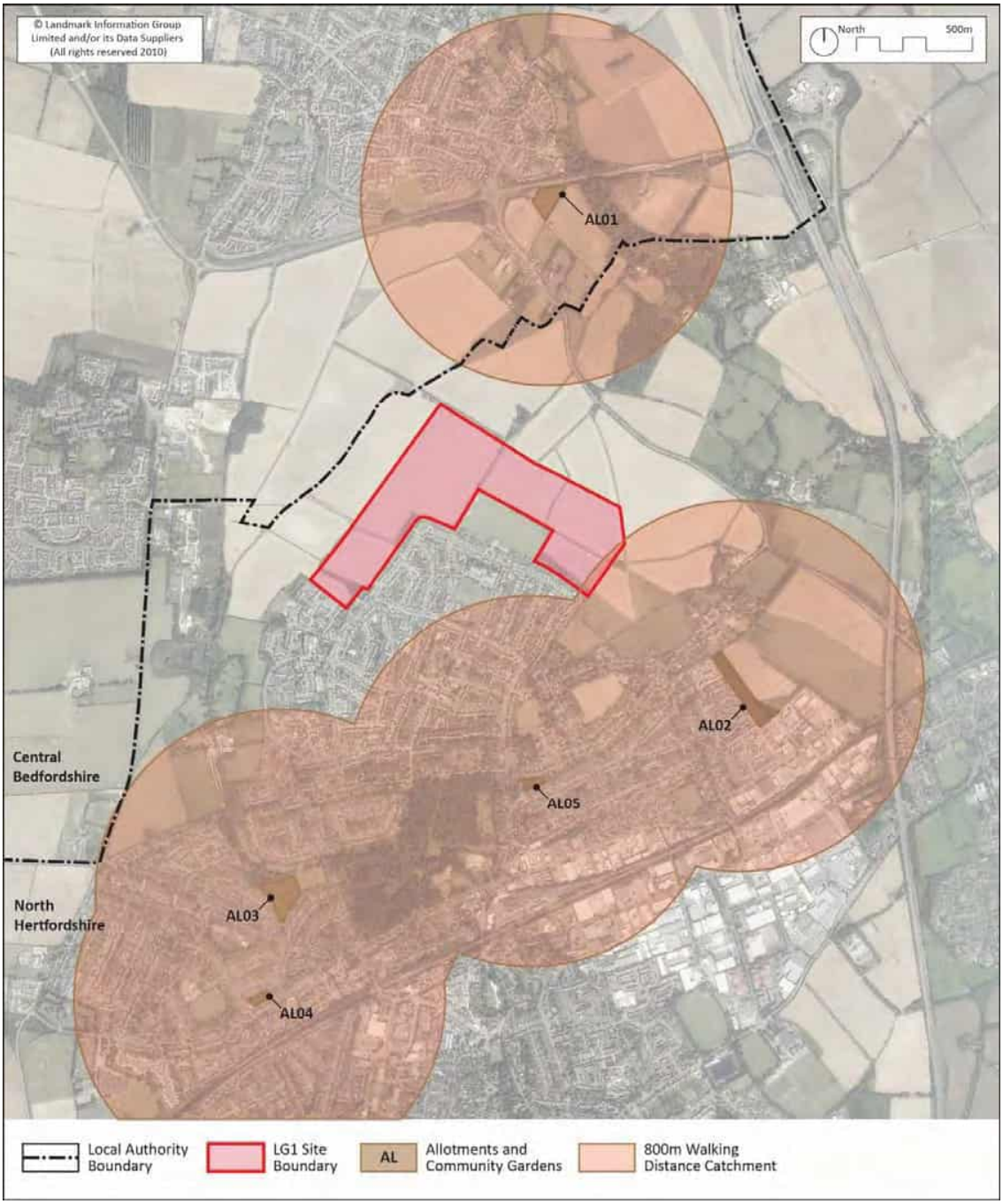
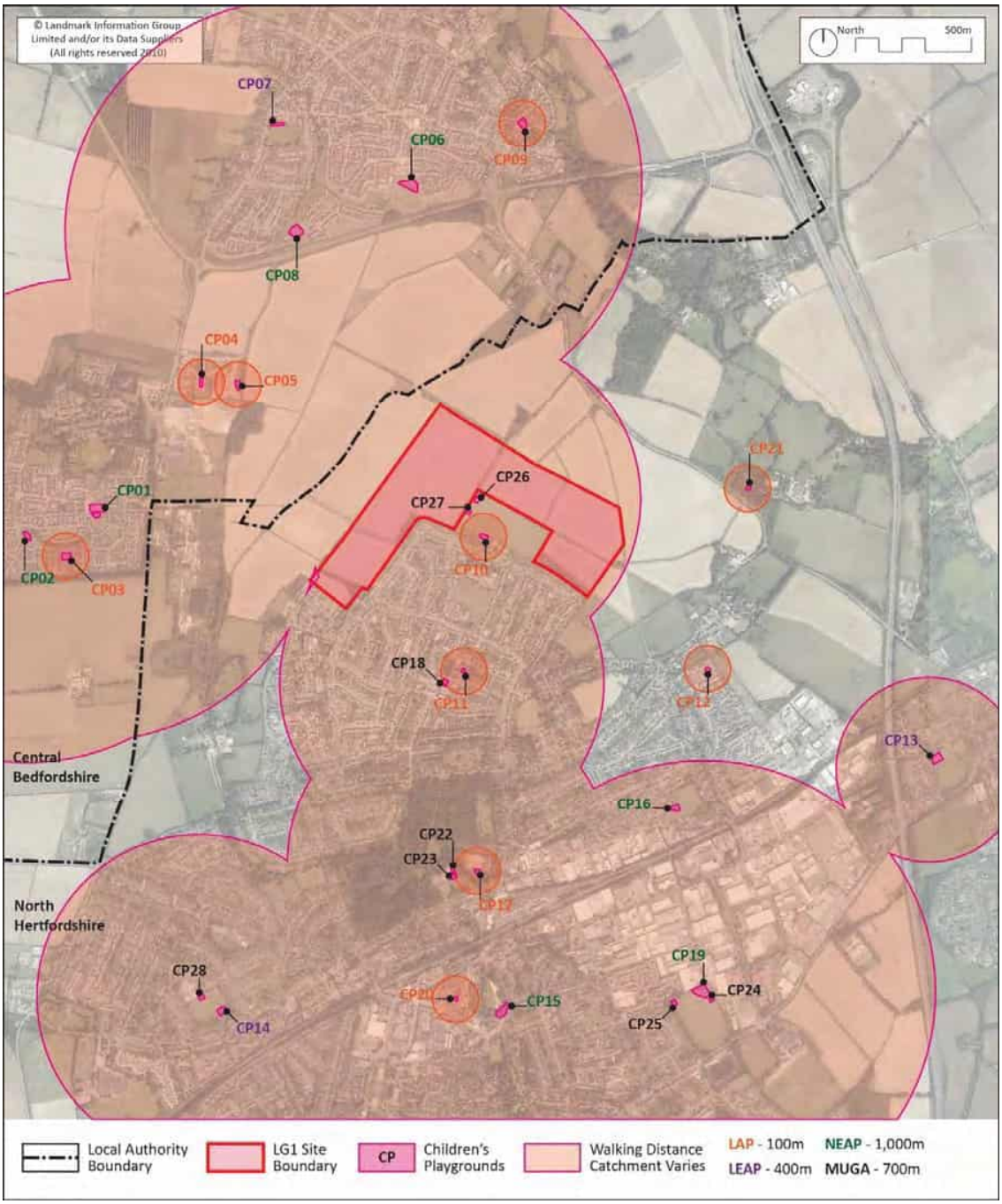


Figure 4.4 - Children's Play Space Accessibility Analysis



Note - Multi-Use Games Area (MUGA) sites include football and basketball courts and skateparks

Figure 4.5 - Natural and Semi-Natural Green Space Accessibility Analysis (720m)

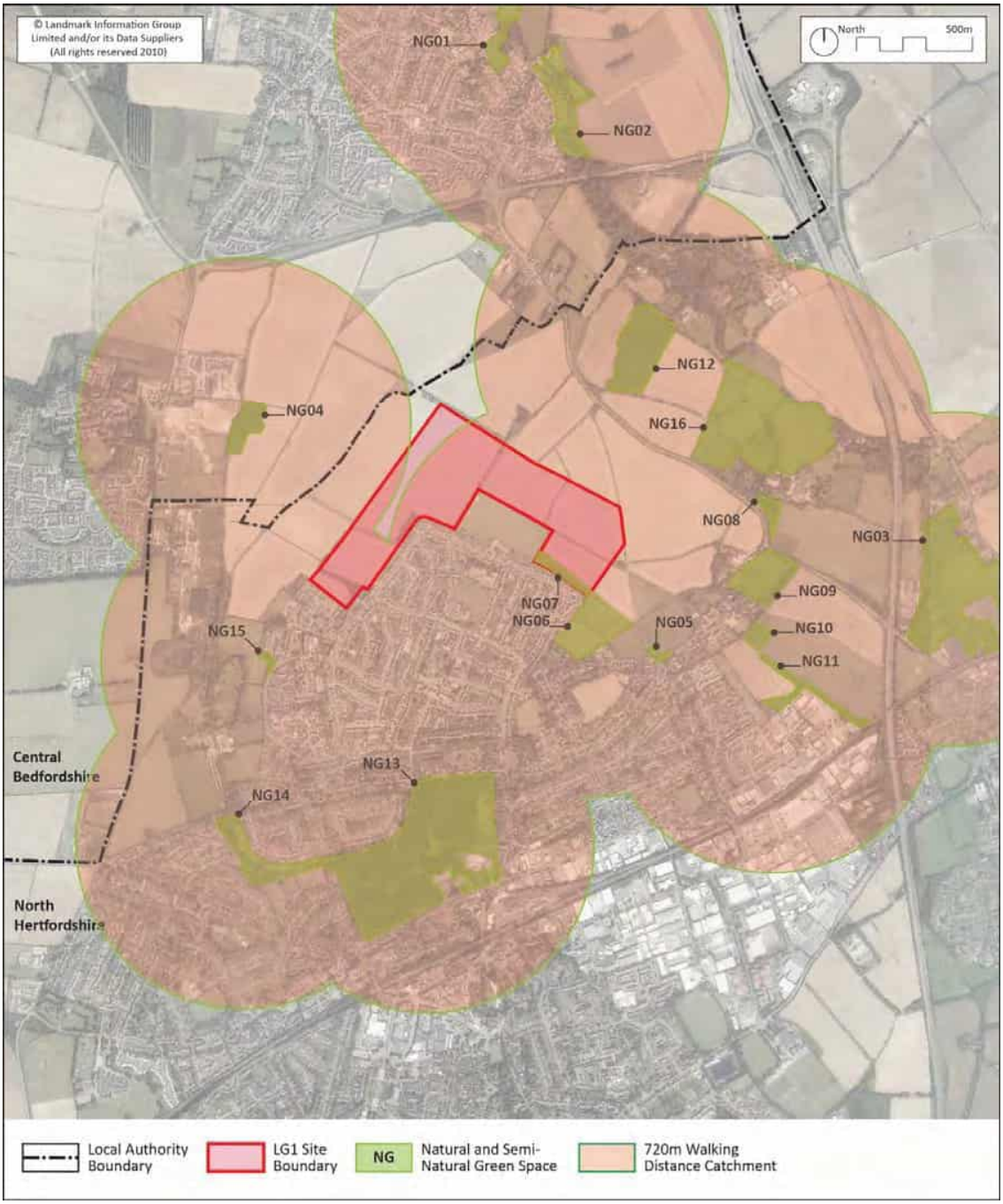


Figure 4.6 - Parks and Gardens Accessibility Analysis (710m)

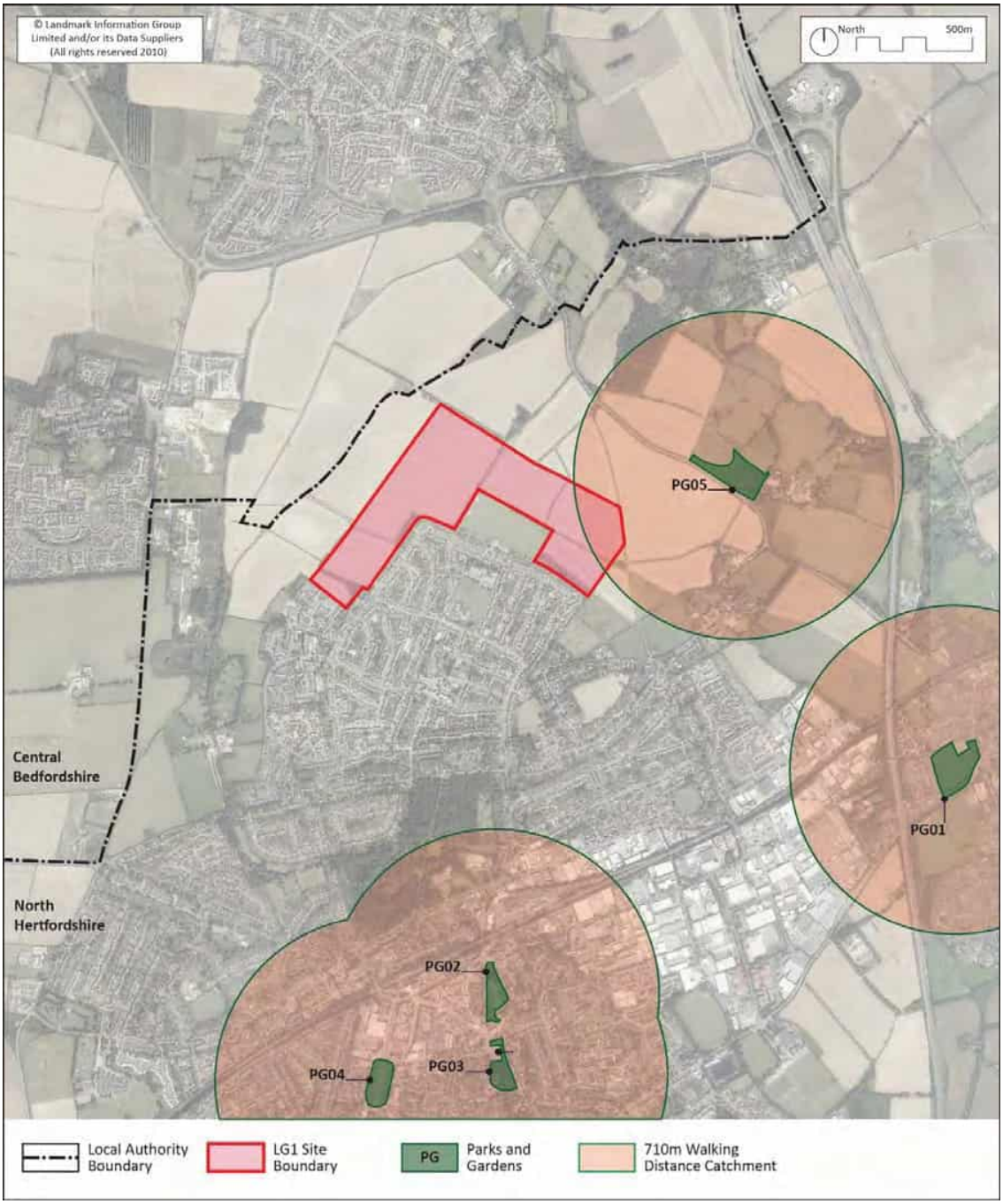
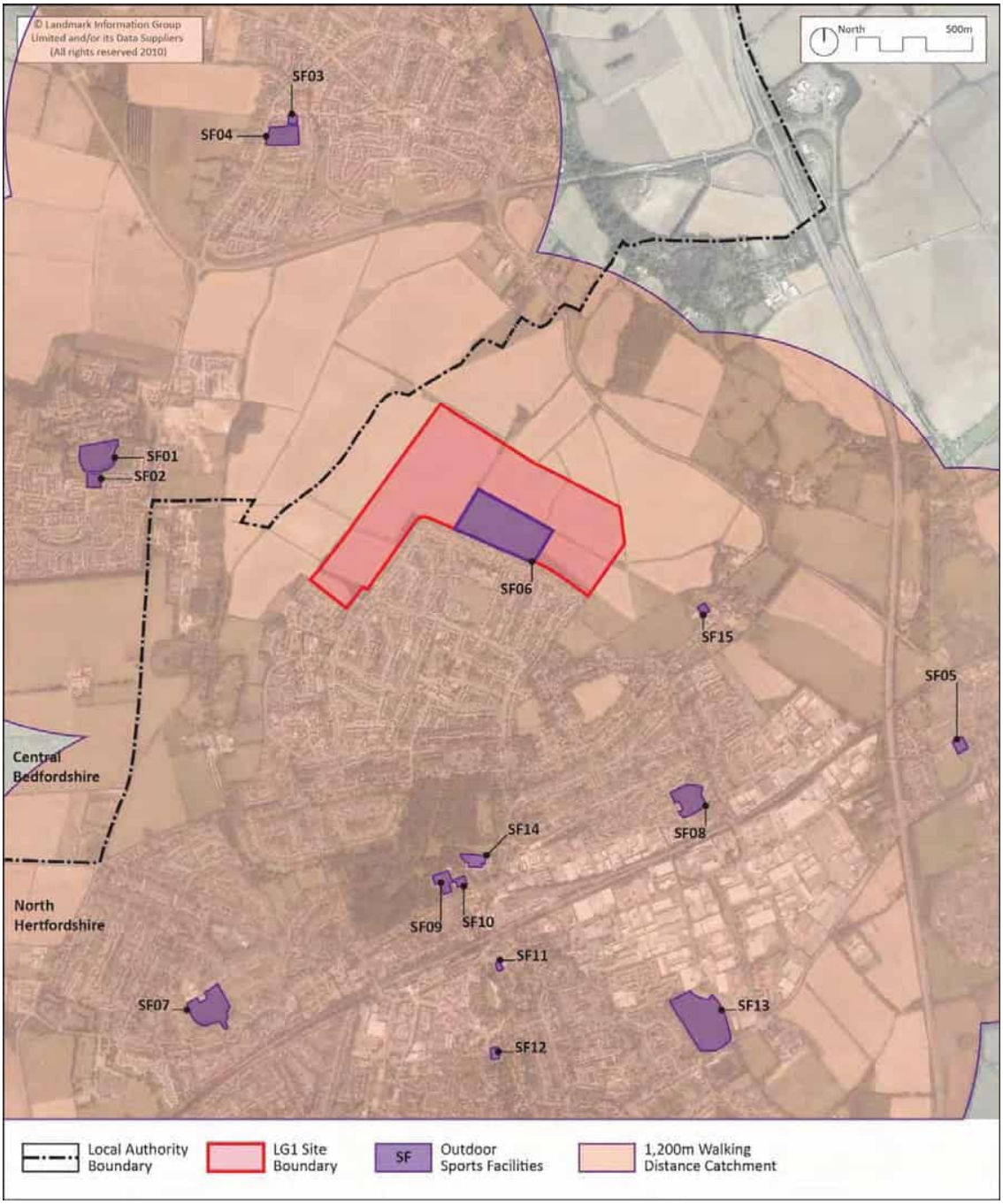


Figure 4.7 - Sports Facilities Accessibility Analysis (1,200m)



Grange Recreation Ground, Toddler Play Area (Site CP10)

5 GREEN INFRASTRUCTURE STANDARDS

5.1 This section considers the requirements for the future provision of Green Infrastructure and Open Space within the LG1 development. It takes account of the different types of recreational open space that will be required including general amenity space, community gardens and parks, outdoor sports, allotments and children's play. This follows the requirements of NHC Local Plan Strategic Policy SP9 (NHC/2022, page 69) which requires strategic masterplans for strategic housing sites to:

vi. create and accessible multi-functional green infrastructure network that provides:

- a key structuring and functional place-making feature supporting healthy lifestyles, sport, play and recreation linking into the wider Green Infrastructure Network.

The policy also requires an integrated network to support biodiversity and ecological connectivity and these environmental requirements are addressed in the Landscape Character and Sensitivity Study (ERE/2023) and the Preliminary Ecological Assessment (TEP/2023).

5.2 NHC Local Plan Policy NE6 requires development proposals to make provision for new and/or improved open space which 'meets the needs arising from the development having regard to the Council's open space standards and other relevant guidance' (NHC/2022, page 156). The North Hertfordshire Open Space Review & Standards published in 2016 provides the evidence base for setting open space standards (NHC/2016) and various Action Plans set out open space priorities across the district.

5.3 The Local Plan refers to relevant guidelines for open space provision (NHC/2022, para 11.27) and specifically Fields in Trust Guidelines[23] for Outdoor Sport and Play in England (FIT/2020) which provide a national benchmark for provision. The NHC Open Space Review notes that the FIT standards 'are helpful in providing an indicative level of provision for different types of open space' (NHC/2016, page 34, para 15.18).

5.4 The 2016 Open Space Review provided a more simplified set of standards in comparison to the FIT and are based on a broad occupancy figure of 2.4 persons per household (NHC/2016, para 15.26). They include a Multi-Functional Open Space Standard that combines Amenity Greenspace and Recreation and/or Natural and Semi-Natural Greenspace along with standards for children's play, outdoor sports and allotments. These are shown in table 5.1.

Table 5.1 - Table of NHC 2016 Open Space Standards

	Type of Open Space		Standard (Ha per 1,000 persons)
1.0	Multi-functional open space	Amenity Greenspace and Recreation	2.00
		Natural and Semi-Natural Greenspace	
2.0	Provision for Children and Young People		0.57
3.0	Outdoor Sports Facilities		1.60
4.0	Allotments		0.25
Source: The North Hertfordshire, Open Space Review & Standards 2016, para 15.26, page 37			

5.5 This simplified set of Open Space Standards could be used to assess the potential level of open space provision for LG1. Using a total population figure of 2,160 residents (900 homes and 2.4 people per property), the open space provision for LG1 would be 9.55 Ha, shown in table 5.2.

Table 5.2 - NHC 2016 Open Space Guidelines applied to the LG1 Housing Allocation

	Type of Open Space	Standard (Ha per 1,000 persons)	LG1 Allocation (900 Homes)
1.0	Multi-functional open space	2.00	4.32 Ha
2.0	Provision for Children and Young People	0.57	1.23 Ha
3.0	Outdoor Sports Facilities	1.60	3.46 Ha
4.0	Allotments	0.25	0.54 Ha
		Total Open Space	**9.55 Ha**
Source: The North Hertfordshire, Open Space Review & Standards 2016, para 15.26, page 37			

[23] Fields in Trust (2020), Guidance for Outdoor Sport and Play, Beyond the Six Acre Standard, England, November 2020 - https://www.fieldsintrust.org/Upload/file/guidance/Guidance-for-Outdoor-Sport-and-Play-England.pdf

5.6 NHC has recently prepared an updated Open Space Settlement Profile for Letchworth Garden City[24] (NHC/2022). This now applies FIT standards to assess the amount of existing open space against settlement population figures for Letchworth to identify areas of deficit, or under-provision, of open space within the Letchworth settlement boundary. The assessment is based on an estimated population figure of 34,912 residents in Letchworth (NHC/2022, page 3, para 5). This compares FIT standards with actual provision to identify where the standard is met or where there are deficiencies in provision and the results are shown in table 5.3.

Table 5.3 - A summary of current open space provision in Letchworth Garden City

*Standards Ha / 1,000 head of population	Parks & Gardens	Cemeteries & Churchyards	Allotments	Outdoor Sports Facilities	Children & Teenagers	Amenity Green Space	Natural & Semi-Natural Green Space	Green Corridors
No of accessible sites	6	2	14	13	13	20	10	8
FIT Standards*	0.80	N/A	0.30	1.20	0.25	0.60	1.80	N/A
Provision required for Letchworth (Ha)	27.92	N/A	10.47	41.88	8.72	20.94	62.82	N/A
Actual provision for Letchworth (Ha)	10.06	50.87	9.14	18.14	0.95	19.04	49.04	1.01
Difference (Ha)	-17.86	N/A	-1.33	-23.74	-7.77	-1.90	-13.78	N/A
Source - NHC Open Space Settlement Profile for Letchworth Garden City, November 2022								

5.7 The analysis indicates there is a deficit of all types of open space within Letchworth when comparing FIT standards of provision with existing accessible open spaces and the current estimated population for the Garden City. The Letchworth Open Space Settlement Profile also provides an analysis of the amount of open space which should be provided on new developments including LG1 based on FIT Standards. Taking the allocation of 900 homes for LG1 and a figure of 2.4 people per dwelling, it is calculated that the future population will be 2,160 people.

5.8 Based on these figures the total open space requirement for LG1 is calculated to be 12.10 Ha (NHC/2022, page 28, para 63). However, the study notes that 'these calculations can be used as a guide to help inform planning decisions for 10+ dwelling units. However, planning applications are assessed on a case-by-case basis using a range of information to inform decision making' (NHC/2022, page 28, para 62).

[24] NHC (2022) Open Space Settlement Profile, Letchworth Garden City, November 2022, unpublished.

Fields in Trust Open Space Guidelines

5.9 An established national standard for planning open spaces for sport and play has been the Six-Acre Standard first published in the 1930s by the National Playing Fields Associations (NPFA, now FIT). Guidance for Outdoor Sport and Play (FIT/2020) provides the current standard for formal outdoor space, including quantity and accessibility standards and is shown in Figure 5.1.

Figure 5.1 - FIT Recommended Benchmark Guidelines for Formal Outdoor Space

Open space typology	QUANTITY GUIDELINE[2] (hectares per 1,000 population)	WALKING GUIDELINE (walking distance: metres from dwellings)	QUALITY GUIDELINE
Playing pitches	1.20	1,200m	• Quality appropriate to the intended level of performance, designed to appropriate technical standards. • Located where they are of most value to the community to be served. • Sufficiently diverse recreational use for the whole community. • Appropriately landscaped. • Maintained safely and to the highest possible condition with available finance. • Positively managed taking account of the need for repair and replacement over time as necessary. • Provision of appropriate ancillary facilities and equipment. • Provision of footpaths. • Designed so as to be free of the fear of harm or crime. • Local authorities can set their own quality benchmark standards for playing pitches, taking into account the level of play, topography, necessary safety margins and optimal orientation[1]. • Local authorities can set their own quality benchmark standards for play areas using the Play England Quality Tool.
All outdoor sports[1]	1.60	1,200m	
Equipped/designated play areas	0.25 See table 4 for recommended minimum sizes	LAPs – 100m LEAPs – 400m NEAPs – 1,000m	
Other outdoor provision (MUGAs and skateboard parks)	0.30	700m	

Source - FIT (2020), Table 1, page 6

5.10 This provides two figures for children's play. One for equipped/designated play areas including small Local Areas for Play (LAP), more substantial Locally Equipped Areas for Play (LEAPS) and the larger Neighbourhood Equipped Areas for Play (NEAPS). A second figure is for other outdoor provision for children and teenagers including Multi-Use Games Areas (MUGAs), skateboard parks and BMX tracks. In addition FIT provides standards for informal outdoor space shown in Figure 5.2.

Figure 5.2 - FIT Recommended Benchmark Guidelines for Informal Outdoor Space

Open Space Typology	QUANTITY GUIDELINE[3] (hectares per 1,000 population)	WALKING GUIDELINE (walking distance: metres from dwellings)	QUALITY GUIDELINE
Parks and Gardens	0.80	710m	• Parks to be of Green Flag status. • Appropriately landscaped. • Positive management. • Provision of footpaths. • Fields in Trust protection • Designed so as to be free of the fear of harm or crime.
Amenity Green Space	0.60	480m	
Natural and Semi-Natural	1.80	720m	

Source - FIT (2020), Table 3, page 7

5.11 NHC uses these standards as an initial benchmark for establishing an indicative level of open space provision in new development based on hectares per 1,000 head of population (HOP) and a projected population of 2,160 new residents. The FIT Quantity Guidelines are therefor multiplied by 2.16 to establish the indicative level of provision for different types of open space and this is illustrated in Table 5.4.

Table 5.4 - FIT Recommended Benchmark Guidelines used for the LG1 Housing Allocation

	Open Space Typology HOP = Head of Population	Quantity Guideline (Hectares per 1,000 HOP) [1]	Walking Guideline (Metres from dwelling) [1]	LG1 Allocation (900 Homes / 2,160 People) [2]
1.0	Playing Pitches	1.20 Ha	1,200 m	2.59 Ha
2.0	All Outdoor Sports	1.60 Ha	1,200 m	3.46 Ha
3.0	Equipped Play Areas	0.25 Ha		0.54 Ha
3.1	Local Area for Play (LAP)		100 m	
3.2	Locally Equipped Area for Play (LEAP)		400 m	
3.3	Neighbourhood Equipped Area for Play (NEAP)		1,000 m	
4.0	Other Outdoor Provision [3]	0.30 Ha	700 m	0.65 Ha
5.0	Parks and Gardens	0.80 Ha	710 m	1.73 Ha
6.0	Amenity Green Space	0.60 Ha	480 m	1.30 Ha
7.0	Natural and Semi-Natural	1.80 Ha	720 m	3.89 Ha
8.0	Allotments [4]	0.30 Ha	800 m	0.65 Ha
	Total Open Space	5.65 Ha		**12.20 Ha**
1	Guidance for Outdoor Sport and Play / Fields in Trust Guidelines (October 2015)			
2	Assumes 1 House has 2.4 people / NHC LGC Open Space Settlement Profile, Nov 2022			
3	Other Outdoor Provision relates to play areas and is for MUGAs and skateboard parks			
4	Fields in Trust recommends 0.30 Ha per 1,000 HOP but do not set an access standard, 800m walking distance is proposed / NHC Open Space Settlement Profile, Nov 2022			

Natural England Green Infrastructure Framework

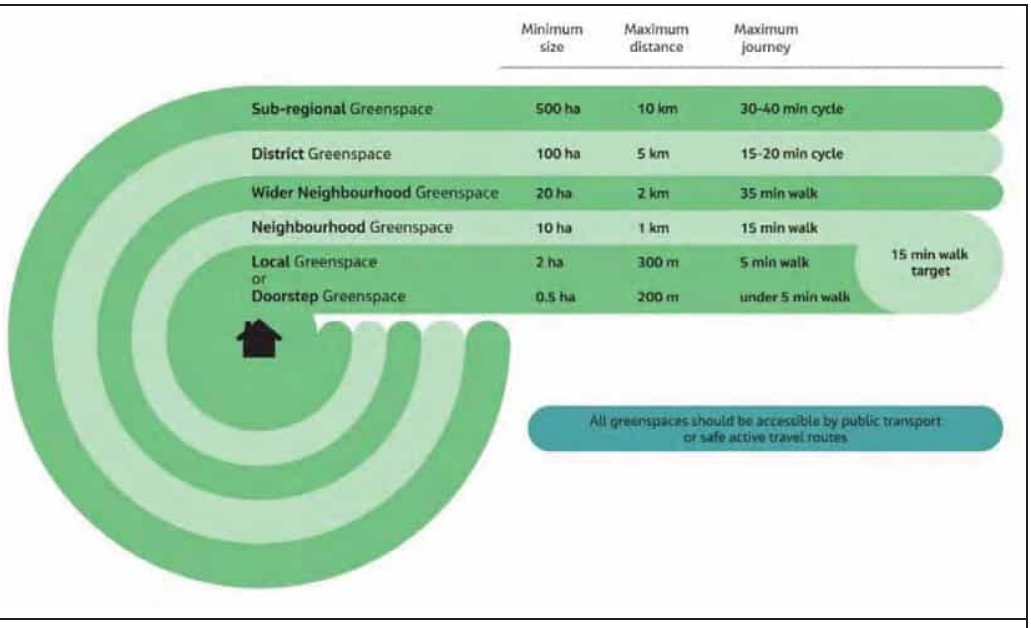
5.12 Natural England has recently updated and expanded their Accessible Natural Green Space Standard (ANGSt) and these are now included in the Green Infrastructure Framework - Principles and Standards for England[25] (NE/2023). The framework includes a set of Principles, Standards, Maps, a Planning and Design Guide and a set of Process Journeys. In combination, these documents are designed to improve the planning, design and delivery of green infrastructure. The updated Accessible Greenspace Standard[26] recommends that local authorities have at least 3 Ha of publicly accessible greenspace per 1,000 population (NE/2023, para 6.5) although this does not differentiate between different types of green space.

[25] Natural England (2023) Green Infrastructure Framework - Principles and Standards for England - https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx

[26] Natural England (2023) Green Infrastructure Standards for England - Summary - https://designatedsites.naturalengland.org.uk/GreenInfrastructure/downloads/Green%20Infrastructure%20Standards%20for%20England%20Summary%20v1.1.pdf

5.13 The updated standards include a more extensive set of accessibility, or proximity, standards for varying sizes of greenspace. The overarching objective is to ensure 'Everyone has access to a variety of good quality green and blue spaces within fifteen minutes' walk of their home' (NE/2023, para 7.1). The updated guidance includes a diagram illustrating various size and distance standards for greenspaces including 200m for Doorstep Greenspace (0.5ha+) and 300m for Local Greenspace (2 Ha+). This is illustrated in Figure 5.3.

Figure 5.3 - Natural England Accessible Greenspace Standards - size-proximity



Source - Natural England (2023), Figure 2, page 33

Sport England Planning for Sport Guidance

5.14 Sport England has published a variety of guidance on planning for sport including the provision of playing pitches. The Planning for Sport Guidance[27] (SE/2019) sets out 12 planning principles for sport, emphasising the need for up-to-date assessments of need and the preparation of strategies. Future provision should meet identified need and follow good practice guidance provided by Sport England and take account of the Active Design Guidance[28] (SE/2023). Planning Practice Guidance advises local planning authorities to consult Sport England on residential developments of 300 dwellings or more which NHC is currently undertaking.

5.15 Following consultation with Sport England NHC has prepared a Draft Sport Settlement Profile[29] for Letchworth Garden City (NHC/2023) that will provide the basis for an Interim Sports

[27] Sport England (2019) Planning for Sport Guidance, June 2019 - planning-for-sport-guidance.pdf (sportengland-production-files.s3.eu-west-2.amazonaws.com)
[28] Sport England (2023) Active Design Guidance - https://www.sportengland.org/guidance-and-support/facilities-and-planning/design-and-cost-guidance/active-design
[29] NHC (2023) Draft Sport Settlement Profile for Letchworth Garden City - Circulated 21 July 2023

Assessment in 2023. This has used the Active Sports Facility Calculator[30] (ASFC) that helps to estimate the demand for additional sports facilities for new residential development and a growing population. This provides recommendation for improving and increasing outdoor sports facilities including tennis, rugby, football, hockey, cricket, bowls, golf and indoor sports.

5.16 The ASFC results for Letchworth estimates additional demand for both outdoor sports pitches and indoor sports facilities based on total projected population increase of over 3,500 people. Much of the additional provision can be accommodated within existing sports facilities alongside the projected demand for a new indoor leisure facility. The main requirement is to improve capacity for football that includes additional natural and artificial grass pitch provision. The North Hertfordshire Local Football Facility Plan[31] (HFA/2019) describes a set of investment projects including upgrading the pitch quality at the Grange Recreation Ground.

5.17 Once options on future provision are assessed and finalised the open space requirement for LG1 can be fixed. Table 5.4 provides a preliminary open space projection for LG1.

Table 5.5 - Preliminary Open Space projection for the LG1 Housing Allocation

	HOP = Head of Population Open Space Typology	Quantity Guideline (Ha / 1,000 HOP)	LG1 Allocation (2,160 People)
1.0	Equipped Play Areas	0.25 Ha	0.54 Ha
1.1	LAP - Local Area for Play		
1.2	LEAP - Locally Equipped Area for Play		
1.3	NEAP - Neighbourhood Equipped Area for Play		
2.0	Other Outdoor Provision	0.30 Ha	0.65 Ha
3.0	Parks and Gardens	0.80 Ha	1.73 Ha
4.0	Amenity Green Space	0.60 Ha	1.30 Ha
5.0	Natural and Semi-Natural	1.80 Ha	3.89 Ha
6.0	Allotments	0.30 Ha	0.65 Ha
	Total Open Space	4.05Ha	**8.75 Ha**
Assumptions - based on NHC initial discussions and recommendations			
1	Playing Pitch provision provided by improvement to Grange Rec facilities		
2	Two LAPS provided on LG1, one NEAP to be provided on Grange Rec		
3	Other Outdoor Provision (MUGAs and skateboard parks) are currently included in the provision but may be provided on Grange Rec		

[30] Sport England (2023) Sports Facility Calculator. https://www.sportengland.org/how-we-can-help/facilities-and-planning/planning-for-sport/sports-facility-calculator

[31] HFA (2019) Local Football Facility Plan for North Hertfordshire, November 2019. https://localplans.footballfoundation.org.uk/local-authorities-index/north-hertfordshire/north-hertfordshire-local-football-facility-plan/

The Garden City Greenway as it crosses the LG1 development site

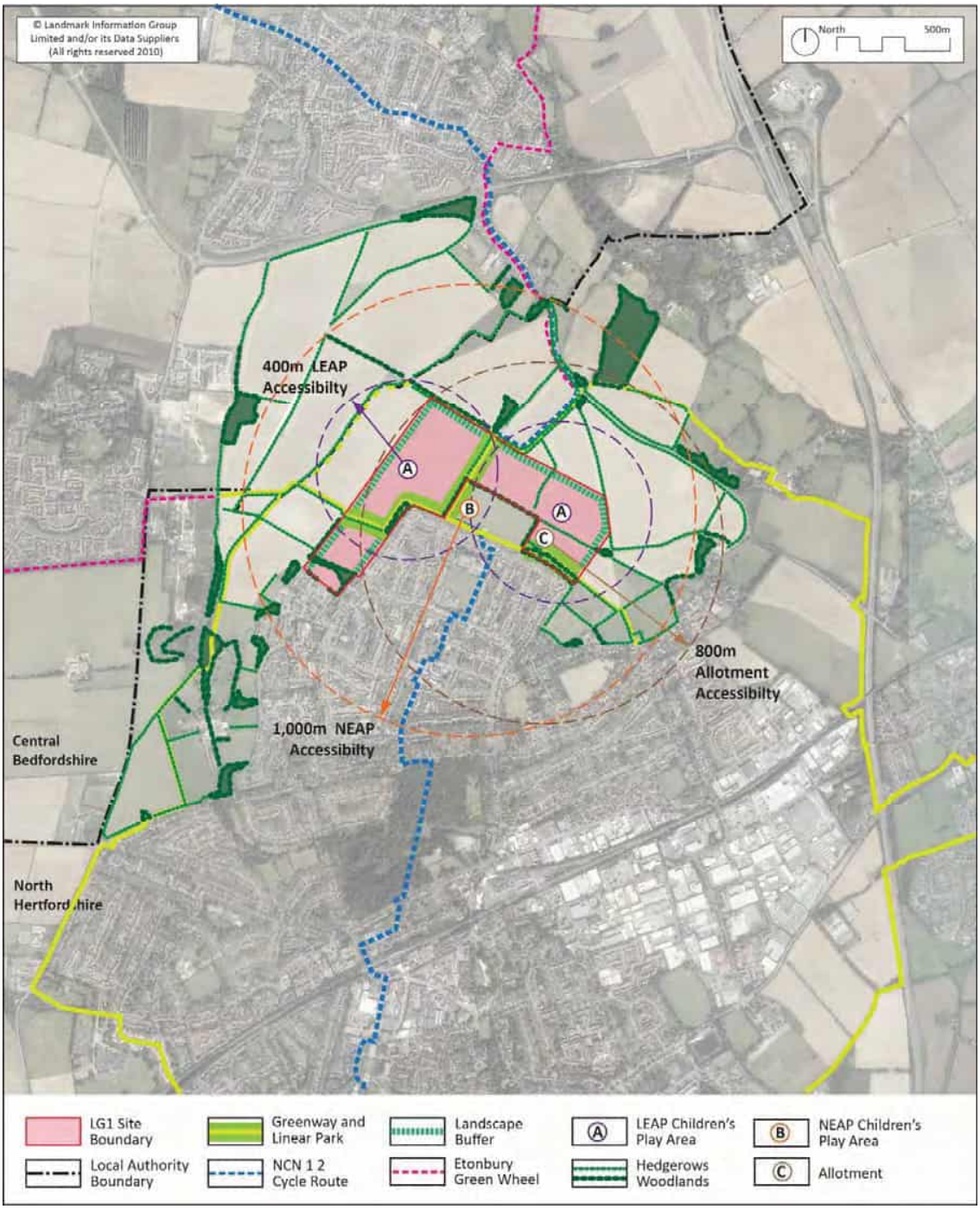
6 Green Infrastructure Network Recommendations

6.1 This Green Infrastructure Audit provides an assessment of existing green space provision by typology within the catchment of LG1 and takes account of quantity, quality and accessibility. With reference to Local Plan Policy NE6: New and improved open space (HNC/2022, page 156), the study sets out the requirements for open space provision within the site to meet FIT standards. Site-specific recommendations for each typology are described in this section.

6.2 A key priority for the LG1 masterplan framework will be to establish a green infrastructure network across the site that connects existing environmental assets of the site, including hedgerows and shelterbelts, with a variety of open space typologies. These will include amenity green space, natural spaces, play areas and parkland to provide a set of connected and multifunctional spaces supporting recreation, active travel and biodiversity. This connectivity will extend beyond the site boundaries to the Garden City Greenway, Etonbury Green Wheel and the National Cycle Network (NCN12).

6.3 It is recommended that the quality and stature of the Greenway is enhanced within LG1 through the creation of a linear parkland that will connect with the Grange Rec and provide an additional environmental buffer to existing areas of housing adjacent to the site. A strategic landscape buffer along the boundaries of the site will incorporate natural and semi-natural greenspace, amenity green space and natural play areas to embed and screen future development within the surrounding landscape structure of hedgerows, shelterbelts and woodlands. This recommended green infrastructure framework is illustrated in Figure 6.1.

Figure 6.1 - Green Infrastructure and Open Space Recommendations Plan



6.4 The Green Infrastructure and Open Space recommendations plan should be read in conjunction with the Landscape Recommendations Framework Plan for LG1 (Landscape Character and Sensitivity Study, ERE/Peter Neal Consulting, 25/01/23). This indicates suitable locations for Children's Play and Allotment Provision within the open space network to inform the development of the Strategic Masterplan Framework.

Amenity Green Space

6.5 The existing green infrastructure provision of Amenity Green Space adjacent to LG1 is relatively evenly distributed throughout the Grange Estate. Whilst this contributes to the general amenity of the neighbourhood its distribution is fragmented, it is of medium quality and offers limited recreational or biodiversity benefit. It is recommended that the provision of additional Amenity Green Space within LG1 should located to strengthen key gateways, boundaries and pedestrian routes.

6.6 1.3 Ha of Amenity Green Space will be required to meet the Local Plan (FIT) standard of provision within LG1. In Letchworth this typology traditionally includes short-mown grassland, shrub and seasonal planting and ornamental trees. It is recommended that these spaces are used to strengthen the sustainability and biodiversity of LG1 by including meadow grassland, pollinator rich perennial planting and generous planting of native and fruiting trees. These spaces should also contribute to surface water management and sustainable drainage networks through the use of raingardens, swales and attenuation basins. The future management of these spaces should promote greater ecological diversity to reflect the form, character and content of the adjacent countryside.

Figure 6.2 - Common View Allotment Space integrated within amenity space (Site AL05)

Allotments and Community Gardens

6.7 The study area includes five existing allotments that are predominately traditional enclosed sites with a regular structure of plots and restricted public access. Whilst these successfully fulfil their role in providing areas for food growing, they make only a limited contribution to the green infrastructure network or benefit to the wider community. The small allotment space at Common View (AL05) is surrounded by housing and integrated withing an amenity green space. This provides one example of how allotments and community food growing areas

could be incorporated within the open space network of LG1. Although the demand and management of these types of spaces will need to be assessed.

6.8 0.65 Ha of Allotments will be required to meet the Local Plan (FIT) standard of provision within LG1. It is recommended that that the majority of this provision is located on the east of LG1 to strengthen the green buffer with Norton Village Conservation area and compliment the Croft Lane community orchard. Additional provision should be integrated across the green infrastructure network of LG1 including areas to the west to address current deficiency in access to allotments within this area (see Figure 4.3 - Allotment Accessibility Analysis).

Cemeteries and Churchyards

6.9 Local Plan and FIT open space standards do not include specific requirements for cemeteries and burial grounds and future provision has not been assessed within this study. NHC has a Cemeteries and Closed Churchyards Action Plan[32] (NHC/2021) that provide guidance on management but requires updating. LG1 is relatively equidistant between the extensive and modern Wilbury Hills Cemetery (CC02), the municipal Baldock Cemetery (CC03) and the historic churchyard of St Nicholas Church (CC04) which all provide active burial grounds.

Figure 6.3 - A popular NEAP Children's Play Space located in Howard Park (Site CP15)

Children's Play - Provision for Children and Young People

6.10 The study area includes 28 sites for children's play including Local Area for Play (LAPs), Locally Equipped Area for Play (LEAPs) and Neighbourhood Equipped Area for Play (NEAPs) as well as other play provision including Multi-Use Games Areas (MUGA), ball courts and skateparks.

[32] NHC (2014) Cemeteries and Closed Churchyards Action Plan (2014-2019) https://www.north-herts.gov.uk/sites/northherts-cms/files/A%20Churchyards%20%26%20Cemeteries%20Action%20Plan%202014-2019.pdf

LAPs, the smallest scale of provision have the shortest access standard (100m) to meet the needs of toddlers and young children. These should be located close to family homes so they can be easily accessed. LEAPs and NEAPs have a larger access standard, reflecting their use by older children and teenagers. A good local example of a NEAP is the play area in Howard Park (Figure 6.3) that provides a popular play destination within an existing park with a wide catchment.

6.11 Up to 1.19 Ha of Children's Play will be required to meet the Local Plan (FIT) standard of provision within LG1and this will include LAPs, LEAPs, NEAPs and other play provision. It is proposed that LG1 provides a combination of LAPs and two LEAPs as the principal play provision within the site. The LAPs should be evenly distributed throughout the residential areas of the development, taking account of the 100m access standard. It is recommended the two LEAPs are located to the west and east of the site to ensure the 400m access standard covers most of the site. It is also proposed that the NEAP provision is located within the Grange Rec to provide benefit for children and teenagers in both the existing and new communities. The indicative location for these play facilities are indicated in Figure 6.1.

Figure 6.4 - The Natural Green Space of Norton Pond to the east of LG1 (Site NG05)

Natural and Semi-Natural Greenspace

6.12 This will be the largest green infrastructure typology for LG1 and will make a strong contribution to both the landscape character and biodiversity of the site. LG1 and Letchworth more generally has good access to Natural and Semi-Natural Greenspace both in the heart of the town with the Norton Common (NG13) and on the periphery with a variety of woodlands and areas designated for nature conservation, such as Norton Pond (NG05) and Radwell Meadows (NG16). This provision will incorporate the existing natural capital of the site, including hedgerows and wooded shelter belts along with the naturalised scrub boundaries that provide existing and mature natural buffers to areas of housing within the Grange Estate.

6.13 3.89 Ha of Natural and Semi-Natural Greenspace will be required to meet the Local Plan (FIT) standard of provision within LG1. This should draw directly on the recommendations in the Preliminary Ecological Appraisal (PEA, TEP/2023) for protecting and enhancing existing habitats. It will also provide the opportunity to improve ecological connectivity between existing Natural and Semi-Natural Greenspaces and establish new wildlife corridors. The creation of additional areas of natural habitat should contribute to achieving at least a 10% biodiversity net gain within the site through the creation of chalk grasslands, new native hedgerows and scrub and wetlands. These should focus on providing habitat for priority plant and animal species.

Figure 6.5 - Howard Park is Letchworth's leading Public Park (Site PG02)

Parks and Gardens

6.14 Public Parks and Gardens make an important contribution to the quality of life of residential neighbourhoods. They provide places for people to meet and socialise, support informal recreation and are increasingly being designed to promote more active and healthy lifestyles. Howard Park (Site PG02) in the centre of Letchworth provides a key leisure destination for the town and plays a significant part in defining the character and identity of Letchworth as a Garden City. The location of Parks and Gardens within LG1 will be a central part of the placemaking strategy. They should be used to both continue and evolve the green space traditions of Letchworth and help to fulfil the sustainable design objectives of new residential neighbourhoods. They should provide benefits for both people and wildlife, operate as natural systems providing a range of ecosystem services and ensure there is clear connectivity between open spaces across the site.

6.15 1.73 Ha of Public Parks and Gardens will be required to meet the Local Plan (FIT) standard of provision within LG1. It is recommended that a particular focus in their planning should be to strengthen the stature of the existing Greenway, helping to establish a connected network of linear parks and green spaces to encourage walking and cycling. This should provide the means

to link LG1 with the adjacent Grange Rec and Estate as well as the surrounding countryside. The landscape strategy should provide informal spaces for recreation with seating and facilities for picnics as well as a variety of areas for children's play providing both traditional and more naturalistic play features. Parks and Gardens should also play a functional and ecological role including the management of surface water by incorporating swales and wetlands that will be of direct benefit to wildlife.

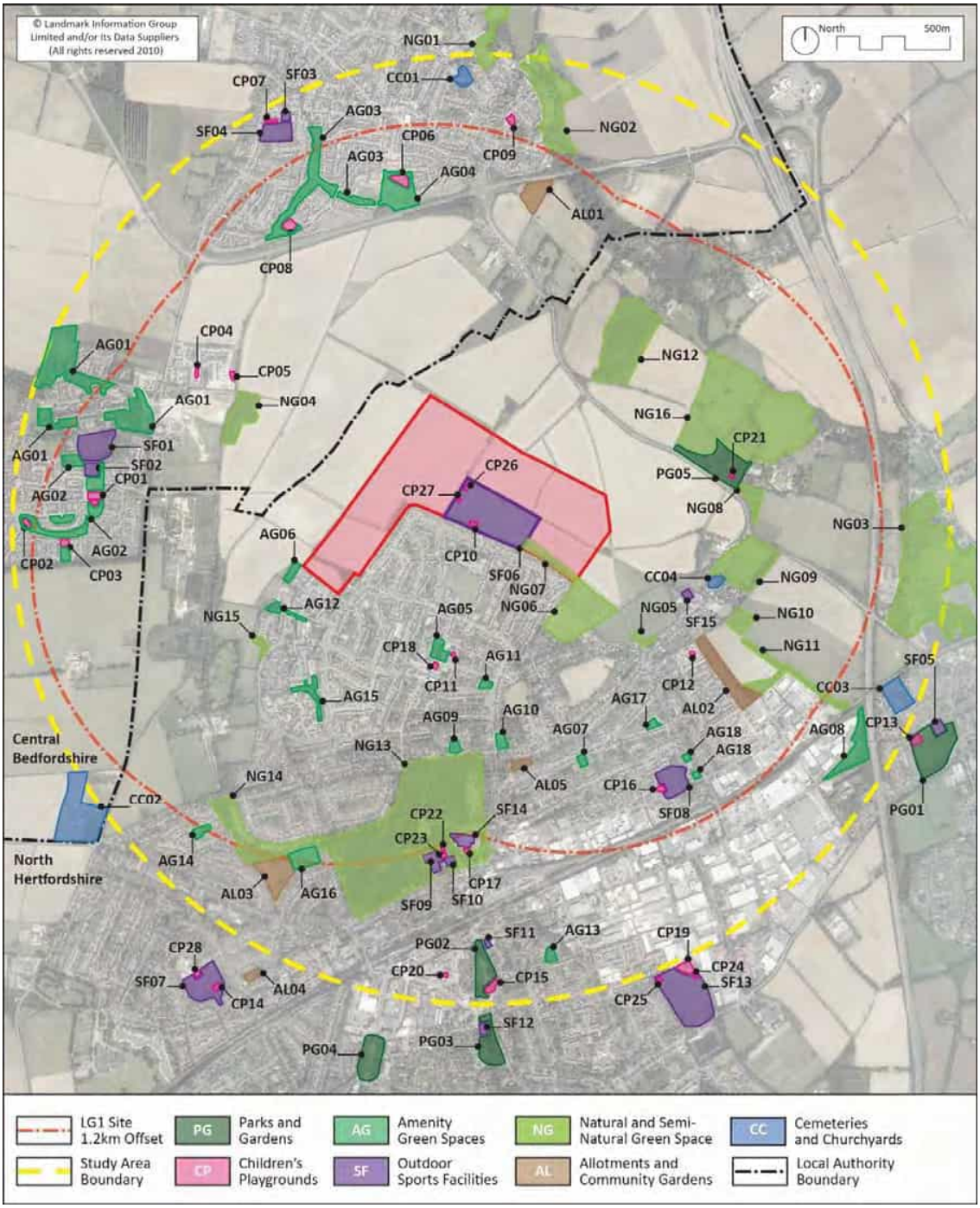
Figure 6.6 - The Grange Recreation providing a key local Sports Facility for LG1 (Site SF06)

Outdoor Sports Facilities

6.16 Planning for sport and active recreation focuses on the provision of playing pitches, other non-pitch sports such as tennis and bowls, multi-use games areas, wheeled sport (BMX and Skateparks) and supporting facilities that may include pavilions, clubhouses, changing rooms and car parking. In addition to quantity and accessibility standards of provision, Fields in Trust and Sport England provide detailed guidelines and specifications for these facilities. Whilst they play an essential role in promoting healthy communities and active lifestyles, their contribution to sustainable planning and design should also be considered. Areas for active recreation also have a role to play in surface water management, conserving the natural environment and increasing biodiversity through native planting and habitat management.

6.17 For LG1, the provision of outdoor sports facilities will focus on enhancing the current football pitch facilities of the Grange Rec and off-site contributions to existing sports facilities within Letchworth. The main planning priority in Letchworth is to improve and increase capacity for adult and youth football and mini soccer. A feasibility study and technical assessment will be required to establish the most appropriate approach to improving pitch facilities within the Grange Rec which is expected to include a new 3G sports pitch and enhancements to the existing turf pitches. This refurbishment strategy for the recreation ground should also include improvements to children's play including a new NEAP play area, enhancements to the skate park and the upgrade of the recreational facilities and landscape areas of the site.

ANNEX A - Site Survey Reference Plan



ANNEX B - Site Survey Schedule of Sites

Typology	Code	LA	LA Ref	Site Name	Quality	Size / HA
Amenity GS	AG01	CBC	351+	Fairfield Hall Green Spaces	19	7.35
Amenity GS	AG02	CBC	679+	Fairfield Park Green Spaces	20	2.99
Amenity GS	AG03	CBC	N/A	Sorrel Drive Green Spaces	18	3.10
Amenity GS	AG04	CBC	N/A	Greenacres Park Green Space	12	2.14
Amenity GS	AG05	NHC	N/A	Pelican Way Grange Green Space	8	0.65
Amenity GS	AG06	NHC	L/AM01	Land at Avocet	13	0.28
Amenity GS	AG07	NHC	L/AM02	Cromwell Green	12	0.20
Amenity GS	AG08	NHC	L/AM03	Works Road	16	1.40
Amenity GS	AG09	NHC	L/AM05	Westholme	23	0.28
Amenity GS	AG10	NHC	L/AM06	Eastholme	23	0.37
Amenity GS	AG11	NHC	L/AM07	Linden Gardens (Linden Green)	13	0.19
Amenity GS	AG12	NHC	L/AM10	Western Close	8	0.43
Amenity GS	AG13	NHC	L/AM12	Ridge Road	20	0.21
Amenity GS	AG14	NHC	L/AM27	Beech Hill	15	0.29
Amenity GS	AG15	NHC	L/AM38	Robin Walk, Dunlin and Swift Close	12	0.53
Amenity GS	AG16	LGCHF	N/A	Cowslip Hill	16	1.20
Amenity GS	AG17	NHC	L/AM02	Common View	18	0.22
Amenity GS	AG18	NHC	L/P15	Temple Gardens, Green Lane	12	0.17
Allotment	AL01	CBC	651	Norton Road Allotments	17	1.22
Allotment	AL02	NHC	L/A01	Norton Road / Green Lane	17	1.55
Allotment	AL03	NHC	L/A03	Runnalow Norton Allotments	20	1.59
Allotment	AL04	LGCHF	L/A05	Saffron Hill	19	0.17
Allotment	AL05	LGCHF	L/A02	Common View / Norton Way North	17	0.01
Churchyard	CC01	CBC	4319	St Mary's Churchyard, Stortfold	20	0.41
Churchyard	CC02	NHC	L/C01	Wilbury Hills Cemetery	21	2.70
Churchyard	CC03	NHC	N/A	Baldock Cemetery	12	1.26
Churchyard	CC04	NHC	NO/C01	St Nicholas Churchyard, Norton	18	0.23
Children's Play	CP01	CBC	685/B	Central Urban Play Area (Hitchin Road) - NEAP	20	0.92
Children's Play	CP02	CBC	680/A	Crescent of Trees West & East Play Area - NEAP	16	0.09
Children's Play	CP03	CBC	681	Bronte Avenue, Figure of 8 Play Area - LAP	20	0.24
Children's Play	CP04	CBC	4643	Beatrice Place Play Area - LAP	14	0.06
Children's Play	CP05	CBC	4644	Leopold Corner Play Area - LAP	17	0.04
Children's Play	CP06	CBC	4634	South Green Play Area - NEAP	15	0.28
Children's Play	CP07	CBC	655	Hitchin Road Recreation Ground Play Area - LEAP	8	0.06
Children's Play	CP08	CBC	4203	Pix Brook Play Area - NEAP	19	0.23
Children's Play	CP09	CBC	4198	Prince William's Close Play Area - LAP	9	0.14
Children's Play	CP10	NHC	L/P44	Grange Recreation Ground Play Area - LAP	10	0.03

Children's Play	CP11	NHC	L/P38-9	Pelican Way, Grange, Play Area - LAP	8	0.03
Children's Play	CP12	NHC	NL/P41	Hartington Place Play Area - LAP	14	0.01
Children's Play	CP13	NHC	N/A	Avenue Park Play and Splash Park, Baldock - LEAP	18	0.19
Children's Play	CP14	NHC	LP/20	Play Area at Icknield Way - LEAP	18	0.08
Children's Play	CP15	NHC	LP/27	Play Area at Howard Park Gardens - NEAP	20	0.21
Children's Play	CP16	NHC	LP/31	Play Area at Green Lane (Pascal Way) - NEAP	18	0.08
Children's Play	CP17	NHC	LP/36	Norton Common Play Area - LAP	15	0.03
Children's Play	CP18	NHC	LP/39	Play Area at the Grange - Other/MUGA etc	10	0.02
Children's Play	CP19	NHC	LP/30	Play Area at Baldock Road Rec Ground - NEAP	17	0.14
Children's Play	CP20	LGCHF	N/A	Play Area at The Wynd (Openshaw Way) - LAP	18	0.03
Children's Play	CP21	LGCHF	N/A	Radwell Meadows Play Area - LAP	17	0.02
Children's Play	CP22	NHC	N/A	Norton Common Skate Park - Other/MUGA etc	15	0.06
Children's Play	CP23	NHC	N/A	Norton Common Sports Court - Other/MUGA etc	15	0.06
Children's Play	CP24	NHC	N/A	Baldock Road Skate Park - Other/MUGA etc	11	0.04
Children's Play	CP25	NHC	N/A	Sports Court Baldock Rec - Other/MUGA etc	13	0.01
Children's Play	CP26	NHC	L/P43	The Grange Skate Park - Other/MUGA etc	10	0.03
Children's Play	CP27	NHC	L/P43	The Grange Basketball Court - Other/MUGA etc	9	0.04
Children's Play	CP28	NHC	L/P21	Sports Court at Icknield Way - Other/MUGA etc	14	0.06
Natural / S-N GS	NG01	CBC	659	Millennium Green, Stotfold	9	2.38
Natural / S-N GS	NG02	CBC	350+	Stotfold Water Mill Local Nature Reserve	15	8.22
Natural / S-N GS	NG03	NHC	N/A	Ivel Springs Local Nature Reserve	13	17.98
Natural / S-N GS	NG04	LGCHF	N/A	Norton Well (The Boffy)	16	2.08
Natural / S-N GS	NG05	LGCHF	N/A	Norton Pond	14	0.20
Natural / S-N GS	NG06	LGCHF	L/N06	Croft Lane Community Orchard, Norton	18	4.41
Natural / S-N GS	NG07	LGCHF	N/A	Grange Woodland Scrub Belt	15	0.95
Natural / S-N GS	NG08	LGCHF	N/A	Nortonbury Woodland	15	2.02
Natural / S-N GS	NG09	LGCHF	N/A	Meadow by St. Nicholas Church	14	3.69
Natural / S-N GS	NG10	LGCHF	N/A	Woodland by St Nicholas Primary School	10	0.80
Natural / S-N GS	NG11	LGCHF	N/A	Woodland near Blackhorse Road	16	4.10
Natural / S-N GS	NG12	LGCHF	N/A	Woodland near Radwell Air Strip	16	7.31
Natural / S-N GS	NG13	NHC	L/N05	Norton Common	22	25.17
Natural / S-N GS	NG14	NHC	L/N07	Woodland by Wilbury Road	18	4.59
Natural / S-N GS	NG15	NHC	L/N04	Woodland by Southern Way	8	0.31
Natural / S-N GS	NG16	NHC	N/A	Radwell Meadows Local Wildlife Site	14	18.32
Parks and Gardens	PG01	NHC	N/A	Avenue Park Baldock	21	2.85
Parks and Gardens	PG02	NHC	LP/02	Howard Park Gardens	23	1.51
Parks and Gardens	PG03	NHC	LP/03	Howard Park Memorial Garden	22	1.35
Parks and Gardens	PG04	NHC	LP/06	Broadway Gardens	23	1.62
Parks and Gardens	PG05	LGCHF	RW/P02	Radwell Meadows Country Park	20	4.70
Sports Facilities	SF01	CBC	687	Letchworth Garden City Cricket Club	19	1.58
Sports Facilities	SF02	CBC	688	Fairfield Bowling Green	22	0.17

Sports Facilities	SF03	CBC	654	Stotfold Bowling Green	18	0.14
Sports Facilities	SF04	CBC	653	Hitchin Road Recreation Ground	12	1.20
Sports Facilities	SF05	NHC	N/A	Baldock Town Bowls Club	19	0.29
Sports Facilities	SF06	NHC	L/P01	Grange Recreation Ground	17	6.19
Sports Facilities	SF07	NHC	L/P16	Wilbury Recreation Ground	16	2.28
Sports Facilities	SF08	NHC	L/P32	Green Lane Recreation Ground	17	1.60
Sports Facilities	SF09	NHC	L/P34	Norton Common Tennis Courts	19	0.40
Sports Facilities	SF10	NHC	L/P46	Norton Common, Willian Bowls Club	21	0.40
Sports Facilities	SF11	NHC	L/P28	Birds Hill Bowling Green	20	0.08
Sports Facilities	SF12	NHC	L/P26	Letchworth Garden City Bowls Club	22	0.24
Sports Facilities	SF13	NHC	L/P16	Baldock Road Recreation Ground	15	4.35
Sports Facilities	SF14	NHC	L/P37	Norton Common Lido	15	0.05
Sports Facilities	SF15	N/A	N/A	Three Horseshoes Bowling Club	7	0.14

ANNEX C - Site Survey Quality Assessment Criteria

	Open Space Quality Assessment	Date	Time	Site Number
	Photos	Weather		Surveyor

No	**Criteria**			**Score 1-5**
1	**Access and Safety**			1 / 2 / 3 / 4 / 5
•	The site is easy to find, welcoming, has good public access with a clear perception of safety			
•	Welcoming and clear points of entry	•	Lighting for internal routes and spaces	
•	Easy to use routes and paths for movement	•	Natural surveillance from surrounding areas	
•	Directional signs, maps or information	•	Parking or close links to public transport	
2	**Character and design**			1 / 2 / 3 / 4 / 5
•	The site has clear design quality, character and identity and enhances the surrounding area			
•	Visual amenity and appeal of the site	•	Compliments character of surrounding area	
•	Layout is appropriate and fit for purpose	•	Fixtures and furnishings are up to date	
•	Clear design continuity and enclosure	•	Includes distinct features and facilities	
3	**Boundaries and hard landscape**			1 / 2 / 3 / 4 / 5
•	The hard structure includes defined boundaries, a good path network, furnishing and seating			
•	Boundary walls, fences, gates and bollards	•	Lighting columns	
•	Internal walls, fences and gates	•	Seating and benches	
•	Paving materials and hard surfaces	•	Rubbish and dog waste bins	
4	**Planting and soft landscape**			1 / 2 / 3 / 4 / 5
•	Good variety of planning including trees, shrubs, grasslands and may include natural habitats			
•	Lawn, grass and meadow areas	•	Native and formal hedgerows	
•	Shrub, seasonal and feature planting	•	Boundary, screening and buffer planting	
•	Specimen and individual mature trees	•	Native and planned woodland planting	
5	**Standards of maintenance**			1 / 2 / 3 / 4 / 5
•	Good standards of maintenance including hard surfaces, planting and removal of rubbish			
•	Cleanliness, limited or no litter / dog fouling	•	Absence of graffiti, vandalism and fly-tipping	
•	Standard of grounds maintenance, weeding	•	Good upkeep of buildings and facilities	
•	Condition of furnishings benches, bins	•	Arboriculture and woodland management	

	Additional Notes	**Total Score**	0-25

ANNEX D - Site Survey Sheets

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**19/25**

Fairfield Hall Green Spaces		**AG01**
Eliot Way, Fairfield, Bedfordshire		CBC
Amenity Green Space		AG
LA Ref - 351/1241/1247/ 4460/4487	Size (HA)	7.35

Description

A sequence of spaces surrounds the historic Fairfield Hall complex of buildings. The main landscape character is open grassland and mature trees. More informal woodland and meadows are to the northwest incorporating a small open cemetery space with gravestones dating back to the former Three Counties Asylum. The southern area includes the historic west and east orchards with interpretation boards, rough mown grass, overlooked by houses. The main routes are lit and the spaces have very few areas for seating. The grounds, trees and vegetation are generally well-maintained with the mature trees providing the most distinct character across the entire amenity green space.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**20/25**

Fairfield Park Green Spaces		**AG02**
Bronte Avenue, Fairfield, Beds		CBC
Amenity Green Space		AG
LA Ref - 678/679/681/ 684/686/1219/1227	Size (HA)	2.99

Description

A sequence of interlinked green spaces through the centre of Fairfield Park that connect with sports facilities and children's play areas. The landscape is predominately short mown grassland with semi-mature trees that have mainly been planted as part of the housing development. The structured and semi-formal path network directly connects to the neighbourhood centre and includes street lighting and several areas for seating. The spaces are well-maintained and clear of litter. They include several areas of shrub planting providing seasonal interest and hedgerows marking boundaries with properties and pedestrian railings and bollards adjacent to junctions with roads.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Sorrel Drive Green Spaces		**AG03**
Valerian Way, Stotfold, Bedfordshire		CBC
Amenity Green Space		AG
LA Ref - N/A	Size (HA)	3.10

Description

A series of interlinked amenity green spaces aligned with the Pix Brook corridor providing a mix of amenity grassland and natural riparian habitat framed by mature trees. The spaces include drainage infrastructure and culverts and are connected by a network of footpaths and a footbridge that links with adjacent residential neighbourhoods. The southern section incorporates a children's play area and multi-use games area (CP08) framed by a generous area of shrub planting. The vegetation along the river corridor is overgrown although the spaces are generally well-maintained and are of good quality providing seasonal and ecological interest.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**12/25**

Greenacres Park Green Space		**AG04**
Marigold Way, Stotfold, Beds		CBC
Amenity Green Space		AG
LA Ref - N/A	Size (HA)	2.14

Description

An open and relatively featureless green space marking the southern boundary of Stotfold and adjacent to the A507. Rowcroft Lower School is to the west and the Town Council Greenacre Community Centre is to the north. A sequence of partially lit curving paths link with adjacent green spaces and the large central play area (CP06). Seating is provided within the play area but not elsewhere. This space is not listed on the CBC mapped inventory of green spaces and adjacent spaces are enclosed by heras fencing. Presumably to restrict public access as these are likely future development plots. The area is free of litter and has a moderate standard of maintenance.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	1/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	1/5
Quality score	**8/25**

Pelican Way, Grange, Green Space		**AG05**
Middlefields, Grange, Letchworth		NHC
Amenity Green Space		AG
LA Ref - N/A	Size (HA)	0.65

Description

An Interconnected green space linked by a network of paths and located within the neighbourhood centre of the Grange. The space is adjacent to local shops, a toddler play area, MUGA and car parking. The central area has a circular and inward-looking arrangement of seating. This is enclosed by a formal set of planting beds that are poorly maintained and generally unplanted. The entire green space is subdivided by a belt of mature trees that provide a sense of enclosure and separate the seating area from adjacent housing. The area appears to have heavy use, has a low standard of maintenance with some litter and a number of items are in need of repair.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**13/25**

Land at Avocet		**AG06**
Avocet, Letchworth Garden City		NHC
Amenity Green Space		AG
LA Ref - L/AM01	Size (HA)	0.28

Description

A small pocket of green space, located at the tip of The Grange, north of Standalone Farm. It contains a small but dense woodland hugging it's boundary and a single path which runs through the site and links toa public footpath which skirts the edge of various privately owned fields. There is little in the way of character beyond the site's natural features, but it works as functional space, funnelling people from the residential area to the footpath. A single bin is located on this site. Surveillance is limited given the thick arboreal layer between the site and neighbouring properties.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	2/5
Quality score	**12/25**

Cromwell Green		**AG07**
Adjacent to Common View, Letchworth		NHC
Amenity Green Space		AG
LA Ref - L/AM02	Size (HA)	0.20

Description

A formally arranged rectilinear green space surrounded by traditional Arts and Crafts terraced housing that frames Cromwell Green. The most distinctive feature is two parallel lines of mature Lombardy poplar trees that are planted on the axis of the green space. A central stepped path leads through the middle of the space and is aligned with Cromwell Road that runs to the south of the space. The short-mown amenity grassland is in fair condition whilst sections are shaded-out leaving areas of bare soil when the trees are in full leaf. Ad-hoc car parking on the verges of the space have further damaged the grassland. The space provides visual amenity and is maintained to a reasonable standard.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**16/25**

Works Road		**AG08**
Works Road, Letchworth Garden City		NHC
Amenity Green Space		AG
LA Ref - L/AM03	Size (HA)	1.40

Description

Located at the end of Works Road, this large site has two distinct areas. The north is made up of natural features and re-naturalised areas of tall grassland accessed by a small footpath. Mature tree rows line the east and west of the site, with sparsely placed individual trees occupying the middle. The southern section incorporates more areas of hard landscaped footpaths and is more clearly managed including well-maintained hedgerows and short mown grass. Multiple points of access to the site connect with several footpaths including one that leads to the adjacent footbridge over the A1 motorway. Much of the site has dense woodland that screens the motorway. There are a small number benches and bins and there is minimal evidence of litter.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	5/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	5/5
Quality score	**23/25**

Westholme		**AG09**
Westholme, Wilbury Road, Letchworth		NHC
Amenity Green Space		AG
LA Ref -L/AM05	Size (HA)	0.28

Description

Westholme contains a well maintained open green space, near Wilbury Road. It is framed by terraced and detached traditional Arts and Crafts housing. A curved access road defines the edge of the central grass area. There is no hard landscaping present on the site, which is mostly made up of a large open green space, with medium length mown grass. A small number of mature trees including a weeping beach provide a distinctive central and framing feature to the site enhancing its visual amenity. The site is separated from Wilbury Road by an extensive, well maintained and tall hedgerow. The site appears well maintained and was free of litter at the time of the survey.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	5/5
Quality score	**23/25**

Eastholme		**AG10**
Eastholme, Norton Road, Letchworth		NHC
Amenity Green Space		AG
LA Ref - L/AM06	Size (HA)	0.37

Description

The site presents similar characteristics as Westholme (AG09) and is situated on the corner of Norton Road and Eastholme. The site is framed by traditional detached and semi-detached Arts and Crafts homes and bounded on the west and south by a low and formally maintained privet hedge. A line of mature primarily deciduous trees mark the boundary of the short-mown grassland and loose aggregate surfaced access road. The space provides a distinctive junction within the layout if the Garden City providing generous views across open green space enhancing visual amenity. The simple layout of the site is well maintained with no evidence of litter.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**13/25**

Linden Gardens (Linden Green)		**AG11**
Lindencroft / Southfields, Grange Estate		NHC
Amenity Green Space		AG
LA Ref - L/AM07	Size (HA)	0.19

Description

This relatively extensive rectangular green space is located on the intersection of Southfields, Lindencroft and Eastern Way. It is surrounded by streets on three sides and framed by terraced and semi-detached residential properties all four sides. This creates a strong sense of passive surveillance making the space feel safe to use and its layout reflects the general character and visual amenity of the Grange Estate. The terraced housing on Linden Green on the western side face directly onto the green space and are solely approached by a footpath rather than vehicular assess. The green space itself is comprised of short-mown grass and several mature trees and the space has good standard of maintenance.

Outline Quality Assessment	
1 Access and safety	1/5
2 Design and character	1/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	2/5
Quality score	**8/25**

Western Close		**AG12**
Adjacent to Stonehill School and Avocet		NHC
Amenity Green Space		AG
LA Ref - L/AM10	Size (HA)	0.33

Description

This amenity green space comprises relatively extensive open short-mown grass verges and an area of mature, principally native woodland. It is accessed along Western Close that leads to the entrance of Stonehill School and Sax House, social care retirement housing. The site directly contributes to the visual amenity of the area, reflecting the general green space character of the Grange Estate. The woodland screens all views westward to the adjacent farmland. A narrow and enclosed footpath runs along the southern boundary of the woodland that provides pedestrian access to Curlew Close and informal footpath that leads across farmland to Pix Brook. The site is generally well-maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	5/5
Quality score	**20/25**

Ridge Road		**AG13**
Ridge Road, Letchworth		NHC
Amenity Green Space		AG
LA Ref - L/AM12	Size (HA)	0.21

Description

The green space located at Ridge Road has a similar form and character as Westholme (AG09) and Eastholme (AG10), both in terms of the shape of the site and the character of the space itself. It is shielded from a busy road with a thick, well-trimmed hedgerow of mixed native and horticultural species. It primarily comprises short-mown grassland and has a large number of mature trees make a positive contribution to the visual amenity of the site. The site is surrounded on all sides by residential properties and the homes directly facing onto the space providing a high level of natural surveillance. The site is well-maintained but has no footpaths and is accessed directly from the surrounding residential road.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**15/25**

Beech Hill		**AG14**
Beech Hill, Letchworth		NHC
Amenity Green Space		AG
LA Ref - L/AM27	Size (HA)	0.29

Description

This small amenity green space is surrounded on three sides by Beech Hill and framed by semi-detached housing. The site has few distinguishing features and mainly comprises open short-mown grassland and a narrow belt of mature trees within an overgrown hedgerow. Within the site is a visually intrusive electrical sub-station enclosed by mesh fencing which has a negative impact on its character and visual quality. The site is overlooked by housing on three sides where this is not screened by the hedgerow. There is a good level of natural surveillance and with the addition of streetlights the site has a good sense of safety. There are no footpaths within the site which is accessed directly from the surrounding streets and the site is well-maintained.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**12/25**

Robin Walk, Dunlin and Swift Close		**AG15**
Between Dunlin and Swift Close		NHC
Amenity Green Space		AG
LA Ref - L/AM38	Size (HA)	0.53

Description

This area of residual amenity green space provides pedestrian access to several surrounding streets including Dunlin, Swift Close and Western Way. It comprises short-mown grassland and mature trees and is enclosed along some edges by ornamental hedgerows. Much of the space is irregularly shaped and surrounded by fences and rear gardens of neighbouring residential properties with poor surveillance. This reinforces the sense that the site is principally left-over open space that is hidden behind housing rather than being located in the foreground and contributing to the visual amenity of the street. The site is crossed by footpaths and maintained to a reasonable standard.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**16/25**

Cowslip Hill		**AG16**
Cowslip Hill, Letchworth Garden City		LGCHF
Amenity Green Space		AG
LA Ref - N/A	Size (HA)	1.20

Description

This amenity green space is located adjacent and south of the semi-natural green space by Wilbury Road (NG14). On the western boundary are the Runnalow Allotments (AL03). In combination these three sites contribute to an important network of green infrastructure that connects with Norton Common to the east. The site is featureless but bounded on all four sides by mixed hedgerows of varying quality along with a mature shelterbelt on the northern boundary with the Wilbury Road Site. It is crossed by an unmade footpath with occasional seating and litter bins. Management of the grassland is relatively informal, and the site has a standard to low level of maintenance.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Common View		**AG17**
Adjacent to Common View, Letchworth		NHC
Amenity Green Space		AG
LA Ref - L/AM02	Size (HA)	0.22

Description

This space is located on the north of Common View and is framed by a formal arrangement of traditional terraced Arts and Crafts housing. There is a small outbuilding with a unspecified use located on site and a well-maintained hedgerow and shrubs that shield the green space from the road. A small number of mature trees punctuate the central area space. The space appears to be actively used, with an ad-hoc football goal located on the western side of the site. On the eastern side is a row of allotment beds that are in cultivation. In situ concrete footpaths frame and bisect the site, the main area of the site is of short mown grassland, is well maintained and has been kept clear of litter.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	1/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**12/25**

Temple Gardens, Green Lane		**AG18**
Adjacent to Common View, Letchworth		NHC
Amenity Green Space		AG
LA Ref - L/P15	Size (HA)	0.17

Description

This distinctive site comprises two similar sized rectangular green spaces located on Green Land and fronted on three side by traditional terraced residential properties. The housing face directly on to the green space and are accessed by footpaths. Vehicular access is provided to the rear of the properties. The northern of the two is screened from the road by an overgrown hedgerow and mature trees. The southern space is more visible. Each comprise short-mown grassland in a fair condition and are directly overlooked and accessed by the surrounding properties. Whilst the spaces contribute to the visual character of the area, they offer minimal recreational value.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**17/25**

Norton Road Allotments		**AL01**
Norton Road, Stotfold		CBC
Allotment		AL
LA Ref - 651	Size (HA)	1.22

Description

Located on a vehicular access track off the Norton Road and adjacent to the A507, the site has 56 plots, all are leased, and it is owned and managed by Stotfold Town Council. Parking is mainly provided on the adjacent road. The site is divided by a central track that provides access and parking for a small number of vehicles and deliveries. The boundaries are enclosed by dense native deciduous hedgerows, trees and scrub. The site provides water although there are no communal buildings or site huts. Sheds are permitted on individual plots and are generally in good condition. The site is well managed, and all plots appear to be under cultivation.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**17/25**

Norton Allotments		**AL02**
Flint Road, Letchworth		NHC
Allotment		AL
LA Ref - L/A01	Size (HA)	1.55

Description

An extensive allotment site that is currently fully let, with approximately 70 plots, some of which are subdivided into mini plots. The site is not accessible to the general public and is approached from an industrial estate, through a secured gate and along a road to both central and northern parking areas connected by a central track. The site is approximately 370m long and orientated north-south bounded on the west by fencing and housing and hedgerows and open fields to the east. There is a large communal building and trading store for plot-holders in the centre of the site. And it appears to be well-maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**20/25**

Runnalow / Norton Allotments		**AL03**
Bedford Road / Runnalow, Letchworth		NHC
Allotment		AL
LA Ref - L/A03	Size (HA)	1.59

Description

This is a large allotment site, with a secure boundary comprising tall fences, hedgerows and mature trees. The site is accessed via locked gates on Bedford Road and there is a general to high level of activity on the site. Access is restricted to allotment holders and within the site there is parking area to the south and an access track towards the western boundary that bisects the site. The site is recorded as being fully let with approximately 60 plots in a regular layout with some plots being sub-divided in two. The site is overlooked by properties and rear gardens from Runnalow and Redhoods Way East and appears to be well managed and maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**19/25**

Saffron Hill		**AL04**
Archer's Close, Letchworth		LGCHF
Allotment		AL
LA Ref - L/AL05	Size (HA)	0.23

Description

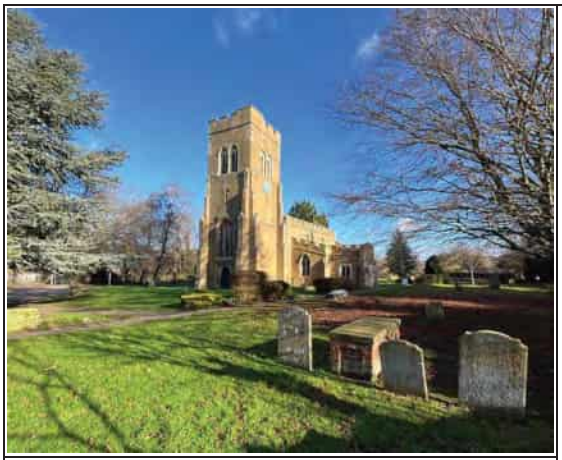
This small and hidden site takes more of a form of community gardens than a formal municipal allotment site. It is located on land to the rear of residential properties on Saffron Hill, Archers Way, Icknield Way and Redhoods Way West. The site appears well used and the boundaries are well maintained, with fencing, locked gates, thick hedgerows, and dense tree lines preventing unauthorised access. There is good visibility from the rear of surrounding homes. Within the site there are some low hedges and a few mature trees. There is minimal infrastructure in terms of vehicular access, the loose rectangular layout of plots are subdivided by small wooden fences and gravel paths.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**17/25**

Common View / Norton Way North		**AL05**
Common View, Letchworth Garden City		LGCHF
Allotment		AL
LA Ref - N/A	Size (HA)	0.14

Description

There is restricted access to this small site and therefor appraisal and assessment was limited. There are similarities to the Saffron Hill Allotment Site (AL04) in that this space for food growing takes more of a form of community gardens than a formal municipal allotment site. The site is located between residential properties on Norton Road and Common View and is not visible from the surrounding streets. Norton Way North is to the west and the site is bounded by numerous rear back gardens. Hedgerows, mature trees and timber fencing enclose the site that has minimal infrastructure for access and circulation.



Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	5/5
Quality score	**20/25**

St Mary's Churchyard		**CC01**
Church Road, Stotfold		CBC
Cemeteries and Churchyards		CC
LA Ref - 4319	Size (HA)	0.41

Description

This small churchyard is located just east of the centre of Stotfold and is at the heart of a residential neighbourhood. It is accessed via several alleyways and paths that connect the green space with surrounding streets, making it a regularly used throughfare. The Grade II* church, dating to the 12th Century, dominates the centre of the space, providing a distinct and tranquil character. The churchyard is well-maintained and has a small number of standing gravestones and burial plots. The landscape includes a mix of attractive mature trees, short mown grassland with boundaries of mature shrubs, hedgerows, fences and walls.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**21/25**

Wilbury Hills Cemetery		**CC02**
Stortfold Road, Letchworth		LA
Cemeteries and Churchyards		CC
LA Ref - L/C01	Size (HA)	2.70

Description

A modern cemetery with contemporary designed non-denominational chapel and linear mausolea structure located on the west of Letchworth on the border with Central Bedfordshire. The site is served by a central access road and curved arrangement of parking bays that lead to a network of plots. The site is subdivided by earth mounds and embankments providing a mix of areas and burial plots with varying enclosure and orientation. Structured and relatively new plantings of trees, hedgerows and shrubs are becoming established. The site is well maintained with seating and short mown grass between individual graves.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**12/25**

Baldock Cemetery		**CC03**
The Sycamores, Baldock		LA
Cemeteries and Churchyards		CC
LA Ref - N/A	Size (HA)	1.26

Description

A traditional cemetery located on the west of Baldock, bounded on three sides by housing, a rail line to the north and close to the A1 on the west. The site is approached by a discrete narrow road between housing that provides vehicular access to the centre and northern sections of the site. A network of footpaths provide access to the grave areas whilst individual plots are subdivided by short mown grass. The site is generally open and featureless but bisected by a belt of mature and over-mature trees of mixed condition. The site is maintained to an adequate standard with no seating and little additional planting or horticultural interest.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**18/25**

St Nicholas Churchyard, Norton		**CC04**
Church Lane, Norton		LA
Cemeteries and Churchyards		CC
LA Ref - NO/C01	Size (HA)	0.23

Description

An enclosed churchyard surrounding the Grade II listed St Nicholas church with an distinct tower dating to the 15th Century. The site is located within the Norton Conservation Area and the church is the most prominent heritage building of the village. The site is approached by a lych gate leading to a circular path that connects on to footpath 27 leading across adjacent fields. Much of the churchyard is filled by graves, grave stones and a few distinctive monuments. It is enclosed by low old stone and brick walls, fencing, hedgerows and shrubberies. There are a few mature evergreen trees and the site is relatively well maintained with some areas of rough grassland.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	5/5
Quality score	**20/25**

Central Urban Play Area		**CP01**
Dickens Boulevard, Fairfield Park		CBC
Children's Play Area - NEAP		CP
LA Ref - 685 / 685B	Size (HA)	0.92

Description

A well-equipped play area adjacent to the neighbourhood centre of Fairfield Park and located within a formal sequence of green spaces. The play area is split between a northern space allocated for toddlers (0-6 years) and a southern space for older children (8-14 years). Both have a wide-range of equipment of a contemporary design, with safety surfacing and short-mown grass. There is good level of seating provision, including picnic benches and the areas are bounded by metal fencing and hedgerows. There is a good level of surveillance from surrounding buildings and a good standard of maintenance across both spaces.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**16/25**

Crescent of Trees West & East		**CP02**
Emily Place, Fairfield Park		CBC
Children's Play Area - NEAP		CP
LA Ref - 680 / 680A	Size (HA)	0.09

Description

A well-equipped play area located to the west of Fairfield Park and on the western end of the green crescent. The space is split between an area allocated for younger children (4-8 years), enclosed by a metal fence, and older children (8-14 years). It is bounded by roads and a mature hedgerow with mature trees that frame and partially enclose the space. Surrounding housing provides a good level of surveillance. The network of footpaths provides direct access to the surrounding neighbourhoods and other green spaces. There is a good standard of maintenance, the equipment is in good condition and offers good play value.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	3/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	5/5
Quality score	**20/25**

Bronte Avenue, Figure of Eight		**CP03**
Bronte Avenue, Fairfield Park		CBC
Children's Play Area - LAP		CP
LA Ref - 681	Size (HA)	0.24

Description

A small play area allocated for toddlers (0-6 years) with a central play feature offering good play value. This is surrounded by a few pieces of traditional play equipment including a swing and roundabout and seating. All equipment is on safety surfacing surrounded by short mown grass. The space is bounded by low hoop-topped metal fencing and regularly clipped hedgerows. The space is directly adjacent to a central spine path that provides direct pedestrian access to the neighbourhood centre in the middle of Fairfield Park and surrounding housing. The space is well-maintained and there is a good level of surveillance from adjacent properties.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	2/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**14/25**

Beatrice Place Play Area		**CP04**
Fairfield Park eastern extension		CBC
Children's Play Area - LAP		CP
LA Ref - 4643	Size (HA)	0.06

Description

A modest play area located in the centre of a new housing estate to the east of Hitchin Road and the historic Fairfield Hall site. The site is bounded by a residential road, low hoop-top metal fencing and deciduous hedgerows with occasional shrubs. There is a high level of surveillance from surrounding housing. The play space has two entrance gates, seating and a small number of items of play equipment. These are of traditional design principally for toddlers and offer reasonable play value. The site is surfaced by short mown grass with areas of bark chippings but no safety surfacing. It is generally well maintained, and the play equipment is in good condition.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**17/25**

Leopold Corner Play Area		**CP05**
Fairfield Park eastern extension		CBC
Children's Play Area - LAP		CP
LA Ref - 4644	Size (HA)	0.04

Description

A small play area located on the eastern boundary of a new housing estate to the east of Hitchin Road and the historic Fairfield Hall site. The site is enclosed by a low hoop-toped metal fence and loose arrangement of shrub planning. The limited number of items of play equipment are of a contemporary design, constructed principally of timber and generally designed for older children. There is safety surfacing under the larger pieces of equipment and bark chippings elsewhere with seating located at the edge of the space. The site is adjacent to a water attenuation pond and overlooked by housing on one site and is generally well maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**15/25**

South Green Play Area		**CP06**
Marigold Way, Stotfold		CBC
Children's Play Area - NEAP		CP
LA Ref - 4634	Size (HA)	0.28

Description

A large play area centrally located close to the southern boundary of Stotfold and adjacent to the large, and relatively featureless, green space of Greenacres Park (AG04). The space has a variety of play elements designed for children up to the age of 14 and includes slides, climbing frames, a zip wire and MUGA. The space has short mown grassland, tarmac and limited safety surfacing that is overgrown by grass. There is some mounding that adds to the play value and interest. It is enclosed by low hoop-top metal railings, gated entrances. There is good access from surrounding paths, clear surveillance from housing on the northern boundary and the space is reasonably well maintained.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	1/5
3 Boundaries and hard landscape	1/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	3/5
Quality score	**8/25**

Hitchin Road Rec Ground Play Area		**CP07**
Hitchin Road, Stotfold		CBC
Children's Play Area - LEAP		CP
LA Ref - 655	Size (HA)	0.06

Description

The play space is incorporated within the northern boundary of the Hitchin Road recreation ground (SF04) and includes a variety of play equipment distributed in an open arrangement with limited play value. The space in not enclosed but bounded on the north by a dense mature hedgerow. Much of the equipment is old and of a traditional design although there are additional more contemporary play items designed for toddlers on the western edge by Hitchin Road. Most of the equipment has rubberised safety surfacing that is in serviceable condition surrounded by short mown grassland. The play area and recreation ground is maintained to a reasonable standard.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	4/5
Quality score	**19/25**

Pix Brook Play Area		**CP08**
Valerian Way, Stotfold		CBC
Children's Play Area - NEAP		CP
LA Ref - 4203	Size (HA)	0.23

Description

A large play area located on the southern boundary of Stotfold and set within the green space network of Sorrel Drive (AG03) that follows the Pix Brook corridor. The space incorporates a wide variety of play elements designed for a broad age range of children and includes slides, climbing frames, a teen shelter and MUGA. The space is mainly surfaced by short mown grassland with some mounding to increase play interest and value. It is enclosed by low hoop-top metal railings, gated entrances and some areas of shrub planting. There is good access from surrounding paths, clear surveillance from housing on the northern boundary and the space is generally well maintained.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	1/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	3/5
Quality score	**9/25**

Prince William's Close Play Area		**CP09**
Prince William Close, Stotfold		CBC
Children's Play Area - LAP		CP
LA Ref - 4198	Size (HA)	0.14

Description

A small play space designed for toddlers in a residential close adjacent to a modest amenity green space and residential street with car parking. There are four pieces of play equipment of traditional design offering reasonable play value along with a bench and bin. The equipment is in serviceable condition, the space has tarmac and safety surfacing and it is reasonably well maintained. It is accessed by tarmac paths and gates and bounded by low hoop-topped metal fencing. There is a poorly maintained scrubby hedgerow on the western boundary, small areas of neglected planting and the space is overlooked by adjacent housing on three sides.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	1/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	3/5
Quality score	**10/25**

Grange Rec Ground Play Area		**CP10**
Gaunts Way, Grange, Letchworth		NHC
Children's Play Area - LAP		CP
LA Ref - L/P44	Size (HA)	0.03

Description

This Local Area for Play (LAP) has a modest range of traditional play facilities and seating designed for toddlers. The space is enclosed by low hoop-topped fencing and surfaced with short mown grass, play surfacing and tarmac path. The space is located along the south-western boundary of the extensive Grange Recreation Ground (SF06). Additional play facilities and fitness equipment are distributed close by within the grassland, providing facilities for older children. A modest skate park and very basic basketball court are located on the western boundary. The space is partially overlooked from adjacent housing, reasonably well maintained and the equipment is in serviceable condition.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	1/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	2/5
Quality score	**8/25**

Pelican Way, Grange, Play Area		**CP11**
Middlefields, Grange, Letchworth		NHC
Children's Play Area - LAP		CP
LA Ref - L/P38	Size (HA)	0.03

Description

A local area for play (LAP) located within the Grange Estate neighbourhood centre and adjacent to retail shops and car parking. The space has a mix of equipment suitable for toddlers and young children including a modest climbing frame and slide, swings and balance beams and rings. The space is enclosed by low hoop-toped metal fencing and additional internal fencing projects a hard urban character. There are benches, rubbish bins, cycle stands and it is surfaced with short-mown grass and safety surfacing. An adjacent MUGA provides facilities for older children. There is no planting and the space is moderately well-maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**14/25**

Hartington Place Play Area		**CP12**
Hartington Place, Letchworth		NHC
Children's Play Area - LAP		CP
LA Ref - L/P41	Size (HA)	0.01

Description

A very modest local area for play designed for toddlers and located within a communal courtyard of this contemporary housing area. The small number of pieces of equipment are set on coloured safety surfacing offering very limited play value. The space is set within short-mown grassland, benches and gravel paths providing a general amenity space that is surrounded by a mix of shrub and hedgerow planting providing seasonal interest. The space has a high degree of surveillance from housing on all sides with lighting columns along the footpaths. The play area and planting are relatively well maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Avenue Park Play and Splash Park		**CP13**
West Avenue / Pepys Way, Baldock		NHC
Children's Play Area - LEAP		CP
LA Ref - N/A	Size (HA)	0.19

Description

A Locally Equipped Area for Play (LEAP) located on the north-western corner of Avenue Park, Baldock. The space has a variety of play equipment for both toddlers and young children loosely distributed across an area of short mown grass and is not enclosed by fencing. There is an adjacent toddlers splash pool and MUGA that increases the play offer and value for older children and teenagers. A number of benches surround the play and there is a modest level of surveillance from adjacent housing beyond the roads that mark the boundary the park. The planting mainly comprises hedgerows and mature trees that provide a level of enclosure to the space which is relatively well maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Play Area at Icknield Way		**CP14**
Icknield Way, Letchworth Garden City		NHC
Children's Play Area - LEAP		CP
LA Ref - LP/20	Size (HA)	0.08

Description

The play area at Icknield Way, positioned on the Wilbury Recreation Ground, is a fairly well-kept playground with a mix of different pieces of equipment, including swings and a slide. There are 13 pieces of equipment in total. There is no clear demarcation of a toddler area vs older children's area, though there are two sets of swings to appeal to these prospective age groups. The play area is covered with grass mats around the equipment and short mown grass throughout the rest of the playground. The site has a medium-sized metallic fence on its boundary. The site is well-overlooked by neighbouring properties on Archer's Way, though there is no lighting provision on the recreation ground.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**20/25**

Play Area at Howard Park Gardens		**CP15**
Norton Way South		NHC
Children's Play Area - NEAP		CP
LA Ref - LP/27	Size (HA)	0.21

Description

A large play area located centrally within Howard Park, this play area is extensive and includes 16 pieces of equipment. This includes larger structures such as a climbing frame which comes equipped with monkey bars, tight rope, and other climbable areas. There is also a tyre swing, a small merry-go-round, as well as a slide/climbing structure, and swings. One section is for toddler play and delineated by a wooden fence. Surfacing is a combination of wood chip and short mown grass, with grass mats providing safety surfacing. The site has a water fountain, a pavilion with toilets and there are five picnic benches nearby. It is overseen by properties on Rushby Mead and Norton Way South.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Play Area at Green Lane		**CP16**
Green Lane, Letchworth Garden City		NHC
Children's Play Area - NEAP		CP
LA Ref - LP/31	Size (HA)	0.08

Description

This a medium-sized play area is located on the western side of the Green Lane Recreation Ground (Site SF08). This serves the residential neighbourhood between Glebe Road and Icknield Way and is overlooked by properties on Pascal Way. There are 12 pieces of equipment including a slide and climbing frame, swings, a small merry-go-round, and other small pieces of equipment. Gym equipment is located outside the boundary of the play area. Rubberised safety surfacing is located under most pieces of equipment, with short mown grass surfacing the rest of the site. A standard low hooped metal fence with gates at either end provides a boundary of the area and the site has one bench.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	2/5
Quality score	**15/25**

Norton Common Play Area		**CP17**
Icknield Way, Letchworth Garden City		NHC
Children's Play Area - LAP		CP
LA Ref - LP/36	Size (HA)	0.03

Description

The Norton Common Play area is a small play area located opposite the entrance to the Norton Lido (SF14). It has five main pieces of equipment including a slide and climbing frame, and a set of swings suitable for toddlers. The site is surfaced by short-mown grass and is surrounded by standard low hooped metal railings with gates on two sides. There are two picnic benches located within the play area. The site is surrounded by trees and the informal parkland of the Norton Common providing a visually attractive setting. A car park and access road for the Lido are located nearby although the site is not visible from surrounding properties. In general, the site is well maintained although the equipment is dated.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	2/5
Quality score	**10/25**

Play Area at The Grange		**CP18**
Pelican Way, The Grange, Letchworth		NHC
Children's Play Area - LAP		CP
LA Ref - L/P39	Size (HA)	0.02

Description

This play area is located in the centre of the Grange Estate and adjacent to the Pelican Way Amenity Green Space (AG05). A toddler play area is also located nearby (CP11). The site comprises a concrete court with a basketball hoop as well as a football goal which is integrated within the tall, coloured fencing which surrounds the space. A covered seating area for teenagers is positioned on the east side of the site. The site is surrounded by grassed areas, mature trees and over-looked by neighbouring properties on Pelican Way and lit by surrounding street and path lighting. The playing surface is functional but does not provide a low impact surface that may increase the risk of injury for users.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**17/25**

Play Area, Baldock Recreation Ground		**CP19**
Baldock Road, Letchworth Garden City		NHC
Children's Play Area - NEAP		CP
LA Ref - LP/30	Size (HA)	0.14

Description

This extensive play area is located on the northeast corner of the Baldock Recreation Ground (SF13). The site includes a toddlers and younger children's play area that includes a slide and climbing frame and swings. There are some larger climbing pieces providing an obstacle course as well as a tyre swing suitable for older children and teenagers. In total there are 20 pieces of equipment as well as a small basketball court with a single hoop. There is no hard boundary for the play space, which gives the whole play area an open and informal feel. Baldock Recreation Ground is surrounded by industrial buildings, with little natural surveillance of the site from the surrounding area.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Play Area at The Wynd		**CP20**
The Wynd, Letchworth Garden City		LGCHF
Children's Play Area - LAP		CP
LA Ref - N/A	Size (HA)	0.03

Description

Located behind one of the main shopping streets in Letchworth this small playground is located on a small offshoot of Leys Avenue called The Wynd, which homes several small, local businesses. The play area is positioned opposite a community garden and provides a focal point for the street. It is equipped with a single large piece of equipment, a climbable wooden ship, with a slide protruding from the side. There is a mixture of soft and hard landscaping in the play area, with a blue safety surfacing surrounding the ship, whilst gravel and short mown grass surfaces the rest of the play area. There is a mural wall adjacent to the site that provides an opportunity for community art projects and adds visual interest.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**17/25**

Radwell Meadows Play Area		**CP21**
Norton Bury Lane, Letchworth		LCGHF
Children's Play Area - LAP		CP
LA Ref - N/A	Size (HA)	0.02

Description

A small play area located in the south-east corner of Radwell Meadows Country Park (PG05). This site is occupied by just one piece of equipment, a large climbing frame with a small slide. The equipment is surrounded by wood chippings as a safety surface. The boundary to the play area marked by a low timber picket fence reflecting the natural setting of this space. It is situated by a small meadow with picnic benches. There Surrounded by native scrub, mature trees and small areas of woodland. This has a very rural and attractive aesthetic although the site is located a long way from residential areas. The Garden City Greenway passes nearby and the site is also served by a carpark.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	2/5
Quality score	**15/25**

Norton Common Skate Park		**CP22**
Norton Common, Icknield Way		NHC
Children's Play Area - Other/MUGA etc		CP
LA Ref - N/A	Size (HA)	0.06

Description

This skate park is located close to the southern boundary of Norton Common and is directly adjacent to other leisure facilities. These include the Norton Common Tennis Courts (SF09) and basketball court (CP23), the Willian Bowls Club (SF10) and the Letchworth open air Lido (SF14). The site mainly comprises a large concrete skating bowl accompanied by a smaller number of concrete obstacles set within an extensive concrete apron. It is surrounded by mature native trees and scrub to the north and east and hedgerows to the south. The site has been poorly maintained, with graffiti visible all over the skating facilities. Some of the concrete is worn with visible cracking.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**15/25**

Norton Common Sports Court		**CP23**
Icknield Way, Letchworth Garden City		NHC
Children's Play Area - Other/MUGA etc		CP
LA Ref - N/A	Size (HA)	0.06

Description

This multi-use games area has a hard surfaced sports court with markings for both football and basketball. The site forms part of a cluster of other sports and play facilities including the Norton Common Skatepark (CP22), a children's play area (CP17), Norton Common Tennis Courts (SF09) and the Willian Bowls Club (SF10). The space is equipped with basketball hoops and small football goals at each end of the court, and these are built into the tall fencing that surrounds the ball court. The court is reasonably well maintained, with clear boundaries and the surface is in fair condition and serviceable. The site is surrounded by the natural wooded landscape with pedestrian access from a footpath adjacent to the southern boundary of the space.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	2/5
Quality score	**11/25**

Baldock Road Skate Park, Letchworth		**CP24**
Baldock Road, Letchworth Garden City		NHC
Children's Play Area - Skate Park		CP
LA Ref - N/A	Size (HA)	0.04

Description

This skate park is located on the northeastern corner of the Baldock Road Recreation Ground SF13) adjacent to Durnham's Lane. An extensive play area (CP19) is located next to the skate park and nearby is a simple open single hooped basketball court. The space is accessed by an informal path or track from the corner of the recreation ground. The facilities mainly comprise a half pipe constructed of concrete and four separate skate ramps of varied construction for practicing tricks. The site is covered in graffiti and is open to the surrounding grassland. It is overlooked by industrial buildings with minimal natural surveillance and there is pedestrian lighting along the foot paths.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**13/25**

Sports Court Baldock Rec Ground		**CP25**
Baldock Road, Letchworth Garden City		NHC
Children's Play Area - MUGA etc		CP
LA Ref - N/A	Size (HA)	0.01

Description

This is a very small ball court that is equipped with a single basketball hoop. The hard paved surfacing is surrounded short-mown grassland, hedgerows and mature trees on the boundary of the recreation ground. The site and adjacent play facilities are maintained to an average standard. It is overlooked by industrial buildings with minimal natural surveillance and there is no pedestrian lighting along the footpaths.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	3/5
Quality score	**10/25**

The Grange Skate Park		**CP26**
The Grange Recreation Ground		NHC
Children's Play Area - Skate Park		CP
LA Ref - L/P43	Size (HA)	0.03

Description

This skate park is in the north-west corner of the Grange Recreation Ground (SF06). The facilities include an elongated half pipe, a hard surfaced stepped platform and a small number of ramps and rails for practicing tricks. These are all set on a concrete apron and surrounded by short-mown grassland. The site is bounded on two sides by a tall mature hedgerow and mature trees. The site is covered in graffiti, moderately well-maintained and in fair condition. It is located in the farthest corner of the recreation ground away from residential properties, so natural surveillance is very limited , and the footpaths are unlit.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	2/5
Quality score	**9/25**

The Grange Basketball Court		**CP27**
The Grange Recreation Ground		NHC
Children's Play Area - MUGA etc		CP
LA Ref - L/43	Size (HA)	0.04

Description

Located close to the Skate Park (CP26), this sports court is on the western boundary of the Grange Recreation Ground (SF06). The court has a hard surface with minimal court markings and freestanding basketball hoops located at either end. The court is surrounded by short-mown grassland and on the western side is a tall mature native hedgerow and individual mature trees. The Garden City Greenway footpath runs adjacent to the court and provides good access for pedestrians and cyclists. There is limited natural surveillance as the court is at some distance from residential properties.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	3/5
Quality score	**14/25**

Sports Court At Icknield Way		**CP28**
Icknield Way, Letchworth Garden City		NHC
Children's Play Area - MUGA etc		CP
LA Ref - L/P21	Size (HA)	0.06

Description

This multi-use sports court is located towards the northern boundary of the Wilbury Recreation Ground (SF07) and close to the Ickneld Primary School. It is hard surfaced is marked out for a variety of ball games including football and basketball. The court is only partially enclosed with fencing at either end that serve as goals and incorporate basketball hoops. There is some seating located nearby for spectators. The court is predominantly surrounded by short-mown grassland and the wider site has an informal full-sized football pitch. It is bounded by a hedgerow and mature trees. The site has been adequately maintained and the site appears to be well used.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	2/5
3 Boundaries and hard landscape	1/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	2/5
Quality score	**9/25**

Millennium Green, Stotfold		**NG01**
Rook Tree Lane, Stotfold		CBC
Natural Green Space		NG
LA Ref - 659	Size (HA)	2.38

Description

This space was dedicated as a Millennium Green by Stotfold Town Council following acquisition from the Bedfordshire County Council in 2001. The site incorporates woodland, mature hedgerows, scrubland, open rough grassland and meadows. The eastern boundary runs alongside the River Ivel and there are a number of access points from the surrounding streets with simple interpretation boards located at some of the entrances. The loose network of paths (CBC Footpath No 14) are unsurfaced and roughly defined. The space is maintained in an informal manner with very limited management of the woodlands, hedgerows and scrub.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**15/25**

Stotfold Water Mill LNR		**NG02**
Baldock Road, Stotfold		CBC
Natural Green Space		NG
LA Ref - 350 / 4161	Size (HA)	8.22

Description

This local nature reserve marks the eastern boundary of Stotfold and is set within the River Ivel corridor. It incorporates a variety of native habitats including open meadows, mature woodlands, plantations and areas of coppice, mature hedgerows, ponds and wetlands. Close to the northern boundary is the historic and distinctive Stotfold Watermill that is open to the public and operated by the Stotfold Mill Preservation Trust. The green space has a good variety of natural habitats providing opportunities for education and field studies. The site in good condition and is maintained in and informal manner reflecting the natural characteristics of the site.

Outline Quality Assessment	
1 Access and safety	1/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**13/25**

Ivel Springs Local Nature Reserve		**NG03**
Norton Road, Baldock		NHC
Natural Green Space		NG
LA Ref - N/A	Size (HA)	17.98

Description

This relatively extensive local nature reserve marks the north-eastern boundary of Baldock and incorporates a loose mosaic of woodlands, hazel coppice, willow dominated scrubland and open meadow grasslands. The course of the River Ivel meanders through the site incorporating areas of wetland and open water. There has been some recent woodland planting within meadow areas that will extend the tree canopy as it matures. The A1 Road corridor is the west and its noise is apparent across much of the site. The irregular and unpaved network of paths meander across the site that is maintained in a relatively informal and naturistic manner.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**16/25**

Norton Well (The Boffy)		**NG04**
Fairfield Park, North of Letchworth		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	2.08

Description

This is a large Natural Greenspace site located along the Pix Brook River corridor and to the west of the LG1 development site. It is a dense woodland with a variety of native tree species and scrub understorey. It appears that some woodland has been planted whilst other areas of the woodland have naturally established or regenerated. Access is limited to an informal path network of unmade tracks that bisect the site and there are no other facilities for users. The woodland does not appear to have had active management but is in reasonable condition and offers clear habitat value to the surrounding agricultural landscape.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**14/25**

Norton Pond		**NG05**
Location		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	0.20

Description

This natural and partially ephemeral wetland is located by the Garden City Greenway and adjacent to the Croft Lane Conservation Area. The site is small is scale and bounded by mature trees and scrub. The wetland has significant encroachment of common bullrush, has minimal areas of open water and is expected to dry out during the summer months. As one of only a few wetland habitats in the area the site has some ecological and biodiversity value. Aesthetically, it also offers some visual interest along the Greenway and the site appears reasonably well maintained.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Croft Lane Community Orchard		**NG06**
Location		LGCHF
Natural Green Space		NG
LA Ref - L/N06	Size (HA)	4.41

Description

The Croft Lane Community Orchard is located between the Grange Estate and Norton Village. It is accessed via the Garden City Greenway and footpaths that link to Croft Lane and Eastern Way. The orchard comprises two adjoining fields that are divided by a mature native hedgerow and an informal footpath runs along the entire boundary of the two fields. The fields are enclosed by native hedgerows and some mature trees. Adjacent residential properties and back gardens are partially visible beyond the field boundaries. The site has long meadow grassland, the fruit trees are planted in a regular grid pattern and both the trees and grassland are generally well maintained.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**15/25**

Grange Woodland Scrub Belt		**NG07**
North of the Grange Estate		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	0.95

Description

This belt of Natural or Semi-Natural Green Space is located on the southern boundary of thew LG1 development site. It is mainly comprised of native scrub that is predominately hawthorn and an irregular pattern of native trees. It provides a screen and dense vegetated boundary to the adjacent residential properties on the Grange Estate. The Garden City Greenway runs through and along this green space providing a connection between the Grange Recreation Ground, Croft Lane Community Orchard (NG06), Norton Pond (NG05), continuing on to Norton Village. The pedestrian path is of an unbound aggregate material and the space is managed naturally and to an appropriate low intensity.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**15/25**

Nortonbury Woodland		**NG08**
Norton Bury Lane, Norton, Letchworth		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	2.02

Description

This Natural and Semi-Natural Green Space mainly comprises native woodland with some native scrub and hedgerow at the edges. It is located along Norton Bury Lane that provides vehicular access to Radwell Meadows Country Park (PG05) and Radwell Meadows Local Wildlife Site (NG16). The woodland is dense and provides very limited public access although the eastern section has a footpath for pedestrians that provides a route adjacent to the road. This links to an informal footpath that runs on the eastern boundary of the space with the adjacent agricultural land. The site has no signage, lighting of facilities for users and is managed to a low intensity.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**14/25**

Meadow by St. Nicholas Church		**NG09**
Norton Road / Church Lane		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	3.69

Description

This Natural and Semi-Natural Green Space is predominately an open rectangular meadow. This provides a pedestrian route (Footpath 27) directly across the field from Church Lane and the Churchyard of St. Nicholas Church (CC04) in Norton Village to Norton Road. This route continues on towards Radwell Meadows Country Park (PG05) and Radwell Meadows Local Wildlife Site (NG16). The site generally has dense vegetated boundaries comprising tall native hedgerows and thick wooded belts of native trees. The pedestrian route is well signposted from the churchyard and the meadow grassland is in fair condition and managed to an appropriate low intensity.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	2/5
3 Boundaries and hard landscape	1/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	2/5
Quality score	**10/25**

Woodland by St Nicholas Primary Sch.		**NG10**
By Norton Road and Church Lane		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	0.80

Description

This Natural and Semi-Natural Green Space is predominately an open rectangular area of native woodland and scrubland that appears to be reestablishing naturally. There is some evidence of fruit trees within the native tree species. The site is located to the rear of St Nicholas Primary School and is bounded on the west and south side by an informal pedestrian path that provides connections between Blackhorse Road, Green Lane and Norton Road. This path network has a distinct rural character, providing access to adjacent farmland. The site has a very informal path that bisects the site, it appears to have a minimal and informal level of management and maintenance which is seems appropriate.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**16/25**

Woodland near Blackhorse Road		**NG11**
Norton Road, Letchworth Garden City		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	4.10

Description

This Natural and Semi-Natural Green Space is predominately a linear area of native woodland that provides a natural buffer between farmland and the industrial estate on Blackhorse Road. It offers some ecological connectivity with the adjacent block of establishing native woodland (NG10). A well-used but unsurfaced footpath runs along the entire boundary on the northern side providing open views to the surrounding agricultural fields. At the southern end, the path connects with the Garden City Greenway that continues towards Baldock. The woodland is generally dense, restricting access and there are no paths within the space and it is managed to a low-intensity.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	3/5
Quality score	**16/25**

Woodland near Radwell Air Strip		**NG12**
North of Norton Road, Radwell		LGCHF
Natural Green Space		NG
LA Ref - N/A	Size (HA)	7.31

Description

This Natural and Semi-Natural Green Space is a distinct and established area of deciduous woodland and recorded on the national Inventory of Priority Habitats (England). It has a full tree canopy with very few openings or glades. The site has an established network of paths that cross through the site, along the northern boundary and along the southern boundary, that forms part of the Garden City Greenway. To the south this leads across Norton Road and on towards the LG1 site. The site is bounded on the west and east by agricultural fields and has a distinct rural character and identity. The woodland is informally managed and generally in good condition.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	5/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	5/5
5 Standards of maintenance	4/5
Quality score	**22/25**

Norton Common		**NG13**
Icknield Way / Wilbury Road Letchworth		NHC
Natural Green Space		NG
LA Ref - L/N05	Size (HA)	25.17

Description

This Natural and Semi-Natural Green Space is a distinct and long-established, historic area of open deciduous woodland and grassland within the centre of Letchworth. The site is a Local Nature Reserve and is recorded on the national Inventory of Priority Habitats (England). The site has a network of unsurfaced paths and a distinct tree-lined avenue that provides a north-south connection between Wilbury Road and Icknield Way. Located in the southeast section of the common are several leisure facilities including the Lido (SF14), Tennis Courts (SF09) and Bowls Club (SF10). The site has some benches, tables, bins and information signs and is generally well managed and maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**18/25**

Woodland by Wilbury Road		**NG14**
Cowslip Hill, Letchworth Garden City		NHC
Natural Green Space		NG
LA Ref - L/N07	Size (HA)	4.59

Description

This Natural and Semi-Natural Green Space provides a connection between Norton Common (NG13) at Cowslip Hill and Standalone Farm at Wilbury Road. It also serves as an ecological corridor marking the course of the Pix Brook and connecting with the Amenity Green Space (AG16) at Cowslip Hill. The site is bounded by rear gardens of houses on Longmead to the north and Runnalow Allotments (AL03) to the south. There is a network of footpaths that connect to adjacent spaces and streets. The space has limited facilities with just a few benches and bins and the footpaths are unlit. It has a low-intensity management regime for the grassland, native scrub and woodland.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	1/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	1/5
Quality score	**8/25**

Woodland by Southern Way		**NG15**
Southern Way and Curlew Close		NHC
Natural Green Space		NG
LA Ref - L/N04	Size (HA)	0.31

Description

This is a small pocket of land, located between north-western curve of Southern Walk and Curlew Close. The Natural and Semi-Natural Green Space is principally of dense native woodland that is naturally regenerating. Access to the site was restrictive, with one point available from Southern Way. There are no clear routes marked throughout the site, the main one appears quite overgrown and difficult to traverse. The site has a clear indication of littering including areas of fly tipping, evidenced by a mattress dumped in the centre of the site, and this appears to be a recurring issue. The site generally has a poor standard of maintenance.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**14/25**

Radwell Meadows Local Wildlife Site		**NG16**
Norton Bury Lane		NHC
Natural Green Space		NG
LA Ref - N/A	Size (HA)	18.32

Description

This Natural and Semi-Natural Green Space provides one of the largest areas of native landscape within the study area. When combined with Radwell Meadows Country Park (PG05) and the Woodland near Radwell Air Strip (NG12) provides an important mosaic of ecological habitats and agricultural land. The site is principally naturalised arable fields and set-aside land that is being actively managed to improve habitat value for plants and animals. Access is from the carpark serving the country park and a network of unsurfaced and poor-quality footpaths provide a link across wildflower and wet meadows to the River Ivel. The site has low-intensity management for biodiversity benefit.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**21/25**

Avenue Park Baldock		**PG01**
West Avenue / Pepys Way, Baldock		NHC
Public Parks and Gardens		PG
LA Ref - N/A	Size (HA)	2.85

Description

This open parkland is located towards the western boundary of Baldock and surrounded on three sides by low-density residential neighbourhoods. The central and southern section of the park incorporating a cricket pitch is open and relatively featureless. The northern section provides a number of recreational facilities including a play area (CP13), water play splash park, an extensive lit MUGA incorporating tennis courts, a changing pavilion and Bowling Green (SF05). Mature trees mark the entire boundary of the park providing a strong green enclosure. The park is well maintained and includes interpretation information and location maps at the entrances.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	5/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	5/5
5 Standards of maintenance	4/5
Quality score	**23/25**

Howard Park Gardens		**PG02**
Norton Way South, Letchworth		NHC
Public Parks and Gardens		PG
LA Ref - LP/02	Size (HA)	1.51

Description

Howard Park is a prominent public park situated centrally within Letchworth. It is an important facility which has served as a focal point for recreation in Letchworth since the Garden City was established. The central feature of the park is a curvilinear splash park and paddling pool surrounded by distinctive seating and areas of short-mown grassland. To the south is a pavilion, play area (CP15), car park and the Elizabeth Howard Memorial Hall. The park has many mature trees set withing a parkland setting and is bounded on the east by rear gardens of houses along Rushby Mead. The park is very well managed and has been awarded a Green Flag reflecting this high standard of maintenance.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	5/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	5/5
5 Standards of maintenance	4/5
Quality score	**22/25**

Howard Park Memorial Garden		**PG03**
Norton Way South, Letchworth		NHC
Public Parks and Gardens		PG
LA Ref - LP/03	Size (HA)	1.35

Description

Howard Park Memorial Gardens, referred to as Howard Gardens, is situated just south of Howard Park (PG02), and provides an extension to the main park. The site includes a good quality bowling green for the Letchworth Garden City Bowls Club (SF12), the Howard Garden Social Centre and a series of semi-formal gardens and woodland. To the south west corner are the buildings housing the International Garden Cities Exhibition. The areas of woodland include a number of mature ornamental trees and this is bisected by a central formal surfaced path with seating and lighting. The sites is well-maintained with mown grass verges and fronting more informal areas of planning and scrub.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	5/5
5 Standards of maintenance	5/5
Quality score	**23/25**

Broadway Gardens		**PG04**
The Broadway, Letchworth Garden City		NHC
Public Parks and Gardens		PG
LA Ref - LP/06	Size (HA)	1.62

Description

This formal parkland in the centre of Letchworth provides a direct link between the station and the retail and commercial centre of the town. It is laid out in a formal axis that leads southwards from Broadway Gardens to the distinct tree-lined residential street of the Broadway. The central parkland includes short-mown lawns, formal plating beds, avenues of trees, a central paved plaza and a large fountain at the southern end. The open space is fronted by a number of prominent civic buildings and the central grass area is used for events and a seasonal fun fair. The park is very well maintained and the herbaceous and annual planting areas provides particular seasonal highlight.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	5/5
5 Standards of maintenance	4/5
Quality score	**20/25**

Radwell Meadows Country Park		**PG05**
Norton Bury Lane, Letchworth		LGCHF
Public Parks and Gardens		PG
LA Ref - RW/P02	Size (HA)	5.99

Description

Radwell Meadows Country Park is located beside Norton Road and is accessed from Norton Bury Lane. It links directly with the larger Radwell Meadows Local Wildlife Site (NG16) and an onsite information board refers to this site as a Country Park. A carpark to the east leads through to open parkland with short-mown grassland, mature trees, seating and picnic benches and a children's play area (CP21). The site has a network of paths surfaced with a loose aggregate that connect with adjacent establishing native woodland and the Garden City Greenway on the northern boundary. The site is well-maintained and provides an informal recreational space, complementing the more natural areas of the meadows to the north.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**19/25**

Letchworth Garden City Cricket Club		**SF01**
Kingsley Avenue, Fairfield Park		CBC
Outdoor Sports Facility		SF
LA Ref - 687	Size (HA)	1.58

Description

A large open expanse of short mown grassland providing a cricket pitch that is set on axis with the main historic Fairfield Hall building. The space is partially enclosed by mature trees and hedgerows. A traditional shuttered cricket pavilion is located on the south-western boundary and a hard surfaced tennis court and area of rough grassland is on the eastern boundary. A single curved pedestrian path provides access to the western side of the space, providing connections to the adjacent bowls club (SF02) and residential areas. There are a few benches overlooking the pitch. The site, hedgerows and trees are well maintained, the pavilion is in good condition.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	5/5
Quality score	**22/25**

Fairfield Bowling Green		**SF02**
Kipling Crescent, Fairfield Park		CBC
Outdoor Sports Facilities		SF
LA Ref - 688	Size (HA)	0.17

Description

This formal and enclosed bowling green is located just to the south of the large cricket pitch (SF01). The site was formerly within the grounds of the Three Counties Hospital and the facility moved to its current location in 1954. It is enclosed by evergreen hedges, mature trees and central short-mown bowling green surrounded by a regular layout if benches facing the green. A traditional timber pavilion, funded by s106 contributions, and changing rooms are located on the northern boundary and the site is overlooked by housing to the west. It is very well maintained and provides a popular sporting facility for the residents of Fairfield Park.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**18/25**

Stotfold Bowling Green		**SF03**
Brook Street, Stotfold		CBC
Outdoor Sports Facilities		SF
LA Ref - 654	Size (HA)	0.14

Description

This enclosed bowling green is located on the northern boundary of the Hitchin Road recreation Ground and was established in its current location in 1941. A modern brick-built pavilion constructed in 2000 is located on the western boundary and served by a small adjacent car park. The site is enclosed by evergreen hedging, a small number of mature trees and metal palisade security fencing. The short-mown bowling green is surrounded by precast paving flag stones and a regular layout of metal benches. The site is surrounded on three sides by residential housing that does not overlook the internal space. It is generally well maintained.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	2/5
3 Boundaries and hard landscape	2/5
4 Planting and soft landscape	2/5
5 Standards of maintenance	3/5
Quality score	**12/25**

Hitchin Road Recreation Ground		**SF04**
Hitchin Road, Stotfold		CBC
Outdoor Sports Facilities		SF
LA Ref - 653	Size (HA)	1.20

Description

This large open green space of predominately short-mown grassland is located towards the western boundary of Stotfold and accommodates a single football pitch. It is surrounded by residential streets and partially enclosed by mature trees, informal hedgerows and private gardens with fencing and hedges along the southern and eastern boundaries. There is a single brick-built changing pavilion located in the north-eastern corner of utilitarian design. There is direct access from adjacent streets and along a narrow enclosed footpath that runs alongside the adjacent bowling green (SF03). A traditional play area (CP07) is located on the northern edge and the site is relatively well-maintained.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**19/25**

Baldock Town Bowls Club		**SF05**
West Avenue, Baldock		NHC
Outdoor Sports Facility		SF
LA Ref - N/A	Size (HA)	0.29

Description

This enclosed bowls club, founded in 1952, is located on the northern boundary of Avenue Park in Baldock (PG01). The site includes a large brick-built pavilion building located on the western boundary served by an adjacent car park. The short-mown bowling green is well maintained and surrounded by a tarmac path, precast paving, seating, mature shrub beds and areas of grass. The site is enclosed by low mixed evergreen and deciduous hedgerows, timber and chain-link fencing and a number of mature trees. There is a very narrow strip of allotments on the northern boundary between the street and the bowling green and overall, the site is generally well maintained.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	2/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**17/25**

Grange Recreation Ground		**SF06**
Gaunts Way, Grange, Letchworth		NHC
Outdoor Sports Facility		SF
LA Ref - L/P01	Size (HA)	6.19

Description

A large open and uniform green space of short-mown grassland and framed on three sides by mature trees and native hedgerows. The site is adjacent to the LG1 development site and accommodates five marked football pitches and a central changing pavilion. A toddler play area (CP10) is located on the south-western boundary along with a basic basketball court and modest skate park on the western boundary. There is a carpark by the southern entrance and gravel footpaths that form part of the Garden City Greenway along the western and southern boundary. The site is partially overlooked by properties along the southern boundary and has a good standard of maintenance.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**16/25**

Wilbury Recreation Ground		**SF07**
Icknield Way, Letchworth Garden City		NHC
Outdoor Sports Facility		SF
LA Ref - L/P16	Size (HA)	2.28

Description

This rectangular recreation ground provides a mix of modest leisure facilities including an informal full-sized football pitch, a multi-use games court (CP28) and a children's play area (CP14). There is restricted vehicular access and a small car park off Archers Way and pedestrian access from Icknield Way. The Icknield Infant & Nursery School is located on the northern boundary of the site. The site has a belt of mature parkland trees to the south and several mature trees along the western and eastern boundaries with private gardens that back on to the space. The recreation ground is relatively featureless and has an average standard of maintenance that mainly focuses on mowing the central grassland.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**17/25**

Green Lane Recreation Ground		**SF08**
Green Lane, Letchworth Garden City		NHC
Outdoor Sports Facility		SF
LA Ref - L/P32	Size (HA)	1.60

Description

This rectangular recreation ground serves the neighbourhoods around Green Lane and Pascal Way. The central open short-mown grassland can be used for active recreation but has no specific facilities or pitch markings for particular team sports. Along the western boundary is a small children's play area (CP16). A single surfaced path provides a connection on the western boundary with Glebe Road in the north and Icknield Way in the south. The site is framed on three sides with mature belts of trees that screen surrounding rear gardens. Additional ornamental trees have been planted more recently along the western boundary. The average standard of maintenance focuses on grass cutting.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	4/5
3 Boundaries and hard landscape	5/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	4/5
Quality score	**19/25**

Norton Common Tennis Courts		**SF09**
Norton Common, Letchworth		NHC
Outdoor Sports Facility		SF
LA Ref - L/P34	Size (HA)	0.40

Description

These three tennis courts are located in the south-east corner of Norton Common (NG13) and are located alongside other sports facilities including the Norton Common Lido (SF14) a skate park (CP22) and a multi-use games court (CP23). Just to the south is the Willian Bowls Club (SF10) and pavilion. The tennis courts are well-protected, with a large fence protecting each court's boundary. The courts have a hard surfacing, two courts are marked for standard tennis and one has three junior sized tennis courts. The site is surrounded on two sides by mature parkland trees and grassland and the courts are accessed from the south via a hard-surfaced foot path.

Outline Quality Assessment	
1 Access and safety	5/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**21/25**

Norton Common, Willian Bowls Club		**SF10**
Norton Common, Letchworth		NHC
Outdoor Sports Facility		SF
LA Ref - L/P46	Size (HA)	0.40

Description

Willian Bowls Club comprises two well-maintained bowling greens and a pavilion. The site provides a formal landscape and built edge to the Norton Common and provides a high standard of competitive club bowls. The greens are enclosed by weldmesh fencing and low clipped hedgerows. Vehicular access is from the south via a short-stay pay and display car park off Icknield Way. Pedestrian access is via a footpath that leads westward from the carpark and along the northern boundary. The pavilion is also accessed from the car park. The site is framed by mature parkland trees and areas of short-mown grassland that is generally well maintained.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	4/5
Quality score	**20/25**

Birds Hill Bowling Green		**SF11**
Birds Hill, Letchworth Garden City		NHC
Outdoor Sports Facility		SF
LA Ref - L/P28	Size (HA)	0.08

Description

Birds Hill Bowling Green is a modest sports facility located to the rear of the Letchworth Conservative Club on the corner of Rushby Mead and Birds Hill. The site is just across from the northern tip of Howard Park. It is enclosed on the western and northern sides by low growing clipped hedgerows. Vehicular access is from Birds Hill to a small car park to the rear of the Conservative Club. The site's hard landscaping is extensive with hard paving and a storage building located within the north of the site. The planting and soft landscaping is well-maintained, including flower beds providing seasonal areas of planting and the well-tended lawn for the bowls green.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	5/5
3 Boundaries and hard landscape	4/5
4 Planting and soft landscape	4/5
5 Standards of maintenance	5/5
Quality score	**22/25**

Letchworth Garden City Bowls Club		**SF12**
Norton Way South, Letchworth		NHC
Outdoor Sports Facility		SF
LA Ref - L/P26	Size (HA)	0.24

Description

The Letchworth Garden City Bowls club is situated toward the northern end of the Howard Park Memorial Gardens (PG03). This prominent location is at the junction of Norton Way South and Gernon Road with the Howard Garden Social Centre building providing a distinctive backdrop and pavilion facilities to the well-maintained green. Vehicular access is via Hillshott and a small car park to the rear of the Social Centre. Pedestrian access is through the park and adjacent street footpath. The site is framed on two sides by a clipped beech hedgerow and extensive shrub and perennial planting beds and short-mown lawns provide a well-managed municipal character of this sports facility.

Outline Quality Assessment	
1 Access and safety	3/5
2 Design and character	3/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	3/5
5 Standards of maintenance	3/5
Quality score	**15/25**

Baldock Road Recreation Ground		**SF13**
Baldock Road, Letchworth Garden City		NHC
Outdoor Sports Facility		SF
LA Ref - L/P16	Size (HA)	4.35

Description

A large site situated on Baldock Road with football pitches and a skate park. The site consists of short mown grass to facilitate the sports activities on-site, with a mixture of soft planting (a mixture of various species of trees and shrubs) and hard landscaping around the site's border. The site is situated next to an industrial area, so natural surveillance is limited. The skate park is made up of a handful of different features, with a main skating bowl the core feature. The recreation ground comes equipped with a small-to-medium sized car park, on the south side of the site.

Outline Quality Assessment	
1 Access and safety	4/5
2 Design and character	4/5
3 Boundaries and hard landscape	3/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	3/5
Quality score	**15/25**

Norton Lido		**SF14**
Icknield Way, Norton Common		NHC
Outdoor Sports Facility		SF
LA Ref - N/A	Size (HA)	0.09

Description

The Letchworth Lido is located within the southeast corner of Norton Common and is set behind a modest traditional and well-maintained entrance building. The 50-meter heated outdoor pool and toddler play pool is open from May to September. The pool is surrounded by a paved terrace with café facilities and areas of short-mown grass for sunbathing. The swimming facility is used by both the public and schools during term-time. A swim club has exclusive use of the site at certain times of the week. Vehicular access is from Icknield Way and Pay and Display car park. Pedestrian access is via adjacent streets and from the network of paths across the Norton Common that surround this popular sports facility.

Outline Quality Assessment	
1 Access and safety	2/5
2 Design and character	1/5
3 Boundaries and hard landscape	1/5
4 Planting and soft landscape	1/5
5 Standards of maintenance	2/5
Quality score	**7/25**

Three Horseshoes Bowling Green		**SF15**
Norton Road, Norton Village		N/A
Outdoor Sports Facility		SF
LA Ref - N/A	Size (HA)	0.14

Description

This bowling green is situated to the rear of the Three Horseshoes pub that is located on Norton Road and in the centre of Norton Village. Vehicular and pedestrian access is from the street and through the pub car park and garden. The site is surrounded and enclosed by mature trees and hedgerows and there is a traditional timber-framed bowls pavilion on the eastern side of the green. This former outdoor sports facility is no longer used as a bowling green and has been taken over by the pub and serves as an extension to the pub garden. There is an ad-hoc arrangement of picnic benches and seating whilst lawn area and pavilion are in a declining condition and the site is poorly maintained.

Appendix F

Ecological desk study

Land to the North of the Grange (Site LG1)

Letchworth, Hertfordshire

Ecological Desk Study

Prepared For: Letchworth Garden City Heritage Foundation

Document Reference: 9546.001

August 2023

Version 1.1

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The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

Contents

Page

1.0 INTRODUCTION 1
Site Location 1
Context 1
2.0 METHODS 2
Scope and Data Sources 2
3.0 LEGISLATION AND POLICY 4
Relevant Legislation 4
Relevant Policy 10
Biodiversity Initiatives and Strategies 13
4.0 WILDLIFE SITES 15
Statutory Sites 15
5.0 NOTABLE HABITATS 24
Habitats of Principal Importance (HPI) 24
6.0 PROTECTED AND NOTABLE SPECIES 26
Protected Species Licences 26
Pre-existing Species Records 26

Figures

Figure 1: Site location 1
Figure 2: Statutory wildlife sites of international significance within 10km of the site 16
Figure 3: Statutory wildlife sites of national significance within 5km of the site 17
Figure 4: SSSI Impact Risk Zones crossed by the site 18
Figure 5: Statutory wildlife sites of regional/local significance within 2km of the site 20
Figure 6: Non-statutory wildlife sites within 2km of the site (map provided by HERC) 22
Figure 7: Non-statutory wildlife sites within 2km of the site (map provided by BLBRMC) 23
Figure 8: Notable habitats 25

Tables

Table 1: Scope and preliminary ecological Zones of Influence (ZOI) 2
Table 2: Statutory local wildlife sites of regional / local significance within 2km of the site 19
Table 4: Non-statutory local wildlife sites within 2km of the site 21
Table 4: Natural England mitigation licences within 2km of the site 26
Table 5: Summary of pre-existing species records returned by HERC and BLBRMC 26

1.0 Introduction

1.1 The Environment Partnership (TEP) was commissioned by Letchworth Garden City Heritage Foundation in June 2022, to complete an Ecological Desk Study to inform a Preliminary Ecology Appraisal (PEA) for Land to the North of the Grange (Site LG1) (hereafter referred to as 'the site').

Site Location

1.2 The location of the site is illustrated in Figure 1. The approximate central grid reference of the site is TL 22194 34911.

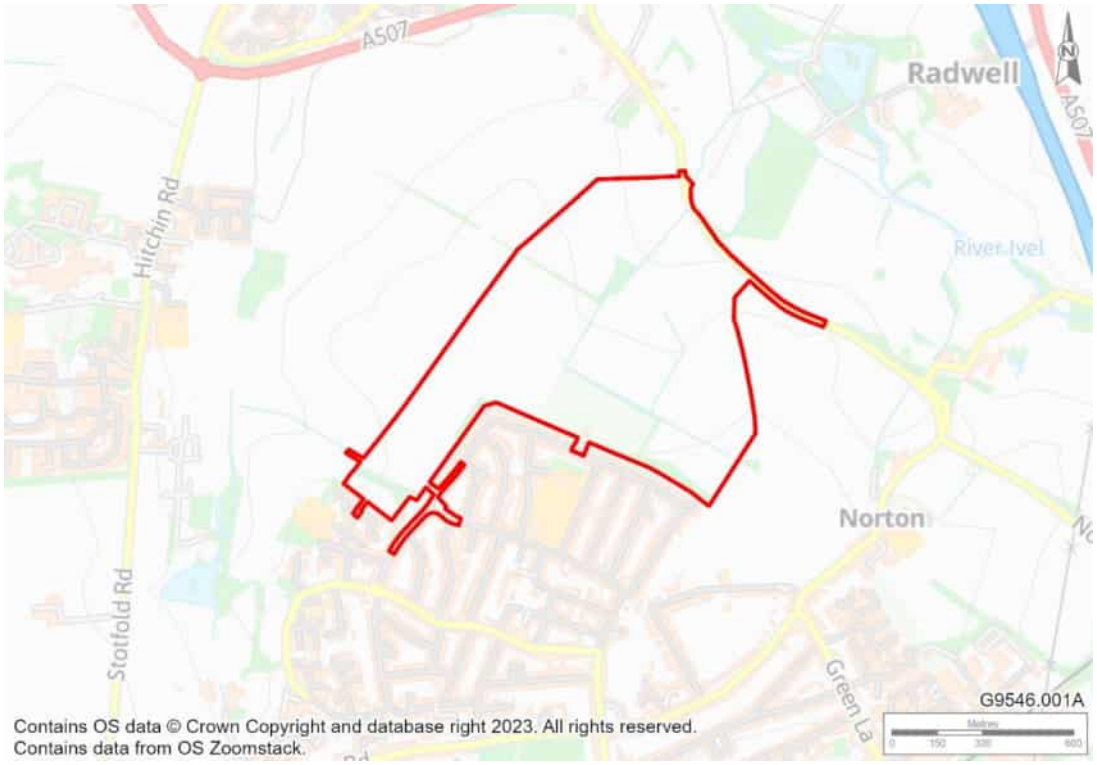


Figure 1: Site location

Context

1.3 The site is within the administrative area of North Herts Council and is allocated by Policy SP15 Site LG1 – North of Letchworth Garden City for 900 homes in North Hertfordshire District Council Local Plan 2011 – 2031 Proposed Submission. The site is also partially designated as green belt (Policy SP5) in the Local Plan.

2.0 Methods

Scope and Data Sources

2.1 The ecological Zone of Influence (ZOI) is an area defined by the ecological assessment within which valued ecological features may be subject to significant biophysical changes as a consequence of the proposed development under assessment.

2.2 For the purposes of this assessment, the preliminary ZOIs within which ecological features were searched for as part of this desk study were varied according to the geo-spatial and/or legal significance of the feature.

2.3 Table 1 summarises the scope and the preliminary ZOIs applied for this desk study. The preliminary ZOIs were applied by extending search radii of the respective distances from the site boundary.

Table 1: Scope and preliminary ecological Zones of Influence (ZOI)

Feature	Scope	Key Source(s)	ZOI
Statutory wildlife sites:	Ramsar sites Proposed Ramsar sites Special Areas of Conservation (SAC) Possible SAC SAC with marine components Special Protection Areas (SPA) Potential SPA Marine Conservation Zones	Natural England (public sector information)	10km
	Sites of Special Scientific Interest (SSSI) National Parks National Nature Reserves (NNR) Marine Nature Reserves (MNR)	Natural England (public sector information)	5km
	Local Nature Reserves (LNR) Country Parks	Natural England (public sector information)	2km
Non-statutory wildlife sites:	Local Wildlife Sites (LWS) Green Link Network Green Wedges	Herts Environmental Records Centre (HERC) Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC) North Hertfordshire District Council Local Plan 2011 – 2031[1] North Hertfordshire District Council Local Plan 2011 – 2031 Proposed Submission Proposals Maps – Hitchin, Letchworth Garden City and Baldock Areas[2]	2km

[1] *North Hertfordshire Local Plan 2011-2031.pdf (north-herts.gov.uk)*, accessed on 22nd August 2023

[2] *Print Template Wizard (north-herts.gov.uk)* accessed on 22nd August 2023

Feature	Scope	Key Source(s)	ZOI
Notable habitats:	Ancient Woodland Habitats of principal importance Main rivers Habitat Network / Nature Recovery Network	Natural England (public sector information) Environment Agency (public sector information) Herts Environmental Records Centre (HERC) Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC)	2km
Protected or notable species:	Pre-existing records for protected or notable species[3], non-native invasive species	Herts Environmental Records Centre (HERC) Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC)	2km
Species licences:	Protected species licences granted by Natural England	Natural England (public sector information)	2km
	Great crested newt survey pond records (2017 – 2019) held by Natural England	Natural England (public sector information)	2km
Policy and Related Guidance	Land allocations and relevant environment / biodiversity policy Local biodiversity priority habitats and species	Hertfordshire Biodiversity Action Plan (LBAP)[4]	As applicable to site

2.4 An absence of records does not indicate the absence of protected species from the search area.

[3] Notable and protected species records may include those listed under any of the following:
- Protected species listed under Schedule 2 (animals) or Schedule 5 (plants) under the Conservation of Habitats and Species Regulations 2017 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance (SPI) listed by requirements under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

[4] *https://www.north-herts.gov.uk/sites/default/files/ORD4%20Hertfordshire%20Biodiversity%20Action%20Plan.pdf*, accessed on 26th October 2022

3.0 Legislation and Policy

3.1 This section details legislation and planning policy which may have relevance to the site. Only legislation and policy of key relevance to biodiversity are included.

Relevant Legislation

International Conventions

3.2 The UK is a Contracting Party to numerous environmental conventions, the commonest form of international agreements to encourage a coordinated response to managing the environment. Key environmental conventions ratified in the UK include:

- The Convention on Wetlands of International Importance especially as Waterfowl Habitat ('Ramsar Convention'[5] or 'Wetlands Convention') - provides the only international mechanism for protecting sites of global importance;
- The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention[6]) - imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species;
- The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention[7] or CMS) - provides strict protection for endangered migratory species. The UK has currently ratified four legally binding Agreements under the convention relating to bats (EUROBATS), African-Eurasian migratory birds (AEWA), small cetaceans in the Baltic, Irish and North Seas (ASCOBANS) and albatrosses and petrels (ACAP) in addition to five Memorandum of Understanding (MoU) and is non-party range state to a further Agreement and a further MoU;
- The Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention) - seeks to protect both cultural and natural heritage;
- The Convention on Biological Diversity (Biodiversity Convention[8] or CBD) - provides a legal framework for biodiversity conservation. Within the UK, delivery of the CBD and the Strategic Plan for Biodiversity 2011-2020[9] is guided by the UK Post-2010 Biodiversity Framework[10].

[5] Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2.2.1971 *https://www.ramsar.org/*

[6] Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 1979 *https://www.coe.int/*

[7] Convention on the Conservation of Migratory Species of Wild Animals, Bonn, June 1979 *https://www.cms.int/*

[8] Convention on Biological Diversity, Rio de Janeiro, June 1992*https://www.cbd.int/*

[9] In October 2010, at the 10th Conference of the Parties to the CBD in Nagoya, Japan, the Parties adopted a new 'Strategic Plan for Biodiversity 2011–2020' along with its 20 'Aichi targets'. *https://www.cbd.int/sp/*

[10] The framework is overseen by the Environment Departments of the four UK governments working through the Four Countries' Biodiversity Group. It demonstrates how the UK, through each of the four countries, contributes to achieving the 'Aichi targets', and identifies the activities required to complement the individual country biodiversity strategies *https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/*

3.3 The legal obligations of the multiple Conventions to which the UK is a Contracting Party are enacted through a suite of national environmental legislation. The most relevant are described in the following paragraphs.

Conservation of Habitats and Species Regulations

3.4 The Conservation of Habitats and Species Regulations 2017[11] (2017 Regulations) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into domestic law.

3.5 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[12] (2019 Regulations) amends the 2017 Regulations to make them operable following the withdrawal of the United Kingdom from the European Union (EU). Most of the changes involve transferral of functions from European Commission to the appropriate authorities in England and Wales, also extending to Scotland and Northern Ireland and applies to Scotland and Northern Ireland (including the adjacent territorial sea to a limited degree), as regards reserved and excepted matters respectively. It also amends Section 27 of the Wildlife and Countryside Act 1981 to maintain existing protections and enforcement for species of wild birds.

3.6 All other processes or terms in the 2017 Regulations remain unchanged and existing guidance and obligations (of a competent authority) remain relevant.

National Site Network

3.7 Under the 2019 Regulations, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) in the UK no longer form part of the EU's 'Natura 2000' ecological network, but instead (along with new SACs and SPAs designated under the 2019 Regulations) form the new National Site Network (NSN). Ramsar sites[5] do not form part of the NSN but remain protected in the same way as SACs and SPAs.

3.8 Proposals which may significantly affect a site belonging to the NSN and which are not connected with or necessary to the management of that site require (by Regulations 63 and 64 of the 2017 Regulations, as amended by Regulations 24 and 25 of the 2019 Regulations, respectively) competent authorities to undertake an Appropriate Assessment of the implications of the plan or project in view of that site's conservation objectives. This process is commonly referred to as a 'Habitats Regulations Assessment' (HRA). The assessment must consider the potential effects both of the plan/project itself and in combination with other plans or projects. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest (IROPI) and if the necessary compensatory measures can be secured.

[11] Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) *https://www.legislation.gov.uk/uksi/2017/1012/*

[12] Conservation of Habitats and Species Regulations 2019 (SI 2019/579) *https://www.legislation.gov.uk/uksi/2019/579/*

Protected Species

3.9 Certain animals and their breeding sites or resting places are protected under Regulation 43 of the 2017 Regulations, which makes it illegal to:

- Deliberately capture, injure or kill any such animal or to deliberately take or destroy the eggs of such an animal;
- Deliberately disturb such an animal; and
- Damage or destroy a breeding site or resting place of such an animal.

3.10 Disturbance is defined in the 2017 Regulations as an activity which is likely to impair a species' ability to survive, to breed or reproduce, to rear or nurture young or, in the case of animals hibernating or migratory species, to hibernate, migrate or which may affect significantly the local distribution or abundance; of the species.

3.11 A bat's resting place is known as a roost site. Because bats tend to be faithful to roost sites but their biology is such that different roost site characteristics are preferred at different times of the year by different species for different functions, a bat roost is considered to be afforded protection even when it is not occupied.

3.12 Certain plant species are protected under Regulation 47 of the 2017 Regulations against deliberate picking, collecting, cutting, uprooting or destruction. It is also an offence to be in possession or control and to transport any live or dead plant or part of a plant of such a species which has been taken in the wild.

3.13 The 2017 Regulations (Regulation 55) enables a relevant licensing body to grant a licence for certain activities that may affect animal or plant species protected by the above provisions. The purpose must conform to one of those listed under Regulation 55(2). For most development related activities, the purpose normally relates to Regulation 55(2)(e) 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment' – commonly known as the IROPI test. Regulation 55(9) introduces two further tests that the licensing body must consider:

- There is no satisfactory alternative; and
- The favourable conservation status of the species concerned will be maintained and/or enhanced.

3.14 Under Regulation 9(1) of the 2017 Regulations (as amended), competent authorities "must exercise their functions which are relevant to nature conservation… so as to secure compliance with the requirements of the Directives". Regulation 9(3) requires a competent authority, in exercising any of its function, to "have regard to the requirements of the Directives so far as they be affected by the exercise of those functions." Local planning authorities must therefore consider the above three 'tests' when determining if planning permission should be granted for developments likely to cause an offence under the Regulations.

Wildlife and Countryside Act 1981

3.15 The Wildlife and Countryside Act 1981 (as amended)[13] (WCA) is a major legal instrument for wildlife protection in the UK. In respect of habitats and flora, the WCA protects important habitats and/or species as Sites of Special Scientific Interest (SSSI). The designation of UK Ramsar sites[5] has usually been underpinned through prior notification of these areas as SSSI and accordingly they receive statutory protection under the WCA.

3.16 The obligations of the Bern Convention[6] (the protection of wild plant and animal species and their natural habitats) are transposed into law for England and Wales[14] by the WCA. The legal requirement for the protection of migratory species listed by the Bonn Convention[7] is also provided by the WCA.

3.17 All wild birds (as defined by the WCA and with exception to species listed in Schedule 2) are protected under the WCA, which makes it illegal to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest (whilst being built or in use) of any wild bird; or
- Take or destroy the eggs of any wild bird.

3.18 Special penalties are available for offences related to birds listed in Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The WCA also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

3.19 Certain animal species (listed under Schedule 5) of the WCA receive protection which makes it illegal (with certain exceptions) to:

- Intentionally kill, injure or take any such animal;
- Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal;
- Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.

3.20 Plant species listed under Schedule 8 of the WCA are protected from unauthorised intentional picking, uprooting and destruction. It is an offence to plant or otherwise cause to grow in the wild any plant that is included in Schedule 9.

[13] Wildlife and Countryside Act 1981 c. 69 *https://www.legislation.gov.uk/ukpga/1981/69/*

[14] In Scotland by the Nature Conservation (Scotland) Act 2004 (as amended) and in Northern Ireland by Wildlife (Northern Ireland) Order 1985 and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

Countryside and Rights of Way Act 2000

3.21 Part III of the Countryside and Rights of Way Act 2000[15] (CROW) deals specifically with wildlife protection and nature conservation. It requires that Government Departments have regard for the conservation of biodiversity, in accordance with the CBD. In addition, it requires that The Secretary of State publishes a list of living organisms and habitat types that are considered to be of principal importance in conserving biodiversity.

3.22 CROW also amends the WCA, expanding the terms of offences to include reckless activity. It increases the legal protection of threatened species, by also making it an offence to "recklessly" obstruct access to a sheltering place used by an animal listed in Schedule 5 of the WCA or "recklessly" disturb an animal occupying such a structure or place.

Natural Environment and Rural Communities (NERC) Act 2006

3.23 Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC)[16] places a duty to conserve biodiversity on public authorities in England. It requires local authorities and government departments to have regard to the purposes of conserving biodiversity in a manner that is consistent with the exercise of their normal functions such as policy and decision-making. 'Conserving biodiversity' may include enhancing, restoring or protecting a population or a habitat.

3.24 Section 41 requires the Secretary of State to publish and maintain lists of species and types of habitats which are regarded by Natural England to be of "principal importance" for the purposes of conserving biodiversity in England.

3.25 These habitats and species of principal importance (HPI and SPI) are drawn from earlier lists of United Kingdom Biodiversity Action Plan Priority Species and Habitats. The Section 41 (S41) lists of HPI and SPI are needed by decision-makers in local and regional authorities when carrying out their duties under Section 40 of the Act.

Environment Act 2021

3.26 The Environment Act 2021[17] was passed into law in November 2021. The Act applies only to England, although many of its measures are designed to be operable across the UK with the consent of devolved administrations. The Act requires statutory long-term (15+ years) targets to be set (and monitored, reported and reviewed) in the four priority areas of waste reduction, air quality, water resources and biodiversity as well as additional targets relating to species abundance and fine particulates by 2030.

[15] Countryside and Rights of Way Act 2000 c. 37 *https://www.legislation.gov.uk/ukpga/2000/37/*

[16] Natural Environment and Rural Communities Act 2006 c. 16 *https://www.legislation.gov.uk/ukpga/2006/16/*

[17] Environment Act 2001 c.30 *https://www.legislation.gov.uk/ukpga/2021/30/*

3.27 The Environment Act amends the Town and Country Planning Act 1990[18] in that planning permissions granted after the provisions come into force[19] are deemed to be subject to a condition prohibiting the start of development before a biodiversity gain plan has been submitted to and approved by the Local Planning Authority (LPA).

3.28 The biodiversity gain plan must demonstrate a net gain of at least 10% in the biodiversity value of the development site "as at the time the development is completed". Biodiversity net gain must be demonstrated by calculations using the biodiversity metric (currently version 3.1 published by Natural England)

3.29 The Environment Act introduces Local Nature Recovery Strategies (LNRS), a new system of spatial strategies for nature, covering the whole of England. LNRS are to be prepared and published by the 'responsible authority', namely the local authority, mayoral authority or National Park authority whose area is, or is within, the strategy area, the Broads Authority or Natural England. Section 40 of the NERC Act (duty to conserve biodiversity) makes provision about the duties of public authorities in relation to LNRS.

3.30 A 'responsible authority' is to be appointed to lead each LNRS area, which could include LPAs and which in mayoral combined authorities is highly likely to be the mayor. The responsible Authority must map the most valuable existing natural habitat in its area and develop a biodiversity strategy, including specific proposals for creating or improving habitats and priorities for nature recovery.

3.31 In addition to the above, the Environment Act Part 6 (Nature and biodiversity) will also:

- Strengthen the biodiversity duty through amendments to Section 40 of the NERC Act.
- Impose a duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Introduce Conservation Covenants (agreements between a landowner and a responsible body);
- Protected Site Strategies (prepared and published by Natural England) to improve the conservation and management of a protected site (including SACs, SPAs listed before exit day, Sites of Community Importance (SCI)[20] listed before exit day and those sites proposed before exit day as SACs).
- Species Conservation Strategies (prepared and published by Natural England) to improve the conservation status of any species of flora or fauna, with which a LPA in England and any prescribed authority must have regard so far as relevant to its functions, including when discharging its duties under the 2017 Regulations (as amended);
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation (where 'forest' is defined as "*an area of land of more than 0.5 hectares*

[18] Town and Country Planning Act 1990 c. 8 *https://www.legislation.gov.uk/ukpga/1990/8/*

[19] The Biodiversity Gain provision of the Environment Act requires the Secretary of State to first publish detailed regulations (see s147(3) of the Act). These are anticipated in November 2023.

[20] SCIs are established under the European Union Habitats Directive (92/43/EEC) and are (under the Habitats Directive) the pre-requisite step for establishing SACs and SPAs.

with a tree canopy cover of at least 10% (excluding trees planted for the purpose of producing timber or other commodities)", which includes "*land that is wholly or partly submerged in water whether temporarily or permanently*");

- Require regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system.

Hedgerow Regulations 1997

3.32 Important hedgerows are protected from removal by the Hedgerows Regulations[21] (as amended). Regulation 3 defines the hedgerows to which the Regulations apply. Regulation 4 sets out the criteria for identifying "important hedgerows" including ecological, landscape or historical/cultural reasons. Under the Hedgerow Regulations it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Works to "important hedgerows" are exempt under the Hedgerow Regulations if planning consent is granted which allows their removal.

3.33 The identification of important hedgerows also provides an additional means to value hedgerows aside from their botanical value (e.g. species richness) as the assessment of importance also includes characteristics relating to maturity and structure (e.g. associated features, connectivity, integrity) which will affect the functional value of the hedgerow.

Protection of Badgers Act 1992

3.34 Badgers and their setts receive statutory protection under the Protection of Badgers Act 1992 (PBA)[22]. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett.

3.35 Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "any structure or place, which displays signs indicating current use by a badger."

Relevant Policy

National Planning Policy Framework

3.36 The National Planning Policy Framework (NPPF21)[23] sets out the Government's planning policies for England and how these are expected to be applied at a local level in development plans and how developers should address them. The Framework places great emphasis on plans and developments contributing to sustainable development.

[21] The Hedgerow Regulations 1997 (SI 1997/1167) *https://www.legislation.gov.uk/uksi/1997/1160/*

[22] Protection of Badgers Act 1992 c. 51 *https://www.legislation.gov.uk/ukpga/1992/51/*

[23] National Planning Policy Framework (2021) Ministry of Housing, Communities and Local Government *www.gov.uk/government/publications*

3.37 Paragraph 174 states: Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

3.38 Paragraph 180 states: When determining planning applications, local planning authorities should apply the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless are wholly exceptional reasons and a suitable compensation strategy exists; and;
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

3.39 Paragraph 181 stipulates that the following should be given the same protection as habitats sites[24]:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

3.40 Paragraph 182 confirms: The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government Circular 06/2005

3.41 Government Circular 06/2005[25] remains pertinent in national policy even though PPS9, which it originally supported, was revoked by the NPPF.

3.42 The Circular outlines the legislative provisions relating to biodiversity and geological conservation which affect planning and development. The Circular provides guidance on the protection of designated international and national nature conservation sites, non-designated sites, the conservation of species, and advice on the related issues and statutory powers.

3.43 Paragraphs 123 and 124 of Part IV of Circular 06/2005 state that "the likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions. Although consideration of the case for granting a licence is separate from the process of applying for planning permission, a planning authority should advise anyone submitting an application for development in an area where there are known to be badger setts that they must comply with the provisions of the Act".

North Herts Local Plan 2011 – 2031

3.44 The North Herts Proposed Submission Local Plan 2011 – 2031 was adopted by North Hertfordshire District Council in November 2022. The Plan seeks to address the key issues facing North Hertfordshire and will set a strategic vision and spatial strategy for the District over the period 2011 to 2031.

[24] Defined by NPPF21 as "Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites".

[25] Office of the Deputy Prime Minister (2005) 'Government Circular: Geological and Biological Conservation – Statutory obligations and their implications within the planning system' ODPM circular 06/2005, DEFRA circular 01/2005 *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf*

3.45 The following strategic policies relate to biodiversity and nature conservation and the site in question:

- SP1: Sustainable development in North Hertfordshire
- SP5: Countryside and Green Belt
- SP12: Green infrastructure, landscape and biodiversity
- SP15: Site LG1 – North of Letchworth Garden City

3.46 The SP15 Policy relates directly to the proposed development area and its specific policy text relating to natural conservation and biodiversity is stated as:

"Development proposals should provide the following planning and masterplanning requirements:

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained and any hedgerow losses kept to a minimum;

i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach; and

j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east."

Biodiversity Initiatives and Strategies

Local Biodiversity Action Plans (LBAP)

3.47 The LBAP for Hertfordshire covers the local authority areas of Broxbourne, Dacorum, East Herts, Hertsmere, North Hertfordshire, St Albans, Stevenage, Three Rivers, Watford and Welwyn Hatfield. Consequently, as a joint BAP, not all local priority habitats or species may be of direct relevance to each local authority.

3.48 The LBAP priority habitats for Hertfordshire include:

- Woodlands;
- Wetlands;
- Heathlands and acid grasslands;
- Neutral grasslands;
- Chalk grasslands;
- Farmlands; and
- Urban habitats.

3.49 The LBAP priority species for Hertfordshire include:

- Water vole;
- Common dormouse;
- Natterer's bat;
- Otter;
- Tree sparrow;
- Bittern;
- Stone-curlew;
- Song thrush;
- Black-necked grebe;
- Great crested newt;
- Chalkhill blue;
- Grizzled skipper;
- Purple emperor;
- Stag beetle;
- White-clawed crayfish;
- Great pignut;
- Cornflower;
- River water-dropwort; and
- Pasqueflower.

Nature Recovery Network

3.50 Habitat Network maps are produced by Natural England in response to the Lawton report (Making Space for Nature, A review of England's Wildlife Sites and Ecological Network[26]).

3.51 These maps provide a useful baseline for the development of a Nature Recovery Network (NRN) as required within the 25 Year Environment Plan and for LRNS proposed within the Environment Act.

3.52 The Habitat Network maps in conjunction with other datasets and local knowledge can identify opportunities for biodiversity action. The Habitat Network comprises (a) Existing Habitats (HPI and associated habitats) and (b) Network Enhancement and Expansion Zones. These latter zones include:

- Network Enhancement Zone 1: Land connecting existing habitats which is likely to be suitable for habitat creation. Action in this zone to expand and join up existing habitat patches and improve the connections between them can be targeted here.
- Network Enhancement Zone 2: Land connecting existing habitats which is less likely to be suitable for habitat creation. Action in this zone that improves the biodiversity value through land management changes and/or green infrastructure provision can be targeted here.
- Fragmentation Action Zone: Land within Enhancement Zone 1 that connects existing habitats patches which are currently highly fragmented and where fragmentation could be reduced by habitat creation.
- Network Expansion Zone: Land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape.

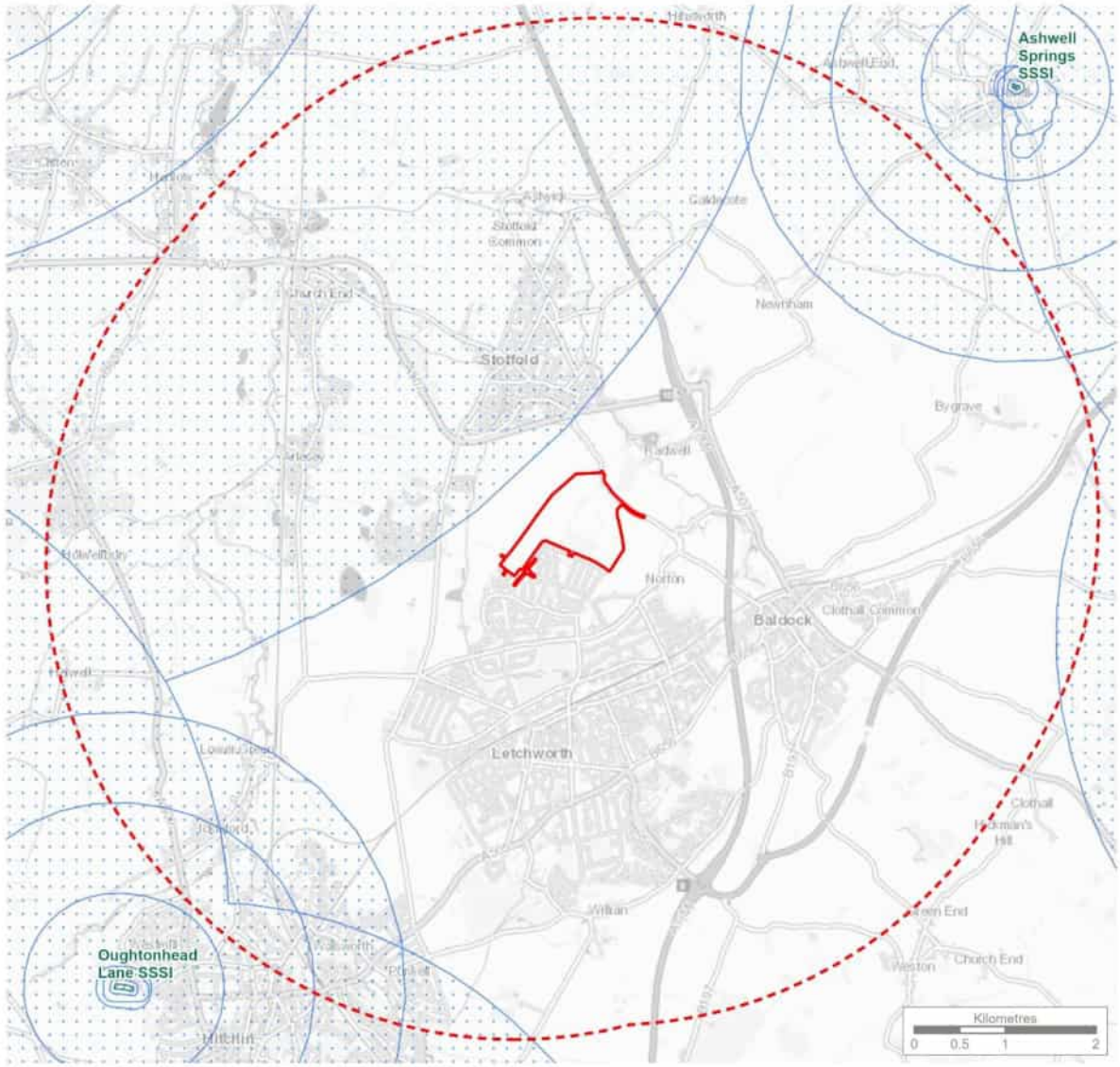
[26] Lawton, J.H., Brotherton, P.N.M., Brown, V.K., Elphick, C., Fitter, A.H., Forshaw, J., Haddow, R.W., Hilborne, S., Leafe, R.N., Mace, G.M., Southgate, M.P., Sutherland, W.A., Tew, T.E., Varley, J., & Wynne, G.R. (2010) *Making Space for Nature*: a review of England's wildlife sites and ecological network. Report to Defra

4.0 Wildlife Sites

Statutory Sites

4.1 There are no internationally significant statutory wildlife designations within 10km of the site (Figure 2) and no nationally significant statutory wildlife sites within 5km of the site (Figure 3).

The site does not fall within any SSSI Impact Risk Zone (IRZ) (Figure 4



Key

- Site boundary
- Site boundary - 5km buffer
- Sites of Special Scientific Interest
- Sites of Special Scientific Interest - Impact Risk Zone

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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project: LG1 Land North of Letchworth

Title: Sites of Special Scientific Interest - Impact Risk Zone

Drawing Number: G9546.011A

Scale	Date
1:60,000 @ A4	22/08/2023

Drawn	Checked	Approved
AR	MK	PP

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4.2 Figure 4), as determined by Natural England to identify likely impacts upon SSSIs, SACs, SPAs or Ramsar sites that may result from planned development.

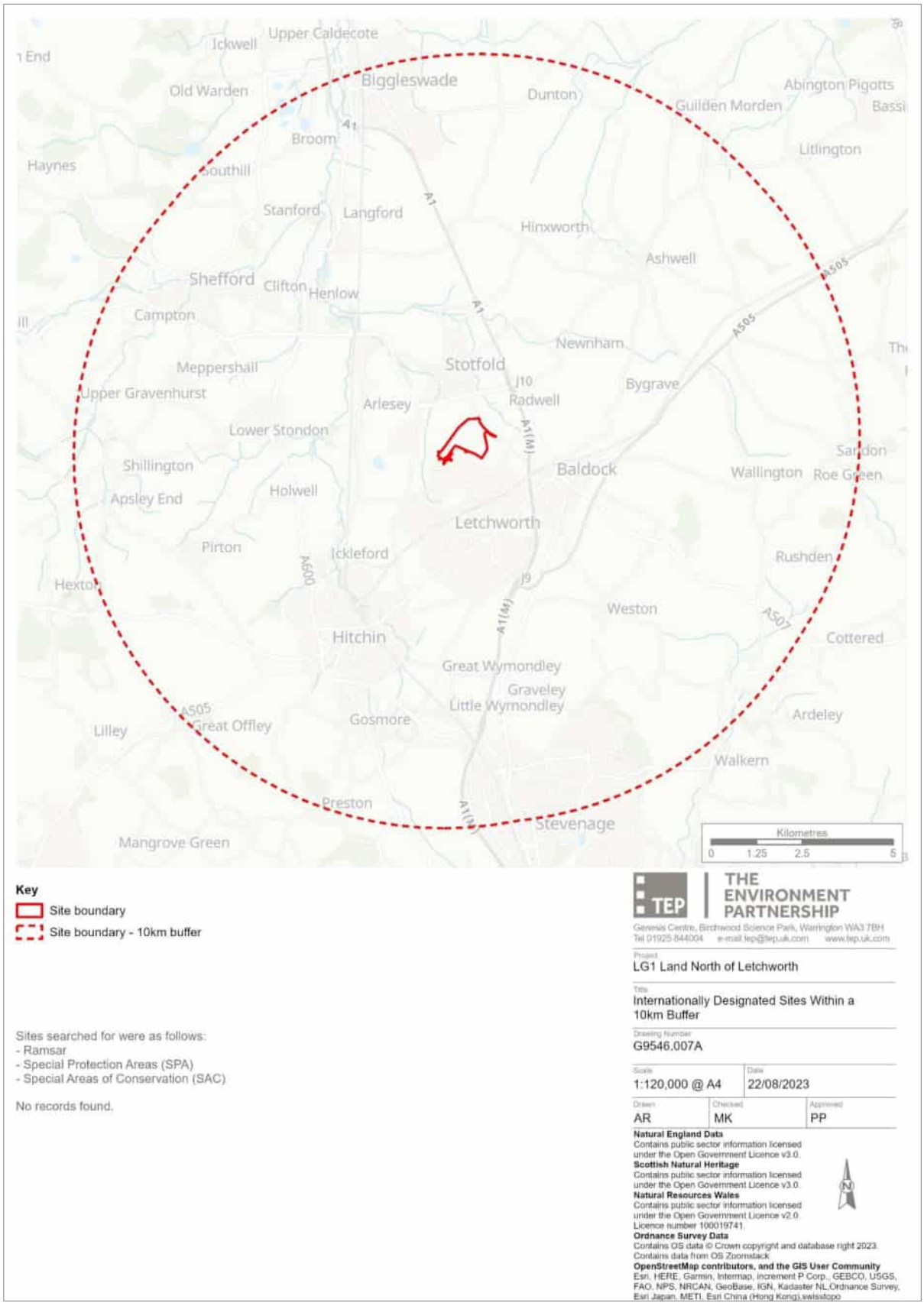
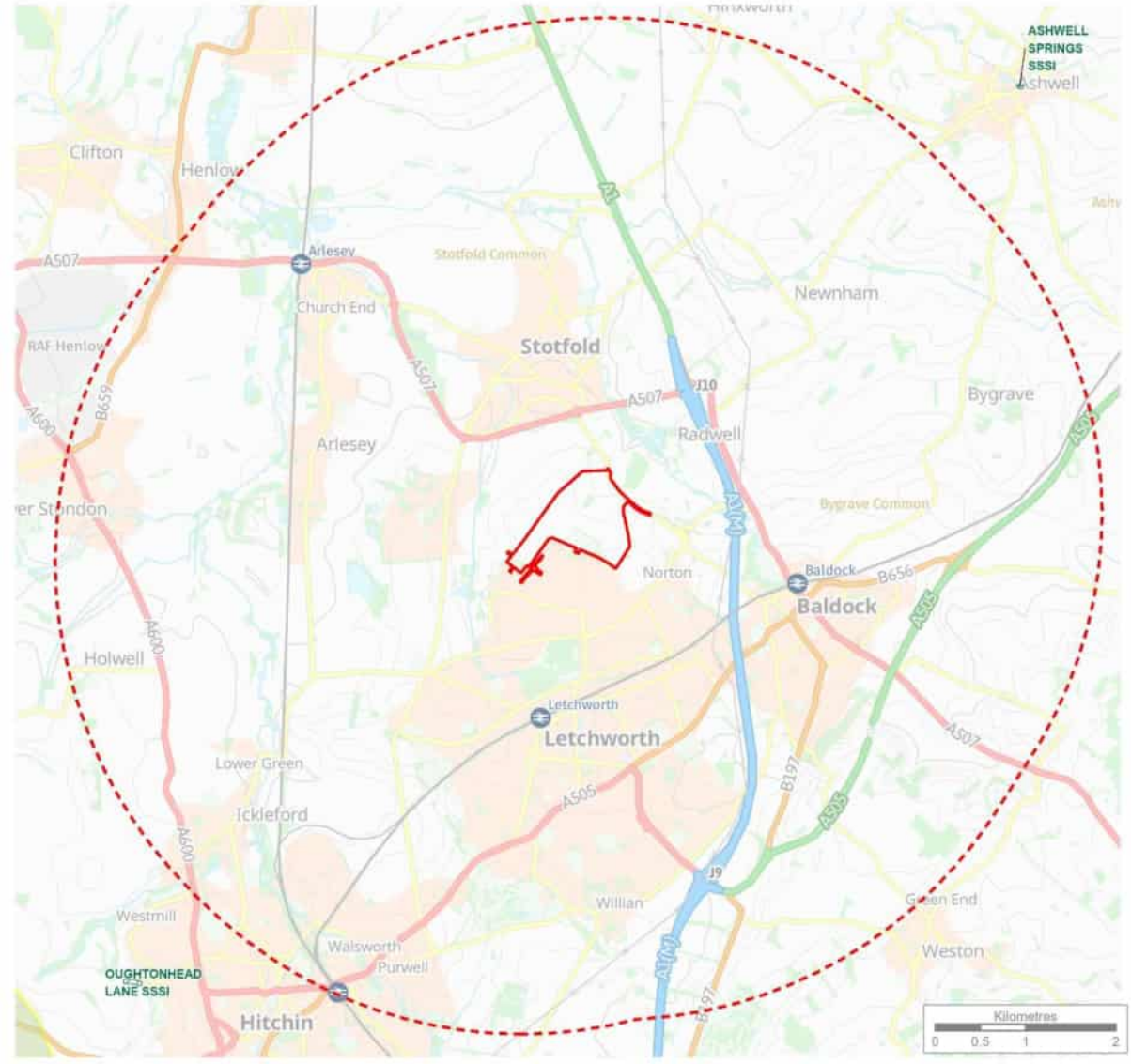


Figure 2: Statutory wildlife sites of international significance within 10km of the site



Key

- Site boundary
- Site boundary - 5km buffer
- Areas of Outstanding Natural Beauty
- Sites of Special Scientific Interest (SSSI)

Sites searched for were as follows:
- Sites of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Area of Outstanding Natural Beauty (AONB)

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Project
LG1 Land North of Letchworth

Title
Nationally Designated Sites Within a 5km Buffer

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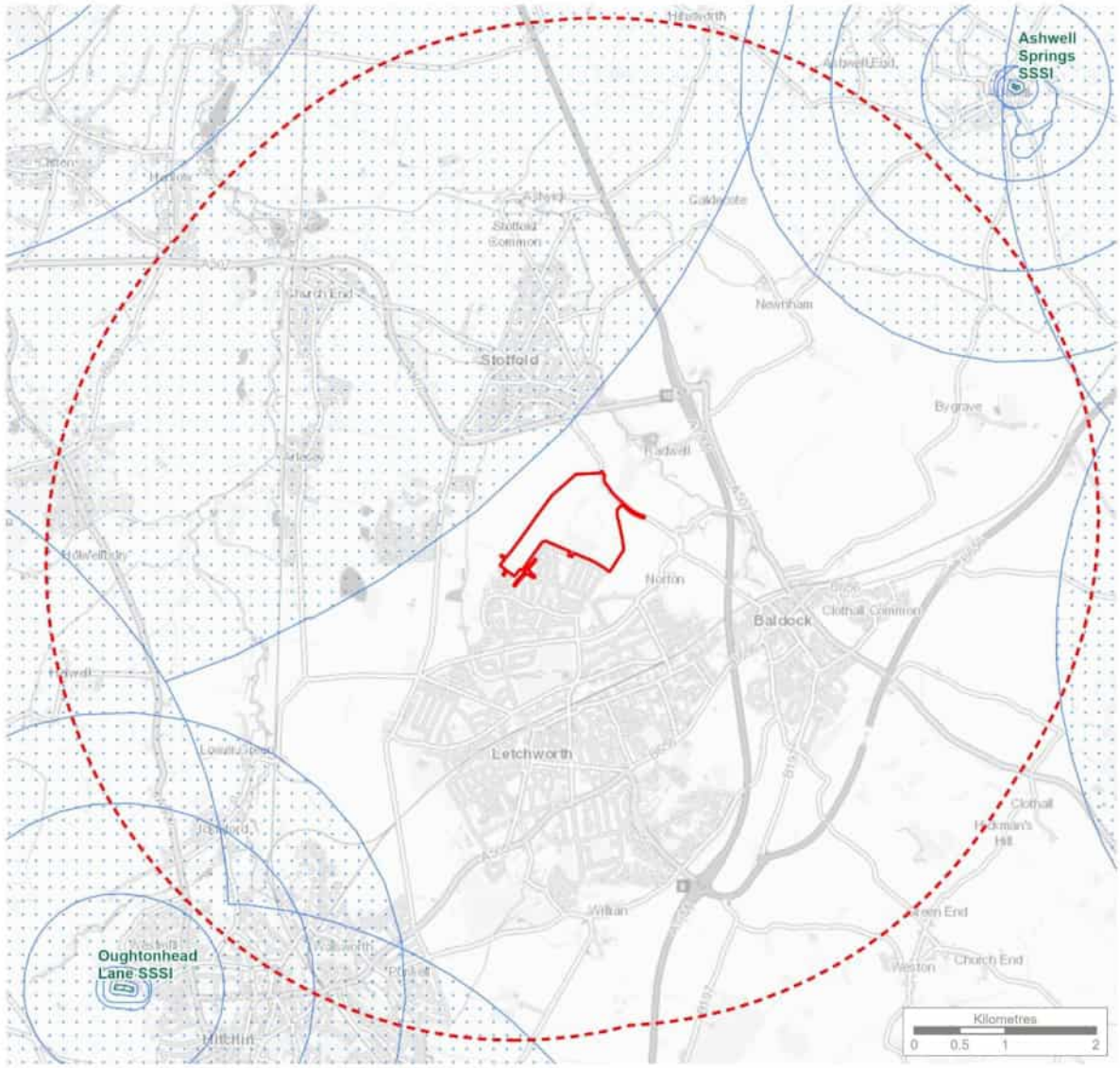
Figure 3: Statutory wildlife sites of national significance within 5km of the site



Key

- Site boundary
- Site boundary - 5km buffer
- Sites of Special Scientific Interest
- Sites of Special Scientific Interest - Impact Risk Zone

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Project
LG1 Land North of Letchworth

Title
Sites of Special Scientific Interest - Impact Risk Zone

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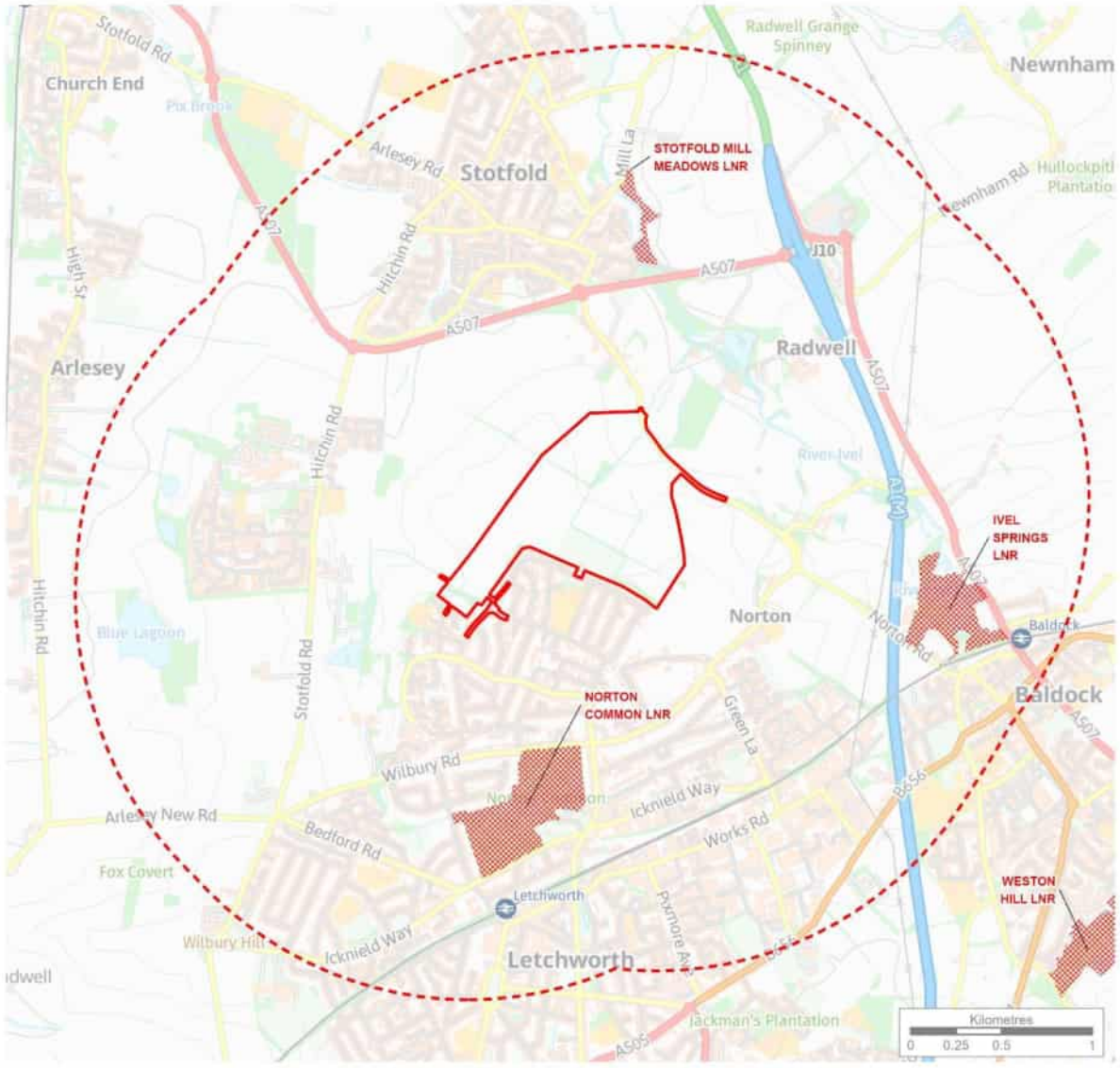
Figure 4: SSSI Impact Risk Zones crossed by the site

4.3 There are three statutory wildlife sites of regional / local significance within 2km of the site (Figure 5**Error! Reference source not found.**). These are summarised in Table 2 below.

Table 2: Statutory local wildlife sites of regional / local significance within 2km of the site

Site Name	Designation	Location Relevant to Site	Key Interest Feature(s)
Norton Common	Local Nature Reserve (LNR)	0.8km south	Woodland, grassland and running water habitats.
Stotfold Mill Meadows	LNR	1.0km north, beyond the A507	Woodland, grassland and pond habitats that support waterfowl and common amphibians.
Ivel Springs	LNR	1.3km east, beyond the A1(M)	Woodland, grassland and running water habitats.



Key

- Site boundary
- Site boundary - 2km buffer
- Local Nature Reserve

Sites searched for were as follows:
- Local Nature Reserves

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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
LG1 Land North of Letchworth

Title
Statutory Locally Designated Sites Within a 2km Buffer

Drawing Number
G9546.009A

Scale	Date
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Figure 5: Statutory wildlife sites of regional/local significance within 2km of the site

Non-Statutory Wildlife Sites

4.4 There are fifteen non statutory locally designated wildlife sites within 2km of the site (Figures 6 & Figure 7). These are summarised in Table 4 below.

Table 3: Non-statutory local wildlife sites within 2km of the site

Site Name	Map Ref	Designation	Location Relevant to Site	Key Interest Feature(s)
Norton Pond, Payne's Farm	Figure 6 12/032	Local Wildlife Site (LWS)	0.2km southeast	The pond supports important invertebrate and vertebrate species.
Radwell Meadows Northwestern Field	Figure 6 05/002/01	LWS	0.5km east	Grassland indicators NVC community MG6.
Radwell Lake	Figure 6 05/004	LWS	0.6km northeast	Bird species, particularly wildfowl
River Ivel, Nortonbury	Figure 6 05/005	LWS	0.6km northeast	Water vole and common kingfisher populations
Norton Common	Figure 6 12/007	LWS	0.8km south	Grassland indicators NVC community MG22.
Blackhorse Farm Storm Drain A1(M)	Figure 6 12/028/02	LWS	1.2km east, beyond the A1 (M)	Grassland indicators and fen and swamp indicators
Icknield Way Railway Bank	Figure 6 12/036	LWS	1.2km southeast	Protected species populations
Radwell (A507) Road Banks	Figure 6 05/007	LWS	1.3km northeast, beyond the A1 (M)	Grassland indicators
Ivel Springs, Norton Road	Figure 6 12/025	LWS	1.3km east, beyond the A1 (M)	Grassland indicators and amphibian, reptile, birds, and water vole populations
Blackhorse Farm Meadow	Figure 6 12/028/01	LWS	1.3km east, beyond the A1 (M)	Grassland indicators
Fairfield East Orchard	Figure 7	CWS	1.2km west	Traditional orchard habitats
Fairfield West Orchard	Figure 7	CWS	1.5km west	Traditional orchard habitats
Blue Lagoon	Figure 7	CWS	1.4km west	Open water body and calcareous grassland habitats.
Stotfold Watermill Wetland	Figure 7	CWS	1.0km north, beyond the A507	Stotfold Mill Meadows LNR comprises wildflower meadows with wetland of interconnected ponds and a small woodland and was recognized as an LNR in 2010. Only the southern-most meadow (Meadow 3) has been recognized as a CWS. The site was recognized as a County Wildlife Site on 17/08/2011 on account of its population of Water Voles.
Rivers Ivel and Hiz	Figure 7	CWS	0.8km north	The river system including adjacent habitats and features, and water vole populations

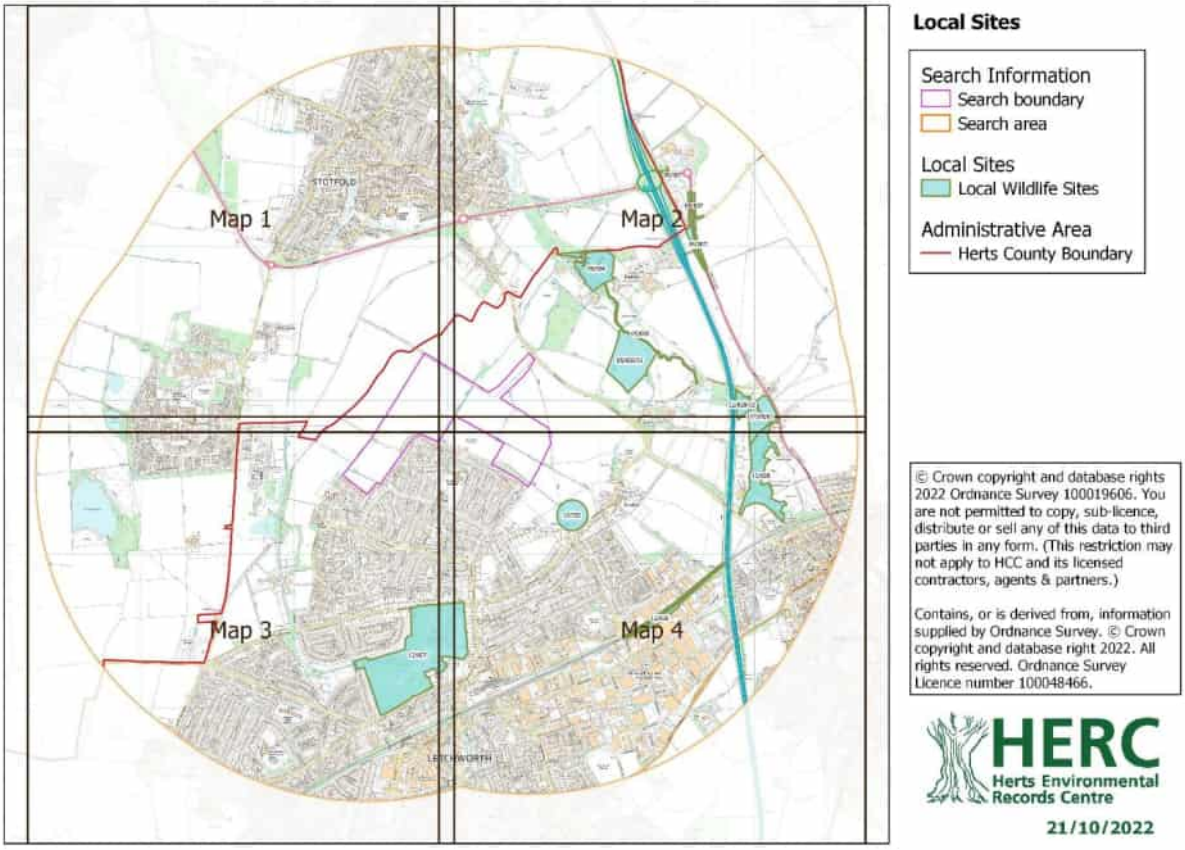


Figure 6: Non-statutory wildlife sites within 2km of the site (map provided by HERC)

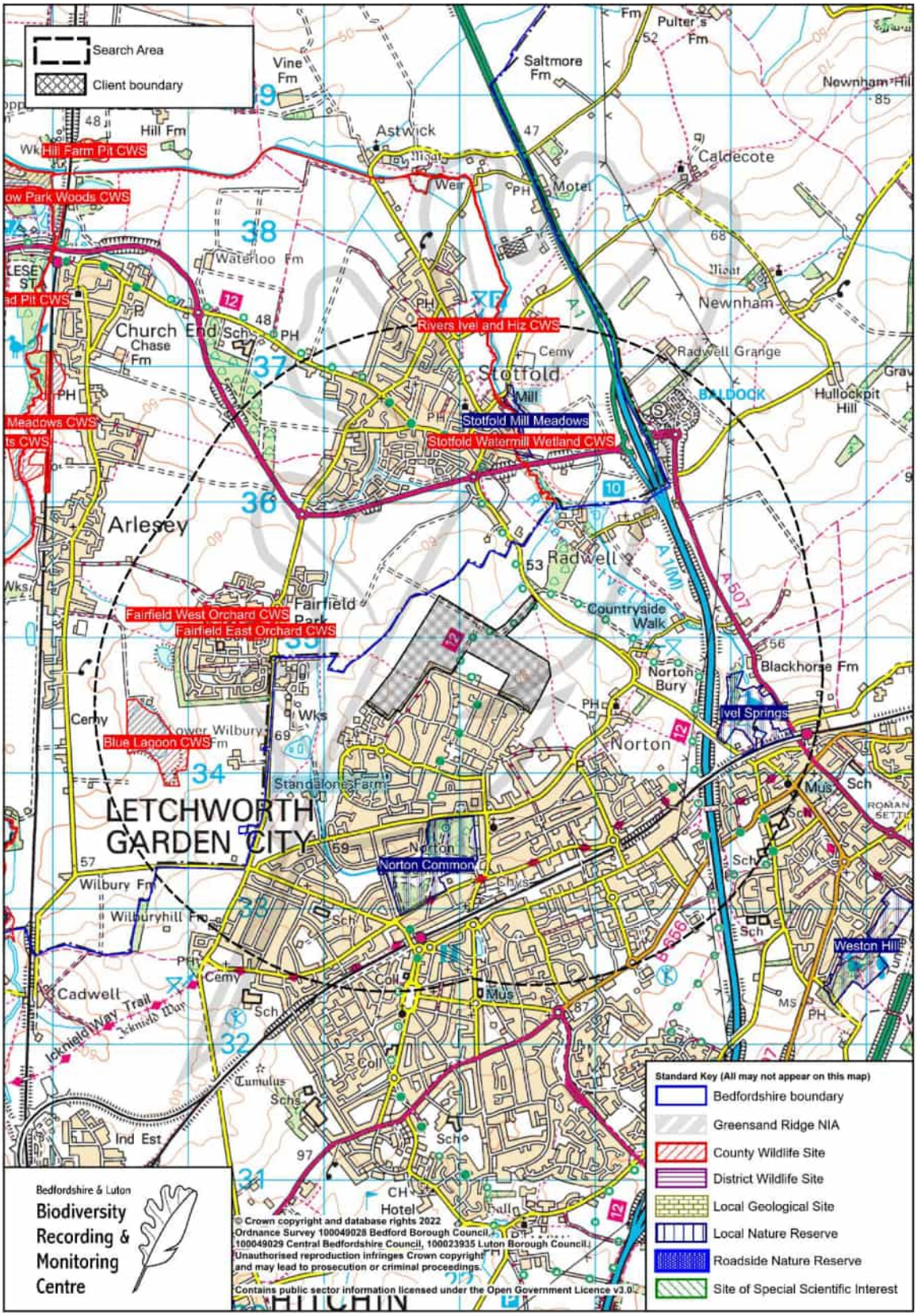


Figure 7: Non-statutory wildlife sites within 2km of the site (map provided by BLBRMC)

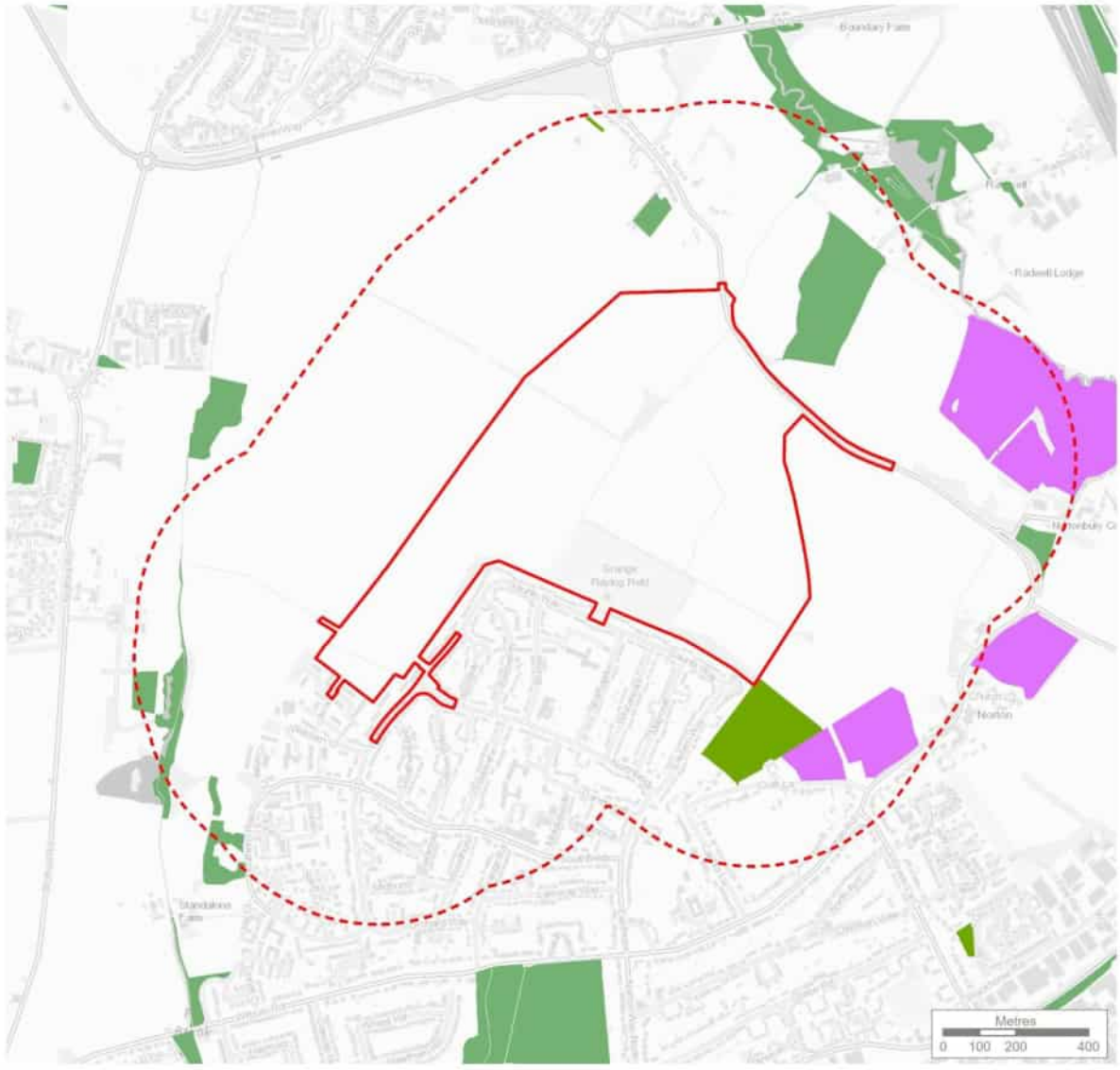
5.0 Notable Habitats

Habitats of Principal Importance (HPI)

5.1 There are no notable habitat types identified on Natural England's priority habitat inventories within the site (Figure 8). However, a small area of traditional orchard (HPI) is present adjacent to the southeast corner of the site. Another small area of traditional orchard lies just beyond this habitat, approximately 360m south of the site.

5.2 Several small areas of deciduous woodland are present offsite, with the most notable being a located approximately 100m north of the site, on the other side of Norton Road. Numerous smaller stretches run adjacent to Pix Brook and are located approximately 400m southwest of the site. Deciduous woodlands are a local priority habitat as well as HPI.

5.3 Numerous areas of good quality semi-improved grassland are located to the east of the site, the closest of which is located approximately 250m southeast, to the north of Croft Lane and Norton Road. Good quality semi-improved grasslands are a local priority habitat as well as HPI.



Key

- Site boundary
- Site boundary - 500m buffer
- Deciduous woodland
- Good quality semi-improved grassland
- Traditional orchard

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Project
LG1 Land North of Letchworth

Title
Notable Habitats Within and Adjacent to the Site

Drawing Number
G9546.010A

Scale	Date
1:15,000 @ A4	22/08/2023

Drawn	Checked	Approved
AR	MK	PP

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Figure 8: Notable habitats

6.0 Protected and Notable Species

Protected Species Licences

6.1 A review of Natural England's open datasets for granted protected species licences did not return any class licence returns or conclusive pond survey data for great crested newts between 2017 and 2019 within 2km of the site.

6.2 Two Natural England mitigation licences have been identified within 2km of the site. These are summarised in Table 4.

Table 4: Natural England mitigation licences within 2km of the site

Species	Licence Number	Dates	Licensable Activities
Brown long-eared bat	2016-22268-EPS-MIT	07/04/2016 to 30/04/2021	Destruction of a resting place
Common pipistrelle Brown long-eared bat	EPSM2011-3393	19/09/2011 to 31/12/2012	Destruction of a resting place

Pre-existing Species Records

6.3 Numerous species records were returned from HERC and BLBRMC for within 2km of the site. These are summarised in Table 5.

Table 5: Summary of pre-existing species records returned by HERC and BLBRMC

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Amphibians			
Common toad *Bufo bufo*	SPI	4	0.37km southwest
Great crested newt *Triturus cristatus*	EPS, WCA5, SPI, LBAP	11	Within 1.00km
Birds			
Barn owl *Tyto alba*	WCA1	12	Within 2.00km
Bittern *Botaurus stellaris*	WCA1, SPI, BAm, LBAP	2	Within 2.00km
Black redstart *Phoenicurus ochruros*	WCA1, BAm	5	Within 2.00km
Black-headed gull *Chroicocephalus ridibundus*	BAm	579	Within 2.00km
Black-tailed godwit *Limosa limosa*	WCA1, SPI, BRd	9	Within 2.00km
Brambling *Fringilla montifringilla*	WCA1	6	Within 2.00km
Bullfinch *Pyrrhula pyrrhula*	SPI, BAm	86	Within 2.00km
Cetti's warbler *Cettia cetti*	WCA1	24	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Common gull *Larus canus*	BAm	85	Within 2.00km
Common sandpiper *Actitis hypoleucos*	BAm	9	Within 2.00km
Common scoter *Melanitta nigra*	WCA1, SPI, BRd	1	Within 2.00km
Corn bunting *Emberiza calandra*	SPI, BRd	139	Within 2.00km
Cuckoo *Cuculus canorus*	SPI, BRd	12	Within 2.00km
Curlew *Numenius arquata*	SPI, BRd	2	Within 2.00km
Dunnock *Prunella modularis*	SPI, BAm	578	Within 2.00km
Egyptian goose *Alopochen aegyptiaca*	IAS	2	Within 2.00km
Fieldfare *Turdus pilaris*	WCA1, BRd	211	Within 2.00km
Firecrest *Regulus ignicapilla*	WCA1	3	Within 2.00km
Gadwall *Anas strepera*	BAm	194	Within 2.00km
Goldeneye *Bucephala clangula*	BRd	6	Within 2.00km
Grasshopper warbler *Locustella naevia*	SPI, BRd	1	Within 2.00km
Great black-backed gull *Larus marinus*	BAm	5	Within 2.00km
Green sandpiper *Tringa ochropus*	WCA1, BAm	264	Within 2.00km
Greenfinch *Chloris chloris*	BRd	557	Within 2.00km
Greenshank *Tringa nebularia*	WCA1, BAm	1	Within 2.00km
Grey partridge *Perdix perdix*	SPI, BRd	109	Within 2.00km
Grey plover *Pluvialis squatarola*	BAm	10	Within 2.00km
Grey wagtail *Motacilla cinerea*	BAm	135	Within 2.00km
Greylag goose *Anser anser*	WCA1, BAm	39	Within 2.00km
Hawfinch *Coccothraustes coccothraustes*	SPI, BRd	5	Within 2.00km
Hen harrier *Circus cyaneus*	WCA1, SPI, BRd	2	Within 2.00km
Herring gull	SPI, BRd	51	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Larus argentatus			
Hobby *Falco subbuteo*	WCA1	27	Within 2.00km
Honey buzzard *Pernis apivorus*	WCA1, BAm	2	Within 2.00km
House martin *Delichon urbicum*	BRd	89	Within 2.00km
House sparrow *Passer domesticus*	SPI, BRd	383	Within 2.00km
Iceland gull *Larus glaucoides*	BAm	1	Within 2.00km
Kestrel *Falco tinnunculus*	BAm	188	Within 2.00km
Kingfisher *Alcedo atthis*	WCA1	95	Within 2.00km
Lapwing *Vanellus vanellus*	SPI, BRd	32	Within 2.00km
Lesser black-backed gull *Larus fuscus*	BAm	155	Within 2.00km
Lesser redpoll *Acanthis cabaret*	SPI, BRd	6	Within 2.00km
Lesser spotted woodpecker *Dryobates minor*	SPI, BRd	9	Within 2.00km
Linnet *Linaria cannabina*	SPI, BRd	131	Within 2.00km
Mallard *Anas platyrhynchos*	BAm	489	Within 2.00km
Marsh harrier *Circus aeruginosus*	WCA1, BAm	1	Within 2.00km
Marsh tit *Poecile palustris*	SPI, BRd	15	Within 2.00km
Meadow pipit *Anthus pratensis*	BAm	95	Within 2.00km
Mediterranean gull *Larus melanocephalus*	WCA1, BAm	5	Within 2.00km
Merlin *Falco columbarius*	WCA1, BRd	9	Within 2.00km
Mistle thrush *Turdus viscivorus*	BRd	216	Within 2.00km
Montagu's harrier *Circus pygargus*	WCA1, BRd	3	Within 2.00km
Moorhen *Gallinula chloropus*	BAm	474	Within 2.00km
Osprey *Pandion haliaetus*	WCA1, BAm	4	Within 2.00km
Oystercatcher *Haematopus ostralegus*	BAm	4	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Peregrine *Falco peregrinus*	WCA1	8	Within 2.00km
Pied flycatcher *Ficedula hypoleuca*	BAm	3	Within 2.00km
Pink-footed goose *Anser brachyrhynchus*	BAm	1	Within 2.00km
Pintail *Anas acuta*	WCA1, BAm	1	Within 2.00km
Pochard *Aythya ferina*	BRd	12	Within 2.00km
Quail *Coturnix coturnix*	WCA1, BAm	2	Within 2.00km
Red kite *Milvus milvus*	WCA1	207	Within 2.00km
Redshank *Tringa totanus*	BAm	1	Within 2.00km
Redstart *Phoenicurus phoenicurus*	BAm	3	Within 2.00km
Redwing *Turdus iliacus*	WCA1, BAm	246	Within 2.00km
Reed bunting *Emberiza schoeniclus*	SPI, BAm	102	Within 2.00km
Ring ouzel *Turdus torquatus*	SPI, BRd	3	Within 2.00km
Rook *Corvus frugilegus*	BAm	114	Within 2.00km
Shelduck *Tadorna tadorna*	BAm	2	Within 2.00km
Short-eared owl *Asio flammeus*	BAm	3	Within 2.00km
Shoveler *Spatula clypeata*	BAm	95	Within 2.00km
Skylark *Alauda arvensis*	SPI, BRd	243	Within 2.00km
Snipe *Gallinago gallinago*	BAm	130	Within 2.00km
Song thrush *Turdus philomelos*	SPI, BAm, LBAP	335	Within 2.00km
Sparrowhawk *Accipiter nisus*	BAm	103	Within 2.00km
Spotted flycatcher *Muscicapa striata*	SPI, BRd	24	Within 2.00km
Starling *Sturnus vulgaris*	SPI, BRd	753	Within 2.00km
Stock dove *Columba oenas*	BAm	271	Within 2.00km
Stone-curlew *Burhinus oedicnemus*	WCA1, SPI, BAm, LBAP	2	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Swift *Apus apus*	BRd	224	Within 2.00km
Tawny owl *Strix aluco*	BAm	15	Within 2.00km
Teal *Anas crecca*	BAm	265	Within 2.00km
Tree pipit *Anthus trivialis*	SPI, BRd	1	Within 2.00km
Tree sparrow *Passer montanus*	SPI, BRd, LBAP	6	Within 2.00km
Turtle dove *Streptopelia turtur*	SPI, BRd	26	Within 2.00km
Velvet scoter *Melanitta fusca*	WCA1, BRd	9	Within 2.00km
Wheatear *Oenanthe oenanthe*	BAm	14	Within 2.00km
Whinchat *Saxicola rubetra*	BRd	5	Within 2.00km
Wigeon *Anas penelope*	BAm	17	Within 2.00km
Willow warbler *Phylloscopus trochilus*	BAm	95	Within 2.00km
Wood warbler *Phylloscopus sibilatrix*	SPI, BRd	12	Within 2.00km
Woodcock *Scolopax rusticola*	BRd	12	Within 2.00km
Wren *Troglodytes troglodytes*	BAm	508	Within 2.00km
Yellow wagtail *Motacilla flava*	SPI, BRd	38	Within 2.00km
Yellowhammer *Emberiza citrinella*	SPI, BRd	241	Within 2.00km
Yellow-legged gull *Larus michahellis*	BAm	2	Within 2.00km
Invertebrates			
August thorn *Ennomos quercinaria*	SPI	1	Within 2.00km
Autumnal rustic *Eugnorisma glareosa*	SPI	1	1.29km north, beyond the A507
Beaded chestnut *Agrochola lychnidis*	SPI	4	Within 1.00km
Blood-vein *Timandra comae*	SPI	15	0.42km north
Brindled beauty *Lycia hirtaria*	SPI	1	1.29km north, beyond the A507
Brown-spot pinion *Agrochola litura*	SPI	7	Within 1.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Buff ermine *Spilosoma lutea*	SPI	57	1.29km north, beyond the A507
Centre-barred sallow *Atethmia centrago*	SPI	11	1.29km north, beyond the A507
Chalk hill blue *Polyommatus coridon*	LBAP	2	0.5km south
Cinnabar *Tyria jacobaeae*	SPI	27	1.29km north, beyond the A507
Dot moth *Melanchra persicariae*	SPI	68	1.29km north, beyond the A507
Dusky brocade *Apamea remissa*	SPI	19	Within 2.00km
Dusky thorn *Ennomos fuscantaria*	SPI	11	1.29km north, beyond the A507
Dusky-lemon sallow *Cirrhia gilvago*	SPI	1	1.29km north, beyond the A507
Ear moth *Amphipoea oculea*	SPI	1	Within 2.00km
Feathered gothic *Tholera decimalis*	SPI	4	1.29km north, beyond the A507
Ghost moth *Hepialus humuli*	SPI	1	Within 2.00km
Green-brindled crescent *Allophyes oxyacanthae*	SPI	2	1.29km north, beyond the A507
Grey dagger *Acronicta psi*	SPI	12	Within 1.00km
Grizzled skipper *Pyrgus malvae*	SPI, LBAP	1	1.04km south
Lackey *Malacosoma neustria*	SPI	1	Within 2.00km
Large garden bumblebee *Bombus ruderatus*	SPI	1	1.31km northwest
Large nutmeg *Apamea anceps*	SPI	51	Within 1.00km
Large wainscot *Rhizedra lutosa*	SPI	1	Within 1.00km
Latticed heath *Chiasmia clathrata*	SPI	2	1.29km north, beyond the A507
Mottled rustic *Caradrina morpheus*	SPI	55	Within 1.00km
Mouse moth *Amphipyra tragopoginis*	SPI	3	0.71km north
Powdered quaker *Orthosia gracilis*	SPI	5	0.71km north
Rosy rustic *Hydraecia micacea*	SPI	10	Within 1.00km
Rustic *Hoplodrina blanda*	SPI	28	Within 1.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Sallow *Cirrhia icteritia*	SPI	1	Within 1.00km
Shaded broad-bar *Scotopteryx chenopodiata*	SPI	3	0.42km north
Small blue *Cupido minimus*	SPI	7	1.04km south
Small emerald *Hemistola chrysoprasaria*	SPI	11	0.42km north
Small heath *Coenonympha pamphilus*	SPI	9	1.04km south
Small square-spot *Diarsia rubi*	SPI	1	Within 2.00km
Stag beetle *Lucanus cervus*	WCA5, SPI, LBAP	1	0.62km west
Wall *Lasiommata megera*	SPI	1	1.04km south
White ermine *Spilosoma lubricipeda*	SPI	17	1.29km north, beyond the A507
White-letter hairstreak *Satyrium w-album*	SPI	8	0.95km east
Mammals			
Bat species Chiroptera	EPS, WCA5	28 field records 5 roosts	Field record – 0.55km north Roost - 0.69km northeast
Brown hare *Lepus europaeus*	SPI	1	1.22km northeast
Brown long-eared bat *Plecotus auritus*	EPS, WCA5, SPI	9 field records 7 roosts	Field record – 0.55km south Roost - 0.56km south
Chinese muntjac *Muntiacus reevesi*	IAS	14	0.79km north, beyond the A507
Common pipistrelle *Pipistrellus pipistrellus*	EPS, WCA5	43 field records 9 roosts	Field record – 0.53km southeast Roost – 0.75km northeast
Daubenton's bat *Myotis daubentonii*	EPS, WCA5	12 field records	0.68km northeast
Eastern grey squirrel *Sciurus carolinensis*	IAS	53	0.42km north
Eurasian badger *Meles meles*	PBA	<<redacted>>	<<redacted>>
Eurasian otter *Lutra lutra*	EPS, WCA5, SPI	13	0.89km north, beyond the A507
European water vole *Arvicola amphibius*	WCA5, SPI, LBAP	14	0.95km north, beyond the A507
Long-eared bat *Plecotus spp.*	EPS, WCA5	5 field records 5 roosts	Field record - Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
			Roost – 0.75km northeast
Noctule *Nyctalus noctula*	EPS, WCA5, SPI	14 field records	0.55km south
Pipistrelle bat *Pipistrellus spp.*	EPS, WCA5	15 field records 7 roosts	Field record – 0.85km southwest Roost - 0.56km south
Polecat *Mustela putorius*	SPI	1	Within the site
Serotine *Eptesicus serotinus*	EPS, WCA5	4 field records 2 roosts	Field record - Within 2.00km Roost – 0.89km northeast
Soprano pipistrelle *Pipistrellus pygmaeus*	EPS, WCA5, SPI	13 field records	0.55km south
West European hedgehog *Erinaceus europaeus*	SPI	111	0.05km north
Plants			
Bluebell *Hyacinthoides non-scripta*	WCA8	1	1.59km north, beyond the A507
Giant hogweed *Heracleum mantegazzianum*	WCA9, IAS	4	0.63km east
Himalayan balsam *Impatiens glandulifera*	WCA9, IAS	2	1.35km east, beyond the A1(M)
Lizard orchid *Himantoglossum hircinum*	WCA8	1	0.70km north
Nuttall's waterweed *Elodea nuttallii*	WCA9, IAS	1	1.47km west
Rhododendron *Rhododendron ponticum*	WCA9	1	Within 2.00km
Variegated Yellow Archangel *Lamiastrum galeobdolon subsp. argentatum*	WCA9	3	0.79km south
Wall cotoneaster *Cotoneaster horizontalis*	WCA9	1	1.47km west
Reptiles			
Common lizard *Zootoca vivipara*	WCA5, SPI	2	Within 2.0km

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Appendix G

Preliminary Ecological Assessment report

LG1 Land North of the Grange

Letchworth, Hertfordshire

Preliminary Ecological Assessment

Prepared For: Letchworth Garden City Heritage Foundation

Document Reference: 9546.002

December 2023

Version 2.1

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Project Name:	LG1 Land North of the Grange, Letchworth
Location:	Letchworth Garden City, Hertfordshire
Document Title:	Preliminary Ecological Assessment
Client:	Letchworth Garden City Heritage Foundation
Year of Surveys:	2022
Report Prepared:	August 2023
Prepared by:	The Environment Partnership Ltd
Office:	London
Document Ref:	9546.002

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The content of this document has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Professional Conduct and is compliant with British Standard BS42020:2013 Biodiversity Code of Practice for Planning and Development.

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The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

Contents

Page

1.0 INTRODUCTION 5
Site Location 5
Proposals 6
Consultation 7
Scope 8
2.0 METHODS 9
Desk Study 9
Habitats and Flora 11
Fauna 12
Assessment Process 14
Assumptions 15
3.0 RESULTS 16
Planning Context 16
Designated Sites 16
Habitats and Flora 17
Fauna 27
Opportunities and constraints 32
4.0 ASSESSMENT OF POTENTIAL IMPACTS 33
Wildlife Sites 33
Habitats and Flora 34
Fauna 36
5.0 MITIGATION AND ENHANCEMENT 41
Planning Context 41
Standard Recommendations to Preserve Wildlife 41
Habitats and Flora 41
Fauna 42
Habitat Enhancement 47
Faunal Enhancement 48
Environmental Best Practice 48
REFERENCES 49

Figures

Figure 1: Site location 6
Figure 2: Typical hedgerow with very narrow arable field margin 19
Figure 3: Scrub area in southeast of site (TN1) 21
Figure 4: Typical grassy arable field margin 22

Figure 5 : Tall ruderals (TN16) and reed swamp behind (TN14) with poplar plantation beyond that (TN15)……...23

Figure 6: Hedgehog access hole in wooden panel fence……44

Tables

Table 1: Summary of baseline surveys 12

Appendices

Appendix A: Desk Study - TEP Ref. 9546.001

Appendix B: High Level Masterplan

Appendix C: Target Notes

Appendix D: Badger Survey - TEP Ref. 9546.003

Appendix E: Reptile Survey - TEP Ref. 9546.04.001

Appendix F: Amphibian Survey Report - TEP Ref. 9546.01.001

Appendix G: Water vole/Otter survey - TEP Ref. 9546.004

Appendix H: Hedgerow Regulations Assessment – TEP Ref. 9546.004

Appendix I: Breeding Bird Survey Report – TEP Ref. 9546.02.001

Appendix J: Winter Bird Survey Report – TEP Ref. 9546.03.001

Appendix K: Dormouse Survey Report – TEP Ref. 9546.07.001

Appendix L: Bat Survey Report – TEP Ref. 9546.01.002

Drawings

Phase 1 Habitat Survey G9546.002A

Opportunities and Constraints Plan G9546.08.001

Executive Summary

Site Details	The site is located at land north of Gaunts Way of the Grange Estate in Letchworth, Hertfordshire. The approximate central grid reference of the site is TL 22131 34974. The site application boundary measures approximately 84ha. The anticipated footprint of the project elements, including construction and decommissioning, is estimated to be 43ha.
Proposals	Broad-scale detailed application proposals comprise a number of residential blocks and a community block consisting of a school, a sustainable transport hub, a community centre and retail units.
Designated wildlife sites	There are no internationally or nationally designated wildlife sites within 10km and 5km respectively, nor does the site fall within any SSSI IRZ's. Three statutory wildlife sites of local significance are within 2km of the site. Given the distance to the site, no direct impacts are anticipated on these designated sites. All may be indirectly affected by proposals (before mitigation) They are: ■ Norton Green LNR – 0.8km south ■ Stotfold Mill Meadows LNR – 1km north ■ Ivel Springs LNR – 1.3km east There are a total of fifteen non-statutory locally designated sites within 2km of the site. Those that may be subject to indirect impacts are listed below. ■ Norton Pond, Payne's Pond – 200m southeast ■ Radwell Meadows Northwestern field – 500m east ■ Radwell lake – 600m northeast ■ River Ivel Nortonbury – 600m northeast No non-statutory locally designated site is expected to be impacted upon directly.
Important Ecological Features present within or adjacent to the site	■ Small areas of S41 deciduous broad-leaved woodland habitats and hedgerows and reedbed (reed swamp) on site may be directly or indirectly affected by proposals (before mitigation) ■ S41 Traditional orchard, deciduous broad-leaved woodland habitats, hedgerows and river within 500m may be directly or indirectly affected by proposals (before mitigation) ■ Lines of Trees, Plantation Broad-leaved woodland on site may be indirectly affected by proposals (before mitigation), while some broad-leaved scattered trees on site may be directly or indirectly affected by the proposals. ■ Other habitats that may be directly affected by the proposals include, scrub, semi-improved grasslands, tall ruderals, and dry ditches. ■ These habitats are known to support protected and notable species of badger, bats, birds, and may be directly or indirectly affected by proposals (before mitigation) . ■ Common amphibians, brown hare, hedgehog, invertebrates, and polecat may also be supported within habitats on site and may be directly or indirectly affected by proposals (before mitigation) .
Recommendations	The following recommendations are made to ensure that delivery of the project remains compliant with relevant legislation and policy: ■ A Biodiversity Net Gain assessment ■ The production of a Construction Environmental Management Plan (CEMP) to include measures to prevent damage or pollution to on-site and adjacent habitats and designated sites.

	■ The production of a Precautionary Working Method Statement (PWMS) for the protection of habitats and species to inform ecological input into the contractors CEMP. ■ A habitat management plan should be produced for the site detailing management prescriptions for the post-development habitats to ensure the target habitats and conditions are reached. ■ Various ecological enhancements should be implemented in the proposals (semi-naturalised SuDS, newly created wildflower meadows, suitable bird breeding habitats including opportunities for ground nesting birds (if possible) Reptile/Amphibian Hibernacula, log piles, bat and bird bricks and boxes)
Conclusions	The proposals will largely impact on site habitats of low ecological value (arable) and no ecological impact arising from the proposals is likely to be significant at more than the site level. Most habitat impacts are anticipated to temporary and reversible in the short term. With implementation of the recommended precautionary working methods, habitat restoration and compensatory features, no residual significant ecological effects are expected to impact upon statutory or non-statutory wildlife sites, notable habitats or protected species. It is expected that some notable species including typically rural birds such as skylark, linnet, meadow pipit and yellowhammer will no longer find suitable habitat on site post development.

This Executive Summary is not a substitute for the full report. Refer to the full text of this report for further detail.

1.0 Introduction

1.1 The Environment Partnership (TEP) was initially commissioned by Letchworth Garden City Heritage Foundation (LGCHF) in June 2022 to produce an Ecological Impact Assessment (EcIA) to support a planning application for the proposed development of largely residential homes at Land north of the Grange, Letchworth Garden City, Hertfordshire (hereafter referred to as 'the site'). Following this TEP were commissioned in October 2022 to undertake a Preliminary Ecological Assessment (PEA). Subsequently the red line boundary was changed in Spring 2023 so further updates have been undertaken to cover the additional areas within the updated red line boundary

1.2 This PEA is an interim report of the findings to date and will be upgraded to an EcIA to support the planning application once all species and habitat survey work has been completed and an outline masterplan has been finalised.

1.3 An Ecological Desk Study has been produced to support this PEA, reported under separate cover (Appendix A). This PEA report should read in conjunction with the Desk Study.

1.4 This PEA report includes details of the methods employed and any limitations of the surveys. Results are provided with supporting maps, together with a preliminary evaluation of the ecological features within the site, an assessment of the potential impacts associated with the development proposals and requirements for mitigation. These are based on the surveys undertaken to date.

1.5 It is recognised that the potential impacts on the protected species; birds (winter and breeding), and bats cannot at this point be fully assessed as the surveys and analysis for these species/groups have not been completed. However high level information on findings has been provided. This appraisal has been undertaken with due consideration for current best practice guidelines (CIEEM 2017a[1], 2018[2]).

Site Location

1.6 The site is located at land north of Gaunts Way of the Grange Estate in Letchworth, Hertfordshire. The location of the site is depicted by the red line shown in Figure 1. The approximate central grid reference of the site is TL 22131 34974.

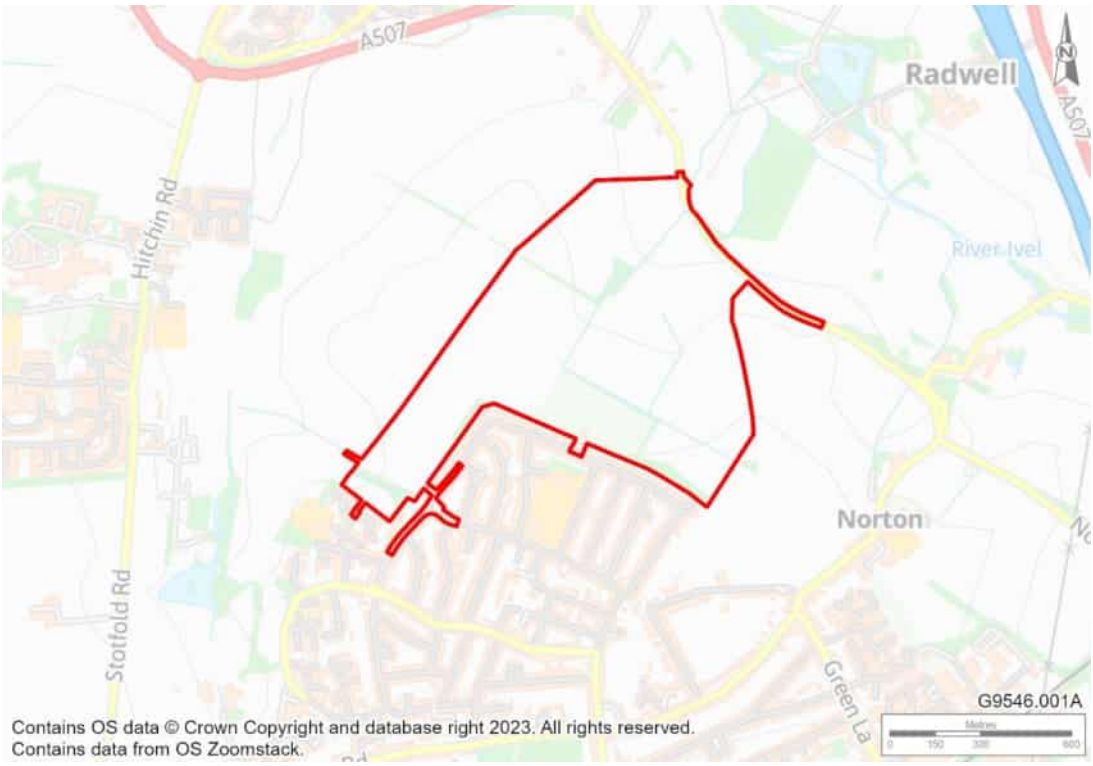
1.7 The site is largely composed of arable fields with some poor semi-improved grassland field boundaries with boundary hedgerows, some of which are also associated with ditches and scattered trees. Small areas of scrub, plantation broad-leaved woodland, bare ground and introduced shrub are also present within the site. There are several public rights of way across and through the site while most of the field boundaries have permissible path networks.

[1] CIEEM (2017a) Guidelines for Ecological Report Writing, 2nd Edition. Chartered Institute of Ecology & Environmental Management

[2] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester

1.8 The wider area comprises of mostly residential units to the south which form the northern extent of Letchworth Garden City, while the rest of the area is largely rural agricultural fields with associated hedgerows and small woodlands between the villages of Radwell, Stotfold and Fairfield Park.

Figure 1: Site location



Proposals

1.9 The outline masterplan is currently at an early stage. Broad-scale proposals comprise a number of residential blocks and a community block consisting of a school, a sustainable transport hub, a community centre and retail units. The existing Grange Recreation Ground, located in the south of the site, is to remain as open space and the main network of rights of way through the site to this area are proposed to be retained and enhanced as parkland links. Additional hedgerows and landscaping are proposed as buffers to the wider surrounding agricultural landscape. The Proposed Block Plan is displayed in Appendix B.

1.10 Access from Norton Road to the site has not been fully determined. Improved access may also be required in the southwest of the site and several sections of existing streets are included in this assessment.

1.11 Under the National Planning Policy Framework 2021 (NPPF), opportunities to achieve biodiversity net gain within developments should be pursued.

Consultation

1.12 Consultation with Sue Hooton – Principal Ecological Consultant with Place Services has been ongoing for several years and a number of previous ecological reports have been produced. Most recently, in March 2022 TEP undertook a consultation exercise with the LPA Ecologist setting out the scope of surveys and reporting previously undertaken. These are as follows:

Ecology surveys and reporting undertaken on behalf of LGCHF comprising:

- Housing Development Technical Report- Ecology – November 2013
- Update Preliminary Ecological Appraisal Report - December 2016
- Badger Survey Report - May 2017
- Reptile Presence/Likely Absence Survey Report September 2017
- Preliminary Ground Level Roosts Assessment – Bats – July 2018
- Wintering and Breeding Bird Surveys September 2018
- Bat Tree Climbing and Dawn Re-entry survey – October 2018
- Dormouse Survey – October 2018
- Bat Activity Survey Report – December 2018
- Ecological Survey Work Summary Table – April 2021

Ecology Update Brief produced in December 2021 by Peter Neal Consulting comprising:

- Badger Survey - Presence/Likely Absence
- Reptile Survey - Presence/Likely Absence
- Great Crested Newt eDNA Survey
- Bat Survey - Preliminary Ground Level Roost Assessment
- Bat Survey - Bat Activity Survey Report
- Bat Survey - Tree Climbing and Dawn Re-entry Survey
- Dormouse Survey
- Wintering and Breeding Bird Surveys

1.13 Following discussion of the above surveys and reporting previously undertaken at the site, the following additional surveys were also recommended:

- Extended Phase I habitat survey (included in this report)
- Badger walkover (included in this report)
- Dormouse scoping survey (included in this report but identified a need for full dormouse surveys of which the report is outstanding)
- Ground based tree assessment for bats (included in this report)
- Great Crested newt HSI and eDNA sampling (included in this report)
- Aerial tree inspection of trees for bats (report outstanding)
- Bat emergence surveys (report outstanding)

- Bat transect surveys (report outstanding)
- Breeding Bird survey (report outstanding)
- Wintering Bird survey (report outstanding)
- Reptile Survey (Included in this report)
- Biodiversity Net Gain Condition Assessment and Feasibility Report (report outstanding)
- Water vole and Otter survey (included in this report)
- Hedgerow Regulations Assessment (included in this report)

Scope

1.14 This report provides baseline information on the habitats and protected species present on site, gathered from a desktop study and the following surveys:

- Phase I habitat survey undertaken in August 2022
- Ground Level Tree assessment for Bats in August 2022
- Badger Walkover Survey undertaken in October 2022
- Reptile Survey undertaken in September/October 2022
- Water vole and Otter Survey undertaken in August 2022 and
- Hedgerow Regulations Assessment undertaken in October 2022 and May 2023

1.15 And some initial information on the following outstanding surveys:

- Hazel dormouse survey, due to complete in November 2023.
- Bat surveys that are completed but at the time of writing are being analysed and are due to be completed mid-September 2023.
- Bird surveys (winter and summer) that are completed but at the time of writing are being analysed and are due to be completed mid-September 2023.

1.16 This report presents the findings of the PEA, the objectives of which are to:

- Detail the methods and results of the aforementioned surveys;
- Identify features of ecological value within the application site such as legally protected species or habitats of importance to biodiversity;
- Identify any non-native invasive species on site and provide advice regarding removal or management;
- Advise on avoidance or mitigation requirements that may be needed prior to development commencing; and
- Provide outline recommendations for biodiversity enhancement within site proposals in accordance with the National Planning Policy Framework (NPPF).

2.0 Methods

Desk Study

2.1 In line with current best practice (CIEEM, 2016[3], 2017b[4]), information regarding designated sites, notable habitats and existing protected and notable species records of the past decade, within a 2km minimum radius of the site was collated and reviewed to inform this ecological assessment. Further detail regarding ecological zones of influence (EZOI) applied for different ecological features and the sources of information included are presented in the Ecological Desk Study (TEP Ref 9546.001).

2.2 In brief, key data sources included Natural England (NE - open source data), Environment Agency (EA - open source data); North Hertfordshire District Council, North Hertfordshire District Local Plan, Herts Environmental Records Centre (HERC), Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC) and other relevant planning documentation such as the Letchworth Garden City Town Centre Strategy Supplementary Planning Document (SPD) and a review of relevant (within the past ten years) species records. A review of previous surveys and reports relating to the site and the wider environment provided by Letchworth Heritage Foundation was also completed.

2.3 Statutory designated wildlife sites were searched for as follows (EZOI applied for each is indicated in brackets):

- Ramsar sites (10km);
- National Sites Network (10km), includes Special Areas of Conservation (SAC) and Special Protection Areas (SPA);
- Site of Special Scientific Interest (SSSI) (5km);
- National Nature Reserve (NNR) (5km); and
- Marine Nature Reserve (MNR) (5km);
- Local Nature Reserves (LNR) (2km).

2.4 Non-statutory designated wildlife sites were searched for within 2km of the site and, within Hertfordshire, these may include:

- County Wildlife Sites (CWS);
- Potential County Wildlife Sites (pCWS);
- Unconfirmed Wildlife Sites (UWS); and
- Other Sites of Wildlife Interest (OSWI).

2.5 Regionally Important Geological Sites (RIGS) are also identified in the search results provided by HERC and BLBRMC, but assessment of RIGS and other geological features do not fall within the scope of this PEA and are not discussed further.

[3] CIEEM (2016) Guidelines for Accessing and Using Biodiversity Data. Chartered Institute of Ecology & Environmental Management

[4] CIEEM (2017b) Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology & Environmental Management

2.6 Notable habitats were searched for within 2km of the site. Notable habitats may include those listed under any of the following:

- Ancient Semi-Natural Woodland (ASNW);
- Main rivers;
- Habitats of Principal Importance (HPI) as listed by the requirements of Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006[5]; and
- Local Biodiversity Action Plan Habitats (LBAP).

2.7 Pre-existing records for notable species were reviewed from the combined data sources, where found from within approximately 2km of the site. Notable species include those listed under any of the following:

- Protected animal species under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive non-native species under the Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Species of principal importance (SPI) as listed by the requirements of S41 of NERC;
- Protection of Badgers Act 1992 (PBA);
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Hertfordshire Biodiversity Action Plan Species (LBAP).

Limitations

2.8 Species records can provide a useful indication of the species present within the search area, although the absence of a given species from the dataset cannot be taken to represent actual absence.

[5] Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

Habitats and Flora

Habitat Survey

2.9 An Extended Phase 1 habitat survey was completed by Toni Wileman, certified to Level 5 under the Field Identification Skills Certification[6]. The survey was completed on 8th August 2022, with the additional areas incorporated into the Red line boundary surveyed on 16th May 2023. The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC, 2010[7]) and UK Habitat Classification (UKHab) assessment method[8] and Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017b[4]). The method records the habitat present, within the survey route, based on the JNCC and UKHab descriptions. Plant species were identified in accordance with the New Flora of the British Isles (Stace, 2019[9]) and recorded as target notes using the DAFOR[10] scale, where relevant.

2.10 The survey was expanded to include off-site habitats adjacent to the site in order to provide context. Adjacent habitats were viewed from accessible locations within the site boundary. Habitats are displayed with the site boundary on Drawing G9546.002A.

Limitations

2.11 Any ecological survey represents a snapshot of ecological conditions at the time of survey; ecological conditions may change over time. Efforts to identify dominant plant species for the purposes of characterising broad habitat types do not constitute a detailed botanical survey.

2.12 The timing of the surveys are within the optimum period (April - Mid October) of undertaking an Extended Phase I survey. There were no constraints in terms of access to the site, although some areas of dense scrub were not fully accessible.

Habitat Condition

2.13 The Environment Act and NPPF state that new developments are to deliver Biodiversity Net Gain (BNG).

2.14 The Natural England Biodiversity Metric 3.1 – Habitat Condition Assessment Sheets were used to determine the pre-development habitat condition. This was undertaken by Toni Wileman, certified to Level 5 under the Field Identification Skills Certification on 10th August 2022. The Block plan was used to determine a high level assessment of the Biodiversity Net Gain.

2.15 Details of the methods, results and recommendations of the BNG Assessment will be presented under a separate cover as TEP Ref 9546.05.001 at a later date.

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[6] A national skills certification scheme operated by Botanical Society of Britain and Ireland. FISC 4 is the competency level recommended for Biodiversity Net Gain (BNG) field assessments

[7] JNCC (2010) Handbook for Phase 1 Habitat Survey – a technique for environmental audit

[8] The UK Habitat Classification User Manual Version 1.1 September 2020

[9] Clive Stace (2019) New Flora of the British Isles

[10] DAFOR = Dominant, Abundant, Frequent, Occasional & Rare

Hedgerow Regulations Assessment

2.16 A Hedgerow Regulations Assessment was undertaken by Toni Wileman, certified to Level 5 under the Field Identification Skills Certification. The survey was undertaken on 8th August 2022 with additional areas surveyed on 17th May 2023. The survey was carried out in accordance with the Hedgerow Regulations methodology to determine the 'species richness' and importance of each hedgerow on site. Plant species were identified in accordance with the New Flora of the British Isles (Stace, 2019[11]) and recorded as target notes using the DAFOR scale, where relevant. A Hedgerow Regulations Assessment Report has been produced under a separate cover (TEP Ref 9546.005) and included as Appendix H.

Fauna

2.17 Ordnance Survey maps and aerials were reviewed to identify potentially suitable habitats offsite within influence (e.g., dispersal distances for mobile species) of the site. The Ecological Desk Study identified any pre-existing records for protected and notable species within at least 2km of the site. Review of previous survey work and reporting undertaken at the site was also undertaken.

2.18 The Extended Phase I habitat survey included an extended assessment of the habitats present for their potential to support notable or protected wildlife species, as described at paragraph 2.7. Any signs indicating the presence of these species were recorded.

2.19 In combination, this data informed the scope for further surveys required to inform this PEA. The scope for additional ecological surveys was confirmed through pre-application consultation with Letchworth Heritage Foundation. Table 1 summarises the type, method, timing and standard of ecological surveys completed and review of existing data to inform this PEA.

Table 1: Summary of baseline faunal surveys

Species / Group	Scope
Amphibians (Ecological Technical Report Ref 9546.01.001) Appendix F	Review of pre-existing reports (Cascade Consulting 2013); Review of pre-existing records provided by HERC and BLBRMC Amphibian survey (HSI and eDNA) of five ponds within 500m of the development on 28th April 2023
Badger (Ecological Technical Report Ref 9546.003) Appendix D	Review of pre-exisitng reports (Cascade Consulting 2013, and Ricardo Energy & Environment 2017); Review of pre-existing records provided by HERC and BLBRMC; Site-wide walkover survey (16th September 2022) to catalogue evidence of badger setts and any other field evidence indicative of badgers;
Bats (Ecological Technical Report Ref 9546.01.002) Appendix L	Review of pre-exisitng reports (Cascade Consulting 2013, and Ricardo Energy & Environment 2018a); Review of pre-existing records provided by HERC and BLBRMC; Preliminary ground based roost assessment (PRA) of trees on 5th August 2022

[11] Clive Stace (2019) New Flora of the British Isles

Species / Group	Scope
	Bat surveys consisted of three activity and monitoring surveys undertaken in May, July and September 2023
Breeding birds Ecological Technical Report Ref 9546.02.001) Appendix I	Review of pre-exisitng reports (Cascade Consulting 2013, and Ricardo Energy & Environment 2018b); Review of pre-existing records provided by HERC and BLBRMC; Breeding Bird survey undertaken between April-July 2023
Wintering Birds (Ecological Technical Report Ref 9546.03.001) Appendix J	Review of pre-exisitng reports (Cascade Consulting 2013, and Ricardo Energy & Environment 2018b); Review of pre-existing records provided by HERC and BLBRMC; Winter Bird survey undertaken between October 2022 and March 20023
Hazel dormouse (Ecological Technical Report Ref 9546.07.001) Appendix K	Review of pre-exisitng reports (Cascade Consulting 2013, and Ricardo Energy & Environment 2018c); Review of pre-existing records provided by HERC and BLBRMC; Hazel dormouse Nut search in February 2022 Hazel dormouse surveys undertaken between May-September 2023
Invertebrates	Review of pre-exisitng reports (Cascade Consulting 2013); Review of pre-existing records provided by HERC and BLBRMC;
Reptiles (Ecological Technical Report Ref 9546.04.001) Appendix E	Review of pre-exisitng reports (Cascade Consulting 2013) Review of pre-existing records provided by HERC and BLBRMC; Presence/absence transect survey comprising direct observation, searches of existing natural refuge features and employing 184 artificial cover objects (ACOs) comprising of roofing felt tiles. Seven survey visits following 'bedding-in' period to inspect mats and determine presence, distribution and abundance of reptiles across the site (21st Septenmber – 13th October 2022). Additional surveys employing 38 ACO's were undertaken between August – October 2023 on land immediatley north of Norton Road as it was considered a significant barrier to reptile movement.
Otter and Water Vole (Ecological Technical Report Ref 9546.004) Appendix G	Review of pre-exisitng reports (Cascade Consulting 2013) Review of pre-existing records provided by HERC and BLBRMC; Otter and water vole surveys on 11th August 2022 and 2nd May 2023.

Limitations

2.20 Ecological surveys were undertaken over the period August to July 2023, with current ongoing surveys due to be completed by November 2023. All surveys undertaken were completed within appropriate seasons over appropriate periods in accordance with industry standards for the specific survey type. Nevertheless, the surveys will only identify habitats and species present at the site at the time of surveys. Additionally, the species investigated are mobile and will move into and out of areas over time. For these reasons, a precautionary approach has been taken in the prediction of impacts. Where there is any doubt, except where specifically noted, species are assumed to be present, and the impact assessment assumes a higher level of significance (within the spectrum of possible significance).

2.21 The PRA was undertaken at a sub optimal time when leaf foliage present on the trees had the potential to obscure visibility, however, it is not considered a constraint to the presence of bats on site as the most significant trees present on site were easily observed.

2.22 Constraints or limitations upon survey methods or interpretation of survey findings are discussed in the relevant Ecological Technical Report.

Assessment Process

2.23 This PEA follows the published guidelines (CIEEM, 2018[2]) and accepted best practice approach (BS42020:2013[12]) of the mitigation hierarchy whereby impacts are first avoided or, where this is not possible, reduced or mitigated or, as a last resort, compensated.

2.24 In summary, the following procedure was undertaken during this PEA:

- Describe the baseline and identify important ecological features;
- Describe important ecological features and identify those which may potentially be affected by the Proposed Development;
- Identify potential impacts upon important ecological features and characterise the effect of such impacts (in respect of biophysical changes and taking account of relevant aspects of ecosystem structure or function);
- Identify opportunities for ecological enhancement.

2.25 Important ecological features have been identified and recommendations for appropriate mitigation, compensation and enhancement are made, in accordance with CIEEM guidance[2].

2.26 BS42020:2013 defines a significant effect as one *"which is important, notable, or of consequence, having regard to its context*." CIEEM describes significance as "*a concept related to the weight that should be attached to effects when decisions are made*." CIEEM defines an ecological effect as significant if it is "*sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project*."

2.27 BS42020:2013 sets out a practical approach to determining the significance of an ecological effect, applicable at all levels of decision making in legal and policy terms, as follows:

- will the effect on biodiversity influence the balance of planning considerations and therefore the decision as to whether planning permission is likely to be refused or granted; and
- if planning permission is granted, is the effect important enough to warrant the use of planning conditions and/or obligations to guarantee proposed measures or to impose restrictions, or to seek further requirements (e.g., for mitigation, compensation, enhancement, monitoring or site management).

[12] British Standards Institution (2013) BS 42020:2013: Biodiversity — Code of practice for planning and development. BSI Standards Limited, London

2.28 Significance is therefore assessed on a case-specific basis according to the importance of the ecological feature (site, habitat or species) within the conservation hierarchy, and the effect upon it.

Assumptions

2.29 Information provided by third parties, including publicly available information, is assumed to be correct at the time of publication.

2.30 It is assumed using the Block Plan drawing that:

- all existing habitats present within the residential and community blocks development blocks will be removed and lost and therefore species within these areas will also be impacted upon due to that loss;
- all the areas identified as linear parkland areas, vehicular access, proposed new greenway, proposed new access, the wildflower and woodland meadow buffer zones and the new hedgerow areas will undergo enhancement which will lead to probable habitat loss and species impacts. A reasonable worst-case scenario has been assumed for these areas.
- All the existing greenway retained oak trees and retained hedgerows and scrub areas will have minimal direct losses but may be subject to disturbance works from the adjacent development. A reasonable worst-case scenario has been assumed for these areas.

3.0 Results

Planning Context

3.1 The NPPF at *Chapter 11: Conserving and Enhancing the Natural Environment* requires that development delivers net gains in biodiversity in addition to minimising the impacts on biodiversity. The chapter highlights the need to protect and enhance valued landscapes, geological conservation interests and soils, as well as recognising the wider benefits of ecosystems.

3.2 The North Hertfordshire Local Plan was adopted by North Hertfordshire District Council in November 2022. The following strategic policies relate to biodiversity and nature conservation and the site in question:

- SP1: Sustainable development in North Hertfordshire
- SP5: Countryside and Green Belt
- SP12: Green infrastructure, landscape and biodiversity
- SP15: Site LG1 – North of Letchworth Garden City

3.3 The SP15 Policy relates directly to the proposed development area and its specific policy text relating to natural conservation and biodiversity is stated as

"Development proposals should provide the following planning and master planning requirements:

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained, and any hedgerow losses kept to a minimum;

i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach; and

j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east."

3.4 Under the National Planning Policy Framework 2021 (NPPF), opportunities to achieve biodiversity net gain within developments should be pursued.

Designated Sites

Statutory Wildlife Sites

3.5 Full details regarding designated sites are provided within the Ecological Desk Study.

3.6 There are no statutory designated sites of international importance within 10km of the site, and none of national importance within 5km. Three statutory designated sites of regional or local importance are located within 2km, these are:

- Norton Common Local Nature Reserve (LNR 0.8km south of the site);

- Stotfold Mill Meadows LNR 1km north of the site; and
- Ivel Springs LNR 1.3km north of the site;

3.7 SSSI Impact Risk Zones (IRZ) highlight the potential for effects on a SSSI if certain types of development are planned within a specified radius of it. The site does not fall within any IRZ.

Non-Statutory Wildlife Sites

3.8 There are fifteen non-statutory wildlife sites identified within 2km of the site. Details are presented in the Ecological Desk Study. Of most relevance are the following County Wildlife Sites:

- River Ivel and Hiz – 0.8km north – river systems with adjacent habitats that support water vole populations;
- Stotfold Watermill Wetland – 1km north – holding water vole populations;
- Fairfield East Orchard – 1.2km west – traditional orchard habitat;
- Blue Lagoon – 1.4km west – open water body and calcareous grassland habitats; and
- Fairfield West Orchard – 1.5km west – traditional orchard habitat.

Habitats and Flora

Pre-existing Data

3.9 The Desk Study identified the following notable habitats, adjacent or nearby to the site to the site:

- A small area of traditional orchard (HPI) – adjacent to the southeast boundary
- A small area of traditional orchard (HPI) – 360m to the south

3.10 No records of protected or notable flora were returned from within the site.

3.11 Flora records were also returned within 2km of the site as follows:

- Protected and notable species:
  - Bluebell *Hyacinthoides non-scripta* – WCA8
  - Lizard orchid *Himantoglossum hircinum* – WCA8
- Non-native invasive species[13,14]:
  - Giant hogweed *Heracleum mantegazzianum* – WCA9, IAS
  - Himalayan balsam *Impatiens glandulifera* – WCA9, IAS
  - Nuttall's waterweed *Elodea nuttallii* – WCA9, IAS
  - Rhododendron *Rhododendron ponticum* – WCA9, IAS

[13] As listed on Schedule 9 of the Wildlife and Countryside Act 1981 as amended

[14] Statutory Instruments 2019 No. 527 The Alien Species (Enforcement and Permitting) Order 2019

- Variegated yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum* – WCA9
- Wall cotoneaster *Cotoneaster horizontalis* – WCA9

Phase 1 Survey data

3.12 Habitats of ecological value present in and around the site identified during the Extended Phase I habitat survey are described below and illustrated in Drawing G9546.002A. Target notes (TN) are provided in Appendix C.

Arable

3.13 Arable habitat was recorded to dominate the site (TN38). The arable fields appear to be used for cereal crops and at the time of the first survey they were predominantly comprised of cereal stubble. Between the surveys they have been left fallow which has allowed ruderal and arable 'weed species to colonise. Plantation and Semi-natural Broad-leaved Woodland

3.14 There are several sections of woodland within the site. These consist of:

On-site: Plantation broad-leaved woodland

- A small plantation of semi mature white poplars *Populus alba*, field maple *Acer campestre*, and ash *Fraxinus excelsior* is present within the north of the site (TN11) with an understory of frequent young white poplar and blackthorn *Prunus spinosa* with the occasional common hawthorn *Crataegus monogyna*, dog-rose *Rosa canina* and elder *Sambucus nigra*. The ground flora consists of abundant barren brome *Anisantha sterilis* with a scattering of agrimony *Agrimonia eupatoria*, ivy *Hedera helix*, false oat-grass *Arrhenatherum elatius* and cock's-foot *Dactylis glomerata*.
- A small broad-leaved plantation of semi mature hybrid black poplars *Populus* x *canadensis* was present to the north central area of the site (TN15) that also supports some aspen *Populus tremula*, white willow *Salix alba*, common hawthorn, elder and spindle *Euonymus europaeus*. Ground flora is composed of largely interspersed stands of great willowherb *Epilobium hirsutum* and common reed *Phragmites australis* with cleavers *Galium aparine* and hedge bindweed *Calystegia sepium* also present. Small amounts of lesser pond sedge *Carex acutiformis*, common nettle *Urtica dioica,* bittersweet *Solanum dulcamara,* creeping thistle *Cirsium arvense* and common hemp-nettle *Galeopsis tetrahit* are also present.
- A young plantation of mixed species (TN22) was recorded in the northwest of the site and is predominantly comprised of field maple, ash and pedunculate oak with lesser amounts of common hawthorn, rowan *Sorbus aucuparia*, dog-rose and beech *Fagus sylvatica*. The young nature of this plantation limits its ground flora composition which is still largely grasses of cock's-foot, false oat-grass and red fescue along with ivy and agrimony.
- A dense scrubby plantation on the southern edge of the site (TN29) comprised of frequent common hawthorn and ash mixed with the occasional pedunculate oak *Quercus robur*, wild cherry *Prunus avium*, dog-rose, blackthorn *Prunus spinosa*, field maple, silver birch *Betula pendula* and common lime *Tilia* x *europaea*. Apple

Malus domestica and spindle are also present. Ground flora in this plantation is very limited due to its density and light availability at ground level yet some grasses of cock's-foot and false oat-grass are present in addition to occasional common nettle, ivy, garlic mustard *Alliaria petiolata*, agrimony, red fescue *Festuca rubra* and wood avens *Geum urbanum*.

- A mature dense ash plantation in the southwest of the site (TN36) is dominated by ash but has a few supporting species of young field maple, hybrid black poplar, silver birch and pedunculate oak. The understory consists of dense young ash with abundant blackthorn and a scattering of common hawthorn and spindle. Ground flora is limited but cow parsley *Anthriscus sylvestris* is frequent.
- A small section of broad-leaved mixed woodland is located in the north of the site (TN43). It was composed of abundant ash and beech with occasional Turkey oak *Quercus cerris*. Shrubs included occasional spindle, elder and blackthorn. Ground flora here is composed of frequent ivy, cleavers, Lords-and-Ladies *Arum maculatum*, common nettle and ivy-leaved speedwell *Veronica hederifolia* with occasional species consisting of wood avens, cow parsley, dog's mercury *Mercurialis perennis*, white dead nettle *Lamium album*, ground-ivy *Glechoma hederacea* and wood forget-me-not *Myotis sylvatica*. This woodland is recognised as a Habitat of Principal Importance (HPI).

Lines of trees and scattered trees

3.15 Two lines of trees are located within the site. They consist of:

- A line of semi mature sycamore trees (LOT1) in the south of the site within the Grange Recreation ground.
- A line of black pine *Pinus nigra* trees (LOT2) in the south of the site within the Grange Recreation ground.

3.16 There are several scattered trees within the site. These consist of a mix of species and include several mature pedunculate oak trees in the northwest central section of the site.

Hedgerows

Figure 2: Typical hedgerow with very narrow arable field margin

3.17 There are a total of 27 hedgerows within the site, some of which were associated with ditches. Full details of these are provided in the Hedgerow Regulations Assessment Report (TEP Ref 9546.005). They are summarised here, and an example shown in Figure 2 above:

- H1 – mature double row common hawthorn hedge
- H2 – semi-mature common hawthorn and blackthorn hedge
- H3 – mature common hawthorn hedge
- H4 – mature common hawthorn hedge
- H5 – mature common hawthorn hedge
- H6 – mature species-rich mixed species hedge
- H7 – mature species-rich mixed species hedge with ditch
- H8 – mature species-rich mixed species hedge
- H9 – mature species-rich mixed species hedge
- H10 – mature species-rich mixed species hedge
- H11 – mature species-rich mixed species hedge
- H12 – mature species-rich mixed species hedge with ditch
- H13 – mature species-rich mixed species hedge with trees and ditch
- H14 – semi-mature species-rich mixed species hedge with ditch
- H15 – mature common hawthorn and goat willow hedge with ditch
- H16 – mature common hawthorn and field maple hedge
- H17 – mature mixed species hedge with trees

- H18 – mature common hawthorn and blackthorn hedge
- H19 – semi-mature common hawthorn and hazel hedge
- H20 – very young common hawthorn hedge
- H21 – mature common hawthorn and blackthorn hedge with trees
- H22 – mature blackthorn hedge with trees
- H23 – mature common hawthorn hedge with trees
- H24 – mature common hawthorn and blackthorn hedge
- H25 – mature blackthorn hedge with trees
- H26 – mature common hawthorn hedge with trees
- H27 – mature common hawthorn hedge with trees

Dense/continuous scrub

3.18 There are various areas of dense/continuous scrub habitat on site, most are dominated by a single species. They are as follows:

- An area of hawthorn dominated scrub (TN1) in the southeast of the site with an understory of bramble *Rubus fruticosus* agg. There are several scattered blackthorns, elder and wild privet *Ligustrum vulgare* shrubs. Common nettle is dominant where bramble does not cover the ground interspersed with some garlic mustard and ivy. Within this area is an area dominated by bramble (TN4) as well as area of blackthorn dominated scrub (TN5).
- An area of mixed scrub within the site (TN17) in the north central area consists of frequent elder, bramble and grey willow *Salix cinerea* with occasional blackthorn and common hawthorn. Ground flora species included common nettle with cleavers, hedge bindweed and large bindweed *Calystegia silvatica*.
- An area of mixed scrub with a few young trees (TN27) that is located in the south of the site and sits between the residential gardens and Hedgerow H17 with a small additional area just west of this to the north of plantation TN29. It consists of various species including common hawthorn, hazel, blackthorn, dog rose, dogwood *Cornus sanguinea*, apple, field maple, spindle, guelder-rose *Viburnum opulus,* and ash. Bramble is also present, and the area was too dense to fully access to identify any ground flora composition. Common nettle, creeping thistle, garlic mustard and grasses of cock's-foot and false oat-grass were present along its frontage. A smaller section (TN28) of mostly bramble is located just to the southwest of this but forms part of the same contiguous habitat with plantation TN29.
- A large area of mixed scrub and young trees is located in the southwest of the site (TN33) composed of frequent field maple, hazel *Corylus avellana*, common hawthorn with occasional Norway maple *Acer platanoides*, blackthorn, bramble, wild privet, dog-rose, ash, sycamore and black pine and rare willow species, silver birch, rowan and butterfly-bush *Buddleja davidii*. Ground flora is limited due to the dense nature of the scrub but includes common nettle, great willowherb, creeping thistle, ivy, agrimony, wood avens, wood dock *Rumex sanguineus*, cleavers and grasses including red fescue, barren brome, cock's-foot and false oat-grass. Small areas of bramble scrub also exist in the southwest of the site (TN31 and TN35).

- A narrow strip of blackthorn scrub is located in the southwest of the site (TN37) located on the western boundary of the site. It fringes the ash plantation TN36.
- Small areas of mixed species scrub of mostly bramble, common hawthorn and elder is located are in the north of the site along just north of Norton Road (TN41 and TN44)
- Three small clumps of dominant blackthorn scrub are located on the edge of the Grange Recreation Ground. One section (TN26) forms as part of an extension to the north of hedgerow H3 while the other two section form part of the northern boundary edge of the recreation ground (TN49). A small area of bramble scrub also borders the southern edge of the recreation ground (TN50).

3.19 Scattered scrub within the site was largely limited to very small sections and has been largely included in other habitats. A small area in the north of the site on the edge of the plantation TN11 and the tall ruderals area TN13 is marked separately.

Figure 3: Scrub area in southeast of site (TN1)

Semi-improved grassland

3.20 A small patch of semi-improved grassland is located in the extreme north of the site (TN40). It consists of abundant yarrow *Achillea* millefolium, oxeye daisy *Leucanthemum vulgare*, cut-leaved crane's-bill *Geranium dissectum* and false oat grass with frequent dove's-foot crane's bill *Geranium molle*, barren brome, red campion *Silene dioica*, common knapweed *Centaurea nigra,* and cock's foot.

3.21 Along the northern boundary of the site there is a strip of semi-improved grassland (TN46) largely dominated by grasses of false oat-grass, Yorkshire-fog *Holcus lanatus* and cock's-foot with lesser amounts of red fescue and rough meadow-grass *Poa trivialis*. Herb species here are varied and diverse and include occasional white dead-nettle *Lamium album*, yarrow, red campion, lady's-bedstraw *Galium verum*, common knapweed, agrimony, oxeye daisy, red clover *Trifolium pratense*, black medick *Medicago lupulina*, cut-leaved crane's bill, meadow buttercup *Ranunculus acris*, hedge bedstraw *Galium album*, wild carrot *Daucus carota* and field scabious *Knautia arvensis*.

Poor semi-improved grassland

3.22 There are several small areas of poor semi-improved neutral grassland present on site. They consist of:

- A small patch within the scrub areas in the southeast of the site (TN2) dominated by false oat-grass with occasional great willowherb, creeping thistle, common nettle and hogweed *Heracleum sphondylium*.
- A small patch bisected by the northern boundary to the north of the site (TN20) of predominantly false oat-grass and cock's-foot with occasional broad-leaved dock *Rumex obtusifolius*, ribwort plantain *Plantago lanceolata* and bristly oxtongue *Helminthotheca echioides*.
- A narrow strip alongside Hedgerow H13 and Ditch D2 (TN24) in the centre of the site, dominated by false oat-grass and cock's-foot with frequent red fescue. This strip is more diverse that other grassland areas on site and supports occasional wild carrot, yarrow, common knapweed, great willowherb, creeping thistle, agrimony, field horsetail *Equisetum arvense* and large-flowered evening-primrose *Oenothera glazioviana*.
- A narrow strip around an arable field in the southwest of the site (TN34) dominated by false oat-grass and cock's-foot with frequent red fescue and occasional other species including broad-leaved dock, common nettle, ribwort plantain, yarrow, common knapweed, creeping thistle and a small patch of a sedge *Carex spp*.
- Narrow strips alongside the Norton Road in the north of the site (TN45) are composed of abundant barren brome with frequent soft-brome *Bromus hordeaceus* and occasional false oat-grass. Of the herbs, common knapweed, cow parsley, Anthriscus sylvestris common nettle, white dead-nettle, yarrow, dandelion *Taraxacum sp.*, hedgerow crane's-bill *Geranium pyrenaicum*, creeping thistle, curled dock *Rumex crispus*, hogweed and Danish scurvygrass *Cochlearia danica* are occasional in the sward.

3.23 The majority of the remaining grassland areas on site are largely located along the arable field margins (TN6, TN9, TN10, TN18, TN23, TN25, and TN30). Most are around 3-5 metres in width and are a mix of grass species; false oat-grass, cock's-foot, Yorkshire-fog, common couch *Elytrigia repens*, red fescue and perennial rye-grass *Lolium perenne* with occasional other grassland and ruderal herbs such as common nettle, creeping thistle, bristly oxtongue, ribwort plantain, greater plantain *Plantago major*, agrimony, yarrow, red bartsia *Odontites vernus*, dandelion broad-leaved dock, wood dock, knotgrass *Polygonum aviculare*, creeping buttercup *Ranunculus repens*, smooth hawk's-beard *Crepis capillaris* and black medick amongst other species.

Figure 2: Typical grassy arable field margin

Amenity grassland

3.24 Amenity grassland forms the main component of habitat within the Grange Recreation Ground in the south of the site (TN48). It is a regularly used area of grassland for dog walking and for sports. It is dominated by perennial rye-grass with abundant daisy *Bellis perennis* and frequent dandelion, creeping buttercup, white clover *Trifolium repens* and common bent *Agrostis capillaris*. There is a small strip of amenity grassland of largely perennial rye-grass just to the east of the recreation ground alongside the edge of teh footpath (TN7) that p[asses through the scrub areas of TN1.

3.25 Smaller roadside sections of amenity grassland are located to the southwest of the site (TN51). Each section is varied in its composition but are largely dominated by perennial rye-grass with abundant dandelion, daisy and frequent ribwort plantain and dove's-foot crane's-bill. Other species present include occasional shepherd's-purse *Capsella bursa-pastoris*, creeping buttercup, wall speedwell *Veronica montana*, yarrow and grasses of cock's-foot and meadow foxtail *Alopecurus pratensis*.

Tall Ruderal

3.26 Tall ruderal habitats can be found in small quantities across the site as follows

- Small stands of great willowherb in the southeast and southwest of the site (TN3 and TN32 respectively).
- Two small strips alongside a track in the northeast of the site composed of creeping thistle, slender thistle *Carduus tenuiflorus* with some bristly oxtongue, wood dock, spear thistle *Cirsium vulgare* and grasses including false oat-grass and cock's-foot (TN12).
- A small stand of mostly common nettle in the northeast with scattered scrub present of bramble, dog-rose, elder, young ash and white poplar (TN13).
- There is also a large stand of tall ruderals (TN16) adjacent to the woodland plantation at TN15. It is composed of a complex mix of great willowherb, common reed and common nettle. It sits of damp soils.

- A narrow strip in the north of the site (TN19) bisected by the site boundary composed of mostly creeping thistle with spear thistle, wood dock, hedge bindweed, mugwort *Artemisia vulgaris*, slender thistle, bristly oxtongue, common mallow *Malva sylvestris*, lesser burdock *Arctium minus*, grasses including cock's-foot and some bramble.
- To the east of hedgerow H15 there is a wide area of arable field margin that is composed of tall ruderals (TN39). It is composed of various species including common nettle, creeping thistle, prickly and smooth sow-thistle, bristly oxtongue, shepherd's-purse and grasses including perennial rye-grass and barren brome.
- A small area of tall ruderal of mixed species is found in the north of the site alongside Norton Road (TN42). It consists of mostly cleavers, common nettle, cow parsley, white dead-nettle, barren brome and false oat-grass.

Figure 5: Tall ruderals (TN16) and reed swamp behind (TN14) with poplar plantation beyond that (TN15).

Swamp

3.27 Adjacent to the off-site plantation broad-leaved woodland in the north central area of the site is a small area of habitat dominated by common reed (TN14). This forms part of an area with damp ground associated with the plantation woodland and tall ruderal vegetation (TN16).

Bare ground

3.28 Bare ground can be found throughout the site, forming public and permissive rights of way. These areas are largely devoid of any vegetation (TN8, TN21 and TN47).

Dry ditches

3.29 The survey identified a number of major ditches present on site. All were largely dry at the time of the surveys. These were:

D1 – a steep sided deep ditch alongside the western side of Hedgerow H12

D2 – a steep sided deep ditch alongside the eastern side of Hedgerow H13

D3 – a shallow ditch alongside the western edge of plantation TN36

D4 – a shallow ditch underneath H15

D5 – a shallow ditch in the north of the side which forms a separate part of D4 north of Norton Road.

3.30 In addition to the ditches listed above very shallow undulations that were probably once ditches of note were also present alongside or within several other hedgerows; H1, H2, H7, and H14.

Introduced Shrub and gardens

3.31 Small areas of introduced shrub and perennial planted gardens exist in the southwest of the site as part of the urban landscape around the amenity grassland roadsides (TN52, TN53 and TN54). They consist of ornamental species.

Notable or Invasive Flora

3.32 No notable (Schedule 8) or non-native invasive flora (Schedule 9) were identified on site or the immediate vicinity of the site boundary. These species are not considered any further within this assessment.

3.33 A single Bluebell *Hyacinthoides non-scripta* (WCA8) record was returned 1.59 km north of the site and a single lizard orchid *Himantoglossum hircinum* (WCA8) record was also returned 700m north of the site.

3.34 Invasive non-native flora species (WCA9) recorded within 2km of the site are as follows:

- Giant hogweed *Heracleum mantegazzianum* – 4 records – 630m east
- Himalayan balsam *Impatiens glandulifera* – 2 records – 1.35km east
- Nuttall's waterweed *Elodea nuttallii* – 1 record – 1.47km west
- Rhododendron *Rhododendron ponticum* – 1 record – within 2km
- Variegated yellow archangel *Lamiastrum galeobdolon subsp*. *argentatum* – 3 records – 790m south
- Wall cotoneaster *Cotoneaster horizontalis* – 1 record – 1.47km west

Habitat Connectivity

3.35 The habitats above connect to a few other hedgerows in the surrounding arable fields, small woodlands and Pix Brook, a small river that runs to the west of the site. Connectivity into the much wider area is restricted by the nearby village developments and several main and extensively used roads; Norton Road to the north, east and northeast, the A507 to the north, and Stotfold and Hitchin Road to the west.

Fauna

3.36 The potential for the site to support legally protected and notable species has been assessed using the results of the desk study and observations made during the site habitat and species surveys within and immediately surrounding the site. Habitats present within the site are suitable for the following species and further consideration is given below to the likelihood for these species to be present within the site:

- Amphibians
- Bats
- Badger
- Birds
- Brown hare
- Hazel dormouse
- Hedgehog
- Invertebrates
- Otter
- Polecat
- Reptiles
- Water vole

The site does not provide suitable habitat for other protected or notable species beyond those listed above. These other species will not be considered further within this report.

Amphibians

3.37 A total of 11 records of GCN (EPS, WCA5, SPI, LBAP) have been recorded within 2km of the site with the nearest records within 1km.

3.38 A review of Natural England's open datasets for granted protected species licences did not return any class licence returns or conclusive pond survey data for great crested newts between 2017 and 2019 within 2km of the site.

3.39 There are four records of common toad *Bufo bufo* (SPI) within the 2km search area surrounding the site, with the nearest record being 370m to the southwest.

3.40 Six ponds were identified within 500m of the site. Of these, three were subject to eDNA sampling and five were subject to a Habitat Suitability Index (HSI) assessment. One pond known as Norton Pond at Payne's Farm is located 350m to the southeast of the site and adult GCN were identified to be present in this pond during the amphibian survey. As a result, it was not required to be subject to eDNA sampling. Another pond was not subject to eDNA as its banks were too steep to allow safe access. A further pond was not accessible and was neither surveyed or HSI assessed. The three ponds that were eDNA sampled were negative in terms of results for GCN. All five of the ponds HSI assessed achieved good or higher suitability for GCN.

3.41 Full details of the amphibian survey are covered under a separate cover (TEP REF: 9546.01.001) and included as Appendix F.

3.42 The Pix Brook which is located to the west of the site at approximately 380m at its nearest point was considered unlikely to support amphibians due to its nature of fluctuating water flows and tendency to become flashy during storm events.

3.43 The woodlands, plantations, hedgerows, scrub, grasslands, tall ruderal and reed swamp habitats are all suitable to support amphibians during their terrestrial part of the life cycles.

Badger

3.44 <<redacted>>

3.45 <<redacted>>

3.46 <<redacted>>

3.47 <<redacted>>.

Bats

3.48 A total of 144 records of the following bat species were returned within 2km of the site:

- Unidentified bat species spp. - HabRegs2, WCA5
- Brown long-eared *Plecotus auritus*- HabRegs2, HSD4, S41, WCA5
- Common pipistrelle *Pipistrellus pipistrellus* - HabRegs2, HSD4, WCA5
- Daubenton's bat *Myotis daubentonii*- HabRegs2, WCA5
- Unidentified long-eared bat - HabRegs2, WCA5
- Noctule *Nyctalus noctula*– HabRegs2, HSD4, S41, WCA5
- Pipistrelle spp. – HabRegs2, WCA5
- Serotine *Eptesicus serotinus*- HabRegs2, S41, WCA5
- Soprano pipistrelle *Pipistrellus pygmaeus*– HabRegs2, HSD4, S41, WCA5

3.49 In addition, a total of 33 roosts of various species were returned within 2km of the site; the nearest roost was recorded less than 600m away

3.50 Several bat surveys including aerial tree inspections, static surveys and bat transects have been undertaken over the Spring and Summer 2023 to further clarify the status of bat species within the site.

3.51 Full details of the bat surveys are covered under a separate cover (TEP REF: 9546.01.002) and included as Appendix L.

3.52 The woodlands, hedgerows, scrub and tall ruderal habitats offer foraging and commuting opportunities for bats.

Birds

Numerous records of bird species were recorded within 2km of the site and are detailed within the desk study, however of the species identified, the habitats on site offer suitable breeding and foraging habitat for the following notable species:

Common Name:	Scientific Name:	Designation:
Hobby	*Falco Subbuteo*	WCA1
Quail	*Coturnix coturnix*	WCA1, BAm
Skylark	*Alauda arvensis*	S41, BRd
Cuckoo	*Cuculus cuculus*	S41, BRd
Corn bunting	*Emberiza calandra*	S41, BRd
Yellowhammer	*E. citrinella*	S41, BRd
Reed bunting	*E. schoeniculus*	S41, BAm
Linnet	*Linaria cannabina*	S41, BRd
Yellow wagtail	*Motacilla flava*	S41, BRd
House sparrow	*Passer domestica*	S41, BRd
Dunnock	*Prunella modularus*	S41, BAm
Turtle dove	*Streptopelia turtur*	S41, BRd
Starling	*Sturnus vulgaris*	S41, BRd
Song thrush	*Turdus philomelos*	S41, BRd
Bullfinch	*Pyrrhula pyrrhula*	S41, BAm
Grey partridge	*Perdix perdix*	S41, BRd
Mistle thrush	*Turdus viscivorus*	BRd
Greenfinch	*Chloris chloris*	BRd
Stock dove	*Columba oenus*	BAm
Kestrel	*Falco tinnunculus*	BAm
Willow warbler	*Phylloscopus trochilus*	BAm
Tawny owl	*Strix aluco*	BAm
Rook	*Corvus frugilegus*	BAm
Sparrowhawk	*Accipiter nisus*	BAm
Wren	*Troglodytes troglodytes*	BAm

3.53 Skylark, yellowhammer, linnet, house sparrow, dunnock, starling, stock dove, kestrel and wren were identified to be present on site during the Phase I survey in August

2022 along with other common species. All these species and corn bunting, song thrush, greenfinch, sparrowhawk, and tawny owl have all been recorded during the winter and or breeding bird surveys. House sparrow and starling have been confirmed to be breeding on site while skylark, yellowhammer, linnet, dunnock and greenfinch are thought to have bred on site. The other species are more likely to be supported by habitats in the wider landscape for foraging.

3.54 Winter bird and breeding bird surveys have been undertaken over the winter of 2022 and 2023 and during Spring and Summer 2023 respectively to further clarify the status of bird species within the site.

3.55 Full details of the Winter Bird survey are covered under a separate cover (TEP REF: 9546.03.001) and included as Appendix J.

3.56 Full details of the Breeding Bird survey are covered under a separate cover (TEP REF: 9546.02.001) and included as Appendix I.

Brown hare

3.57 A single record of brown hare (S41) was returned from a location 1.2km to the northeast of the site.

3.58 Habitat on site is suitable to support the species but the site is likely too disturbed to support the species .

Hazel Dormouse

3.59 No records of hazel dormouse were returned from the 2km search area.

3.60 Several hedgerows and woodlands on site have the potential to support hazel dormouse. Given the lack of records in the local vicinity it is considered unlikely the species would be present on site. A dormouse scoping survey was undertaken on 6th March 2023 which identified several hazelnuts with gnaw marks that were borderline potential of being formed by hazel dormouse. As a consequence, a hazel dormouse survey was undertaken on a precautionary basis, but no dormouse or signs of dormouse were identified.

3.61 Full details of the Dormouse survey are covered under a separate cover (TEP REF: 9546.07.001) and included as Appendix K.

Hedgehog

3.62 A total of 111 records of hedgehog Erinaceus europaeus (S41) were returned within 2km of the site.

3.63 The scrub, woodland, plantations and hedgerows have the potential to support breeding, foraging, and hibernating hedgehog.

Invertebrates

3.64 The desk study identified numerous records of invertebrate species within 2km of the site, of note the following species:

Common Name:	Scientific Name:	Designation:
Chalk hill blue	*Polyommatus coridon*	LBAP
Grizzled skipper	*Pyrgus malvae*	S41, LBAP
Stag Beetle	*Lucanus cervus*	WCA5, S41, LBAP

3.65 Although the habitats within the site may be suitable for a number of the invertebrate species, it is not considered that the site is of particularly elevated value to invertebrates locally.

Otter

3.66 Thirteen records were returned for Otter *Lutra lutra* (WCA5, S41) within 2 km of the site. Three otter spraints were found to the west of the site on the Pix Brook approximately 450m southwest of the site during the first otter and water vole survey on 11th August 2022. The nearest previously returned record was approximately 890m away to the north. However, it was beyond the main A507 road. No other evidence of otter was found.

3.67 Full details of the otter survey are covered under a separate cover (TEP REF: 9546.004) and included as Appendix G.

3.68 There is no habitat on site that would support otter. The Pix Book to the west at the very least, supports otters for foraging.

Polecat

3.69 A single Polecat *Mustela putorius* (S41) record was recorded from within the site from the data search.

3.70 The woodlands, hedgerows, scrub, grasslands, tall ruderals and arable field margins are all habitats suitable to support polecat.

Reptiles

3.71 Two common lizard *Zootoca vivipara* (WCA5, S41) records were returned from the 2km search area surrounding the site. No reptiles were recorded during the Reptile survey undertaken in September-October 2022. Two slow-worms and a single grass snake were identified in additional surveys undertaken between August-October 2023.

3.72 Full details of the reptile survey are covered under a separate cover (TEP REF: 9546.04.001) and included as Appendix E.

3.73 The woodlands, plantations, hedgerows, grasslands, scrub, reed swamp and tall ruderal habitats on site are all suitable habitat to support reptiles.

Water Vole

3.74 Fourteen water vole *Arvicola amphibius* (WCA5, S41, LBAP) records were returned from the 2km data search surrounding the site. The nearest record was from 950m to the north and north of the significant A507 road.

3.75 Full details of the water vole survey are covered under a separate cover (TEP REF: 9546.004) and included as Appendix G.

3.76 There is no habitat on site that would support water vole. The Pix Book to the west has the potential to support water vole but during the otter/water vole surveys undertaken, no signs were found.

Opportunities and constraints

3.77 An Opportunities and Constraints Plan (G9546.08.001) has been produced in relation to the Desktop, Phase 1 and protected species data obtained, and in-line with the Hertfordshire County Council (HCC) Ecological Networks Map for the LG1 Letchworth area.

3.78 This HCC Ecological Networks Map forms part of the dataset produced by the Hertfordshire Local Nature Partnership and provided in the 'Guidance on applying 'Hertfordshire's Ecological Networks' within the planning system' document.[15] This dataset and the produced Opportunities and Constraints Plan sets out to identify the strategic priorities and which/where habitats need to be maintained, restored and created.

[15] *Planning guidance on applying Herts ecological networks_Final Oct 2014.pdf (hertswildlifetrust.org.uk)*

4.0 Assessment of Potential Impacts

4.1 This section assesses the potential impacts on ecological features associated with the Proposed Development described in Section 1.

4.2 Consideration is given to the 'mitigation hierarchy,' i.e., that impacts are first avoided or where this is not practicable, mitigated and as a final resort, compensated (off-set).

Wildlife Sites

Statutory Designated Sites

4.3 There are no internationally or nationally designated wildlife sites within 10km and 5km respectively, nor does the site fall within any SSSI IRZ's.

4.4 Three statutory wildlife sites of local significance are within 2km of the site. These are

- Norton Green LNR – 0.8km south – woodland, grasslands and running water habitats
- Stotfold Mill Meadows LNR – 1km north – woodland grassland and pond known to support wildfowl and amphibians
- Ivel Springs LNR – 1.3km east – woodland, grassland and running water habitats

4.5 Given the distance to the site, no direct impacts are anticipated on these designated sites. It is possible that all these sites may experience indirect impacts through increased recreational use .

Non-statutory Designated Sites

4.6 There are a total of fifteen non-statutory locally designated sites within 2km of the site. The desk study gives details of all of them. Those that may be subject to indirect impacts are listed below. No non-statutory locally designated site is expected to be impacted upon directly.

- Norton Pond, Payne's Pond – 200m southeast – pond that may be subject to indirect impact from polluted water runoff from increased traffic use of Norton Road post and during construction and from other pollutants including dust from the construction works and from increased road traffic and human disturbance post construction.
- Radwell Meadows Northwestern field – 500m east – grassland habitat with significant grassland flora indicator species that is highly unlikely to be subject to indirect impacts and from increased road traffic and human disturbance post construction.
- Radwell lake – 600m northeast – lake and wildfowl site that could be subject to is highly unlikely to be subject to indirect impacts and from increased road traffic and human disturbance post construction.
- River Ivel Nortonbury – 600m northeast – river with protected species that could be subject to increased pollutants during the construction works via Ditch D5 north of Norton Road which connects with this River

Habitats and Flora

Notable Habitats

4.7 A small area of S41 deciduous broad-leaved woodland habitat is located within the north of the site and further areas are found along the stretches of the Pix Brook 450m to the southwest. Areas of good quality semi-improved grasslands are present to the southeast and northeast of the site within 500m of the site. These habitats are local priority habitats as well as habitats of Principal Importance (HPI) but are not subject to direct impacts from the development. They may be subject to increased access pressures from the proposed increased local population and local traffic as they are (at least in part) publicly accessible.

4.8 Small areas of publicly accessible S41 traditional orchard are found adjacent to and 360m south of the site. Direct impacts are not expected to occur on either of these orchards, but the orchard adjacent to the site may be subject to indirect impacts from construction dust and other pollutants during construction works while both are likely to have increased access pressures from the proposed increased local population and local traffic.

Other Habitats

Semi-natural broad-leaved woodland, Lines of Trees, Plantation Broad-leaved woodland and scattered broad-leaved trees

4.9 None of the areas of plantation or semi-natural broad-leaved woodlands, or large scattered trees, on site or adjacent to the site are expected to be directly impacted as a result of the proposals as all are expected to be retained. These habitats may be subject to indirect impacts from construction dust and other pollutants during construction works and from increased road traffic and human disturbance post construction.

4.10 Some small, scattered trees may be subject to loss but currently the extent of this is unknown. On site potential mitigation for this loss is feasible without negatively impacting upon other habitats.

Hedgerows

4.11 Some hedgerows will be subject to some losses as part of the proposals to provide access routes through the site. The extent of loss is currently unknown but the current high level masterplan proposals indicate replacement hedgerow planting can be incorporated into the development to mitigate for any losses occurring. All other hedgerows are expected to be retained. All of the hedgerows may be subject to indirect impacts from construction dust and other pollutants during construction works and from increased road traffic and human disturbance post construction.

Scrub

4.12 Some small areas of scrub habitat may be lost as part of the proposals. Some of this loss may be due to proposed wildlife area enhancement works to mitigate other

habitat losses elsewhere. The full extent of scrub loss is not currently known. Any losses to scrub can feasibly be mitigated for on site within the proposed development area. All areas of retained scrub may be subject to indirect impacts from construction dust and other pollutants during construction works and from increased road traffic and human disturbance post construction.

Semi improved and Poor semi-improved grassland

4.13 Some of the small areas of semi-improved and poor semi-improved grasslands may be lost as part of the proposals, the extent of which is currently unknown. The High Level Masterplan proposals suggests that this habitat may increase to mitigate for the losses of other habitats. Any losses to grassland habitats can feasibly be mitigated for on site within the proposed development area.

4.14 All of the arable field margin habitats are expected to be lost as part of the proposals. These losses are small and can be mitigated for on site within the proposed development area.

4.15 All of the grassland habitats may be subject to indirect impacts from construction dust and other pollutants during construction works and from increased road traffic and human disturbance post construction.

Tall Ruderals

4.16 Some areas of tall ruderal vegetation may be lost as part of the proposals. Some of this loss may be due to proposed wildlife area enhancement works to mitigate other habitat losses elsewhere. The full extent of tall ruderal loss is not currently known. Any losses to these habitats can very easily feasibly be mitigated for on site within the proposed development area. All of them may be subject to indirect impacts from construction dust and other pollutants during construction works and from increased road traffic and human disturbance post construction.

Reed swamp

4.17 This habitat is unlikely to be impacted upon directly from the proposed development. It may be subject to indirect impacts from construction dust and other pollutants during construction works and from increased road traffic and human disturbance post construction.

Dry ditches

4.18 All of the dry ditches on site are due to be retained and are unlikely to be directly impacted upon. All may be subject to indirect impacts from construction dust and other pollutants during construction works particularly polluted water runoff and from increased road traffic and human disturbance post construction.

Arable

4.19 All of the arable habitat is due to be lost as part of the proposed development. These habitats have limited biodiversity value and their losses can be mitigated for onsite through enhancement and creation of additional more biodiverse habitats.

Habitat Change

4.20 Details of habitat change are currently unknown; however, it is anticipated that in order to mitigate for habitat losses required to enable development, new habitat creation, enhancement and ongoing management will be required.

Fauna

Amphibians

4.21 Norton Pond at Payne's Farm located 350m to the southeast of the site was identified to hold GCN during the amphibian HSI and eDNA surveys. This pond has no significant dispersal barriers between it and the site. Furthermore, the suitability of the other surveyed four offsite ponds to support GCN ranged from Good to Excellent although the three ponds that were sampled returned negative results during the eDNA sampling.

4.22 GCN are generally accepted to range up to 500m from breeding ponds, but generally use habitats within the immediate and intermediate distances up to 250m. Given there are no ponds within the site to range towards and that the habitats within the site within 500m of the breeding pond are predominately sub-optimal arable habitat, there is a low risk that GCN will utilise the site during their terrestrial part of their life cycles.

4.23 The presence of four common toad records close to the site and plentiful suitable terrestrial habitat indicates that there is a risk of direct impacts to other more common amphibians potentially present within more optimal terrestrial habitat on site.

No ponds or ditches will be impacted directly, so direct impacts to breeding habitats are considered unlikely.

Badger

4.24 <<redacted>>

Bats

4.25 The several returns of confirmed bat roosts within 2km of the area and a large number of sighting returns (144 records) suggest that the area and habitat is very suitable and highly likely to be utilised by bats.

4.26 Initial PRA's identified 20 trees with bat roosting potential. TEP have undertaken a number of surveys on trees including cavity searches, transects and dusk and dawn surveys,

4.27 A total of three trees (T121, T126, T129) were found to have high bat roost potential, six trees (T123, T125, T127, T132, T136 and T241) with moderate bat roost potential and 11 with low roost potential. All of these trees were within the north central section along Hedgerows H13 and H14 and within the plantation and scrub habitats of areas TN15 and TN17. In addition, plentiful bat records have been picked up in the surveys. These mostly consist of Pipistrelle species, but some records of possible barbastelle have also been recorded.

4.28 Trees with roost potential have been identified on site but are all likely to be retained, so no direct impact is expected, however a mitigation strategy will be required to avoid indirect impacts.

4.29 The optimal foraging and commuting habitats are also likely to be largely retained but similarly a mitigation strategy is required to ensure foraging and commuting habitat is maintained. The majority of habitat that is to be lost is arable which is a sub-optimal foraging habitat.

4.30 Overall, the site falls within the Core Sustenance Zone (CSZ) for bat populations within the wider landscape and habitat features are of local value for providing connectivity between higher quality foraging habitat within the wider landscape. Habitats within the site are therefore of value for supporting the Favourable Conservation Status (FCS) of bats within the wider landscape and the proposed development may impact dispersal of foraging and commuting bats within the site and the surrounding locality.

4.31 The woodlands, lines of trees, scattered trees, scrub, hedgerows, grassland and tall ruderal vegetation offer opportunities for foraging and commuting bats and some of this will be directly impacted by the proposals. Indirect impacts to these habitats may also reduce their potential for foraging and or supporting roosts.

Birds

4.32 Both wintering and breeding bird surveys have been undertaken. Several red and amber listed birds of conservation concern are confirmed or probably bred on or adjacent to the site within the habitats present including skylark, linnet, yellowhammer and corn bunting. These four species are birds of open habitat with skylark being a ground nesting species of arable fields while the other three breed in hedgerows adjacent to open country fields either arable or pasture. Furthermore, these species were also present along with meadow pipit during the winter months and were utilising the arable fields and their field margins for winter forage.

4.33 This open habitat is going to be almost entirely lost due to proposals and therefore it is highly unlikely to support these species post development. It is possible that these species may find opportunities in the wider area where similar habitat is present, however the loss of suitable open space habitat for breeding and foraging coupled with an increased disturbance from the increased population will likely have an indirect negative impact on the local populations of these species.

4.34 Several other species were also recorded on site that utilise the site for foraging and have an ecological preference for foraging more open habitats include kestrel, red kite, sparrowhawk, stock dove, golden plover, and greenfinch. The loss of the extent of open habitats locally coupled with an increased disturbance from the increased population is likely to also have an indirect negative impact on the local populations of these species.

4.35 Other red listed species present on site include house sparrow and common starling. The former two species breed in residential homes to the south of the site within the Grange and are known to forage both within the urban areas especially the gardens but also utilise the neighbouring scrub, hedgerows and grassland habitats, some of which may be subject to direct and indirect impacts as well as increased disturbance pressures. However, it is possible that the proposed development will offer more opportunities for these two species if created open space habitats, residential homes, and associated garden spaces offer breeding locations for these species within their design.

4.36 Most of the other species found to be present on site are species typical of woodlands, hedges as well as structural diverse gardens and urban park habitats. These include blackbird, blue, great, and long-tailed tit, dunnock, robin, wren, woodpigeon, and goldfinch. The impacts upon these species are likely to not be significant.

4.37 The provision of greater structural diversity within any proposed open space habitats created and nesting opportunities provided by buildings will benefit a range of common species.

4.38 No schedule 1 bird species were identified to breed on site. Furthermore, during the winter bird surveys the site was not found to significantly support wintering wading birds or wildfowl although a flock of golden plover were recorded

4.39 There is a risk of damage or destroying a nest if tree felling, lopping or vegetation clearance is carried out in the nesting period (generally considered to be between March to August inclusive, although some species also commonly nest outside this period).

4.40 An all-encompassing assessment of the value of the site concludes that the site is of local significance for breeding birds and of offers some value for both foraging passerines and non-passerines during the winter although the resources utilised in the winter are not restricted to the survey area; hedgerows and arable fields and are all present in the surrounding area.

Brown hare

4.41 With just a single record returned within the 2km search radius surrounding the site and no evidence of them being on site it is considered highly unlikely that brown hare will be impacted upon as part of the development proposals. Brown hare therefore does not represent a constraint to the proposals and is therefore not considered further in this report.

Hazel Dormouse

4.42 No records were returned from the 2km search, and no records or evidence was obtained from the dormouse surveys. It is therefore likely that dormice are absent from the site and therefore does not represent a constraint to the proposals and is therefore not considered further in this report.

Hedgehog

4.43 Given a large number of records (111) and plentiful suitable habitat which of which a proportion is likely to be lost as part of the proposals there is an elevated risk that hedgehog may be directly impacted upon.

Invertebrates

4.44 Proposals will impact on habitats suitable for a variety of invertebrates that may include notable species such as those identified from the desk study. It is unlikely that that the impacts on invertebrates will be anything more than low to any given species population as most of the optimal habitat for invertebrates present on site will be retained and that these habitats are widespread in nature with further areas of such habitats present in the surrounding landscape.

4.45 Invertebrates do not represent a significant constraint to the proposals and are therefore not considered further in this report.

Otter

4.46 There is no habitat on site that would support otter and therefore the likelihood of direct impacts on otters is negligible.

4.47 Otter was found to be present in the Pix Brook which is more than 30m away from any proposed development so impacts on any otter holts, if present, are highly unlikely. There is a potential for indirect impacts upon the watercourse through pollution into water courses including the ditch network, which may cause knock on effects to otter using this habitat.

Polecat

4.48 Polecat habitat is found on site and a single record of the species was also returned from within the site. This species is rare but recovering from historical extinctions. A single record does not constitute a population but as a consequence there is still a risk, albeit low, of the proposals having a direct impact upon this species.

Reptiles

4.49 There were no records from the reptile survey undertaken in October 2022 and only two returned records of common lizard within 2km.

4.50 Two slow-worms and a single grass snake were recorded in surveys north of Norton Road (considered a significant but not insurmountable barrier to reptile movement) so populations of these species are thought to be low. Due to these low populations as a consequence, there is still a risk, albeit low, of the proposals having a direct impact upon this species.

Water Vole

4.51 There is no habitat on site that would support water vole and therefore the likelihood of direct impacts on water voles is negligible.

4.52 There is a potential for water vole to be present in the Pix Brook such that there is a potential for indirect impacts upon the watercourse which may cause knock on effects to water vole should they be present.

5.0 Mitigation and Enhancement

5.1 This section describes appropriate and proportionate measures for impact avoidance, mitigation and enhancement required or recommended to address the potential ecological effects described in Section 4.0.

Planning Context

5.2 The development should be undertaken with due consideration to Policies SP1, SP5, SP12 and SP15 and the NPPF and ensure that the Mitigation hierarchy process is considered with regards to impacts on nature conservation and biodiversity.

Standard Recommendations to Preserve Wildlife

5.3 A Construction Environmental Management Plan (CEMP) should be produced for the site. This should include measure to prevent damage or pollution to on-site and adjacent habitats and designated sites. Standard pollution prevention measures should be included and adhered to at all times during construction to avoid impacts on the on-site and adjacent designated sites.

5.4 It is recommended that an ecological Precautionary Working Method Statement (PWMS) for the protection of habitats and species is drafted to inform ecological input into the contractors CEMP.

5.5 If applicable, the PWMS will identify any further measures to ensure that impacts on nearby designated sites or priority habitats are reduced to a reasonable minimum such that the qualifying features of such designations are not negatively affected by the proposed development.

Habitats and Flora

Habitats

5.6 All on-site Plantation broad-leaved woodland, scattered/lines of trees and hedgerows should be retained where possible. It is understood that a new access road is proposed in the north of the site which may impact on a number of hedgerows and result in some hedgerow loss. It is recommended that a buffer zone in line with RPA/arboricultural advice *BS5837:2012* is incorporated around retained Plantation broad-leaved woodland, lines of trees and hedgerows. Built development including gardens should be excluded from the buffer zone.

5.7 Replacement woodland, tree and hedgerow planting comprising native, and climate resilient species should be undertaken on site to compensate for any loss of woodland, plantation and hedgerows caused by the proposals.

5.8 Grassland should be retained where possible, although the loss of grassland arable field margins is anticipated. New grassland creation should be sown with native species-rich grassland mixes and managed sensitively to compensate for the loss of any existing grassland.

5.9 Native species shrub planting should be included within the proposals to compensate for the loss of any dense scrub on site.

5.10 Retained Plantation broad-leaved woodland, lines of trees, scattered trees and hedgerows should be protected from accidental damage during site clearance and construction, in accordance with BS5837:2012 Trees in relation to design, demolition and construction.

5.11 Habitat enhancement measures are further discussed under the 'Habitat Enhancement' below.

Habitats of Principle Importance

5.12 The S41 broad-leaved woodland on site and the traditional orchard habitat located adjacent to the site should be protected throughout the development. The CEMP detailed above would ensure accidental damage to these notable habitats is avoided.

5.13 The S41 habitat hedgerows is also present on site. Where possible, detailed design should seek to retain all native hedgerows within an appropriate setting in the final design. Best practice pollution prevention measures should be implemented to protect retained hedgerows within and adjacent to the site from construction activities, including dust, airborne debris and run-off.

5.14 Where hedgerow retention is not possible, priority for retention should be placed upon the species rich hedgerows and those that have the potential to be ‘ important’ as well as hedgerows which provide an important connectivity function.

5.15 The hedgerows that are included under these definitions are: H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, and H24.

5.16 Where hedgerow loss cannot be avoided, losses will be mitigated or compensated for. As far as practical, all native hedgerows which cannot be retained in situ should be translocated to appropriate alternative location(s). Any remaining hedgerow losses will be compensated for through new planting. New planting and gap-planting of hedgerows will also be implemented to further enhance ecological networks within the site and local landscape and to deliver net biodiversity gain, both in terms of habitat quantity and ecological function.

5.17 Retained and new hedgerows (including those translocated) within the site should be within a setting appropriate to the maintenance of the ecological function i.e. avoiding private boundaries, road margins etc. New hedgerows proposed in such situations should not contribute to the balance of existing hedgerows to be lost.

Fauna

Amphibians

Further Survey

5.18 No further surveying is required.

Mitigation, Compensation and Licencing

5.19 Although GCN has been located within Norton Pond 350m to the southeast of the site, Natural England mitigation licence for GCN will not be required as the pond is unlikely to be impacted upon by the development proposals and GCN are considered highly unlikely to range into the site.

5.20 A Precautionary Working Method Statement (PWMS) should be produced to include precautionary working measures to avoid impacts on a range of species, including common amphibians.

5.21 The PWMS will be followed during site clearance and vegetation removal and must be undertaken in consultation with and under supervision of, where necessary, a suitably qualified ecologist.

5.22 In the event a GCN is identified within the site, it must not be moved or handled, and all works within the area must cease until advice from a licenced ecologist is obtained. The licenced ecologist will liaise with Natural England. Depending on the outcome of this, a licence may be required (if not already in place at the site) to complete the works.

Badger

Further Survey

5.23 It is recommended that a badger walkover survey is undertaken of the site immediately prior to any works. Locations of setts, level of activity, and any other signs of badger should be recorded.

5.24 A badger walkover survey can be undertaken at any time of year but is best undertaken during the winter months when vegetation is less likely to obscure setts or signs.

5.25 Following the badger walkover survey, further badger monitoring surveys aided by the use of camera traps may be required to fully assess any activity of setts if they are found.

Mitigation, Compensation and Licencing

5.26 Mitigation measures will be informed by the further badger survey.

5.27 If an active sett is required to be removed or works which may disturb badger are proposed to be undertaken within 30m of the sett, a Natural England badger licence may be required to be obtained in order to facilitate the works.

5.28 If a main sett is required to be closed, a replacement artificial sett will be required to be created.

5.29 Regardless of the results of the further survey and the need for licencing, it is recommended that measures are included within the PWMS in relation to badger to avoid impacts on this species.

Bats

5.30 At least ten trees were considered to have potential roost features with moderate to high suitability for roosting bats, but additional trees may have moderate or higher PBRF's

Further Survey - Nocturnal Emergence Re-entry Surveys

5.31 T121, T126, and T129 has high suitability to support roosting bats. T123, T125, T127, T132, T136 and T241 have moderate suitability to support roosting bats. Therefore, should they be unavoidably impacted upon as part of the proposals further emergence/re-entry surveys will be required on these trees to assess whether bat roosts are present. The scope of further emergence surveys will be identified once a masterplan has been finalised and any necessary tree removal has been identified.

Mitigation, Compensation and Licencing

5.32 Mitigation measures will be informed by the ongoing surveys due to be published in September 2023 and should they be required the further bat surveys described above.

5.33 If any bat roosts are recorded on site and are to be affected a Natural England EPSM licence will be required once planning permission has been granted and prior to works commencing. A suitable mitigation strategy would need to be developed as part of the licence. The details of this would depend on the species recorded roosting and the conservation status of the roost.

5.34 The PWMS should include measures in relation to bats.

5.35 As previously stated, it is recommended that all mature on-site trees are retained in the proposals. If this is not possible, any trees identified as having low suitability to support roosting bats will need to be soft-felled using hand tools under supervision of a bat licenced ecologist. Sections containing suitable roosting features will need to be carefully lowered to the ground using ropes.

5.36 Plantation broad-leaved woodland, line of trees, and hedgerows should be retained on-site where possible, to avoid impacts on suitable foraging and commuting habitat. Native woodland, tree and hedgerow planting should be undertaken to compensate for the loss of suitable foraging and commuting habitat.

5.37 A sensitive lighting strategy, both during site clearance and construction works, and post-occupation, must be implemented to minimise any light spill onto areas of suitable bat foraging and commuting habitat to avoid potential impacts on foraging and commuting bats. The lighting strategy should be developed in accordance with current guidance on bats and artificial lighting in the UK[16] and should address the following key design principles:

- Dark corridors maintained across key areas of suitable bat foraging and commuting habitat such as woodland, plantations treelines and hedgerows;

[16] Bat Conservation Trust and Institution of Lighting Professionals (2023) Bats and Artificial Lighting at Night. Guidance Note 08/23.

- Use of unnecessary lighting will be avoided;
- Spatial spread of lighting – the horizontal and vertical spread of artificial light will be minimised and take into account both primary and reflected light sources. Directional lighting can be achieved through the use of LED bulbs and by angle and orientation of beam. Use of a cowl, louvre or other light shield could also be implemented if required.
- Variable lighting regime – Timers will be used to ensure that overall illumination is reduced during core night-time hours.
- Intensity and colour of lighting – light intensity will be as low as possible whilst meeting the objectives of the intended function. Light sources selected will emit zero ultra-violet light wherever possible.

5.38 Providing mitigation and compensation for impacts on bat foraging and commuting habitat are incorporated into the proposed development, the FCS of bat populations using the site and within the locality should be maintained.

Birds

Further Survey

5.39 No further bird surveys are required.

5.40 If removal of suitable nesting habitat is required during nesting bird season, this will require a nesting bird check to be carried out by a suitably qualified ecologist immediately prior to any clearance works commencing. If evidence of nesting is observed, a buffer zone will need to be set up around the nest, the size of which will be dependent upon the species nesting. The ecologist will monitor the nest to confirm when any young have fledged, following which vegetation clearance works can proceed.

Mitigation and Compensation

5.41 Measures in relation to breeding and wintering birds should be included within the PWMS.

5.42 Plantation broad-leaved woodland, continuous scrub and hedgerow removal should be minimised where possible. Removal of woodland, plantation, dense scrub or hedgerow works should be undertaken outside of the bird breeding season of March to August inclusive, to avoid harm to nesting birds.

5.43 If removal of suitable nesting habitat is required during nesting bird season, this will require a nesting bird check to be carried out by a suitably qualified ecologist immediately prior to any clearance works commencing. If evidence of nesting is observed, a buffer zone will need to be set up around the nest, the size of which will be dependent upon the species nesting. The ecologist will monitor the nest to confirm when any young have fledged, following which vegetation clearance works can proceed.

5.44 Native species woodland, hedge, tree, and scrub and grassland planting should be undertaken to compensate for the loss of suitable nesting habitat and provide winter forage for wintering species like thrushes and finches.

5.45 Mitigation/compensation will likely be required for the loss of foraging and breeding habitats for the arable farmland species including skylark, meadow pipit, linnet, and yellowhammer which are highly likely to be indirectly impacted or displaced.

Hedgehog

5.46 Sensitive clearance measures in relation to hedgehog should be included in the PWMS.

5.47 Hedgehog access holes are recommended to be created at ground level in all new boundary walls and fences across the site around plots and edges of the development to allow hedgehog to move freely throughout the site. Access holes will be a minimum of 130mm in size and should be marked with 'Hedgehog Highway signs' (Figure 6) to ensure residents are aware of the purpose and to discourage the blocking up of these holes.

Figure 6: Hedgehog access hole in wooden panel fence

5.48 Hedgehog highway signs are available from www.nhbs.com.

Polecat

Mitigation and Compensation

5.49 The (PWMS) should include precautionary working measures to avoid impacts on a range of species, including polecat.

5.50 The PWMS will be followed during site clearance and vegetation removal and must be undertaken in consultation with and under supervision of, where necessary, a suitably qualified ecologist.

5.51 In the unlikely event that a polecat is identified within the site, it must not be moved or handled, and all works within the area must cease until advice from an ecologist is obtained.

Reptiles

Further Survey

5.52 No further surveys are required.

Mitigation and Compensation

5.53 A Precautionary Working Method Statement (PWMS) should be produced for the site. This will include precautionary working measures to avoid impacts on a range of species, including common reptiles.

5.54 The PWMS will be followed during site clearance and vegetation removal and must be undertaken in consultation with and under supervision of, where necessary, a suitably qualified ecologist.

5.55 In the unlikely event a reptile is identified within the site, it must not be moved or handled, and all works within the area must cease until advice from an ecologist is obtained.

Otter and water vole

Further Survey

5.56 No further surveys required.

Mitigation and Compensation

5.57 Neither of these species are likely to be present within the site itself given the lack of suitable on-site habitat, however, indirect impacts upon Pix Brook are possible as a result of the proposed development. The implementation of the CEMP should prevent any damage to such habitat and otter and water vole should they be present.

Habitat Enhancement

5.58 Habitat enhancements would be informed by the Design Stage BNG Assessment.

5.59 A habitat management plan should be produced for the site detailing management prescriptions for the post-development habitats to ensure the target habitats and conditions are reached.

5.60 New areas of species-rich wildflower meadow, native woodland, and native scrub could be created on site.

5.61 Any SuDS created on site should be done so with an aim of achieving a semi-naturalised pond, including permanent areas of water , native aquatic and marginal planting and varying bank grading.

Faunal Enhancement

5.62 New semi-natural SuDS features would result in an enhancement in breeding habitat on site for common amphibians and also provide suitable habitat for bats, birds, reptiles and invertebrates.

5.63 Hibernacula could be created in areas of retained habitat and newly created areas of semi-natural open space, to provide enhanced hibernation opportunities for amphibians and reptiles.

5.64 Any woody vegetation removal undertaken should be used to create log piles and brash piles which should be located in retained areas of grassland and woodland to provide increased refuge opportunities for a range of species including hedgehog.

5.65 Bat and bird boxes should be installed on site. Built-in bird boxes and built-in bat boxes should be incorporated into buildings where possible. Additionally, bat and bird boxes should be installed onto retained mature trees on site. Precise numbers and models of bat and bird boxes will be informed by the results of the further bat and breeding bird surveys.

5.66 Invertebrate boxes and bug hotels could be installed into retained areas of woodland and in new areas of open space.

Environmental Best Practice

5.67 In addition, general environmental protection measures must be implemented during the construction phase of the proposed scheme. The following minimum standards must be adhered to prevent ecological impacts beyond the site boundary:

- Measures must be taken to prevent dust and other emissions from construction affecting any land beyond the site.
- Chemicals and fuels must be stored in secure containers located away from watercourses and ditches. Spill kits must be available.
- Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the site is closed (e.g., overnight) to prevent entrapment of animals.
- Noise and vibration must be controlled and kept to the minimum necessary.
- Lighting used for construction must be switched off when not in use and positioned so as not to spill on to adjacent land or retained vegetation within the site.

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Appendix A

Desk Study 9546.001

Land to the North of the Grange (Site LG1)

Letchworth, Hertfordshire

Ecological Desk Study

Prepared For: Letchworth Garden City Heritage Foundation

Document Reference: 9546.001

August 2023

Version 1.1

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The content of this document has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Professional Conduct and is compliant with British Standard BS42020:2013 Biodiversity Code of Practice for Planning and Development.

The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

Contents

Page

1.0 INTRODUCTION 1
Site Location 1
Context 1
2.0 METHODS 2
Scope and Data Sources 2
3.0 LEGISLATION AND POLICY 4
Relevant Legislation 4
Relevant Policy 10
Biodiversity Initiatives and Strategies 13
4.0 WILDLIFE SITES 15
Statutory Sites 15
5.0 NOTABLE HABITATS 26
Habitats of Principal Importance (HPI) 26
6.0 PROTECTED AND NOTABLE SPECIES 28
Protected Species Licences 28
Pre-existing Species Records 28

Figures

Figure 1: Site location 1
Figure 2: Statutory wildlife sites of international significance within 10km of the site 18
Figure 3: Statutory wildlife sites of national significance within 5km of the site 19
Figure 4: SSSI Impact Risk Zones crossed by the site 20
Figure 5: Statutory wildlife sites of regional/local significance within 2km of the site 22
Figure 6: Non-statutory wildlife sites within 2km of the site (map provided by HERC) 24
Figure 7: Non-statutory wildlife sites within 2km of the site (map provided by BLBRMC) 25
Figure 8: Notable habitats 27

Tables

Table 1: Scope and preliminary ecological Zones of Influence (ZOI) 2
Table 2: Statutory local wildlife sites of regional / local significance within 2km of the site 21
Table 4: Non-statutory local wildlife sites within 2km of the site 23
Table 4: Natural England mitigation licences within 2km of the site 28
Table 5: Summary of pre-existing species records returned by HERC and BLBRMC 28

1.0 Introduction

1.1 The Environment Partnership (TEP) was commissioned by Letchworth Garden City Heritage Foundation in June 2022, to complete an Ecological Desk Study to inform a Preliminary Ecology Appraisal (PEA) for Land to the North of the Grange (Site LG1) (hereafter referred to as 'the site').

Site Location

1.2 The location of the survey area (hereafter referred to as the site) is illustrated in Figure 1. The approximate central grid reference of the site is TL 22194 34911.

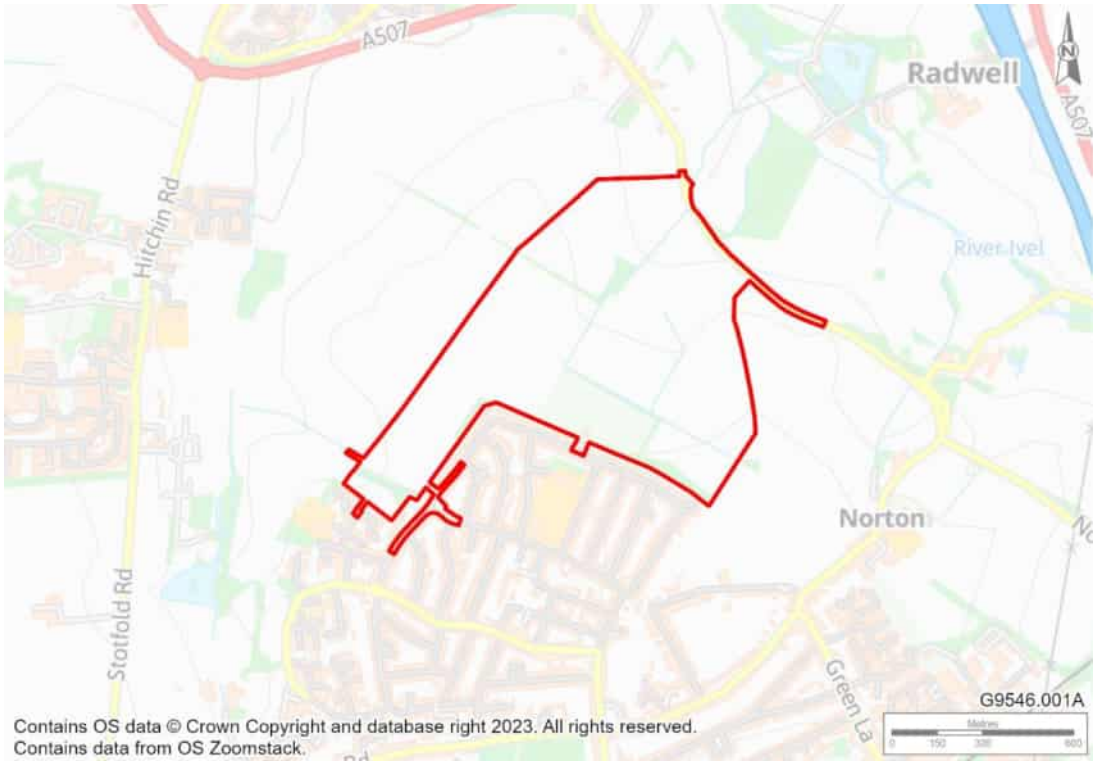


Figure 1: Site location

Context

1.3 The site is within the administrative area of North Herts Council and is allocated by Policy SP15 Site LG1 – North of Letchworth Garden City for 900 homes in North Hertfordshire District Council Local Plan 2011 – 2031 Proposed Submission. The site is also partially designated as green belt (Policy SP5) in the Local Plan.

2.0 Methods

Scope and Data Sources

2.1 The ecological Zone of Influence (ZOI) is an area defined by the ecological assessment within which valued ecological features may be subject to significant biophysical changes as a consequence of the proposed development under assessment.

2.2 For the purposes of this assessment, the preliminary ZOIs within which ecological features were searched for as part of this desk study were varied according to the geo-spatial and/or legal significance of the feature.

2.3 Table 1 summarises the scope and the preliminary ZOIs applied for this desk study. The preliminary ZOIs were applied by extending search radii of the respective distances from the site boundary.

Table 1: Scope and preliminary ecological Zones of Influence (ZOI)

Feature	Scope	Key Source(s)	ZOI
Statutory wildlife sites:	Ramsar sites Proposed Ramsar sites Special Areas of Conservation (SAC) Possible SAC SAC with marine components Special Protection Areas (SPA) Potential SPA Marine Conservation Zones	Natural England (public sector information)	10km
	Sites of Special Scientific Interest (SSSI) National Parks National Nature Reserves (NNR) Marine Nature Reserves (MNR)	Natural England (public sector information)	5km
	Local Nature Reserves (LNR) Country Parks	Natural England (public sector information)	2km
Non-statutory wildlife sites:	Local Wildlife Sites (LWS) Green Link Network Green Wedges	Herts Environmental Records Centre (HERC) Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC) North Hertfordshire District Council Local Plan 2011 – 2031[1] North Hertfordshire District Council Local Plan 2011 – 2031 Proposed Submission Proposals Maps – Hitchin, Letchworth Garden City and Baldock Areas[2]	2km

[1] *North Hertfordshire Local Plan 2011-2031.pdf (north-herts.gov.uk)*, accessed on 22nd August 2023

[2] *Print Template Wizard (north-herts.gov.uk)* accessed on 22nd August 2023

Feature	Scope	Key Source(s)	ZOI
Notable habitats:	Ancient Woodland Habitats of principal importance Main rivers Habitat Network / Nature Recovery Network	Natural England (public sector information) Environment Agency (public sector information) Herts Environmental Records Centre (HERC) Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC)	2km
Protected or notable species:	Pre-existing records for protected or notable species[3], non-native invasive species	Herts Environmental Records Centre (HERC) Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC)	2km
Species licences:	Protected species licences granted by Natural England	Natural England (public sector information)	2km
	Great crested newt survey pond records (2017 – 2019) held by Natural England	Natural England (public sector information)	2km
Policy and Related Guidance	Land allocations and relevant environment / biodiversity policy Local biodiversity priority habitats and species	Hertfordshire Biodiversity Action Plan (LBAP)[4]	As applicable to site

2.4 An absence of records does not indicate the absence of protected species from the search area.

[3] Notable and protected species records may include those listed under any of the following:
- Protected species listed under Schedule 2 (animals) or Schedule 5 (plants) under the Conservation of Habitats and Species Regulations 2017 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance (SPI) listed by requirements under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

[4] *https://www.north-herts.gov.uk/sites/default/files/ORD4%20Hertfordshire%20Biodiversity%20Action%20Plan.pdf*, accessed on 26th October 2022

3.0 Legislation and Policy

3.1 This section details legislation and planning policy which may have relevance to the site. Only legislation and policy of key relevance to biodiversity are included.

Relevant Legislation

International Conventions

3.2 The UK is a Contracting Party to numerous environmental conventions, the commonest form of international agreements to encourage a coordinated response to managing the environment. Key environmental conventions ratified in the UK include:

- The Convention on Wetlands of International Importance especially as Waterfowl Habitat ('Ramsar Convention'[5] or 'Wetlands Convention') - provides the only international mechanism for protecting sites of global importance;
- The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention[6]) - imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species;
- The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention[7] or CMS) - provides strict protection for endangered migratory species. The UK has currently ratified four legally binding Agreements under the convention relating to bats (EUROBATS), African-Eurasian migratory birds (AEWA), small cetaceans in the Baltic, Irish and North Seas (ASCOBANS) and albatrosses and petrels (ACAP) in addition to five Memorandum of Understanding (MoU) and is non-party range state to a further Agreement and a further MoU;
- The Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention) - seeks to protect both cultural and natural heritage;
- The Convention on Biological Diversity (Biodiversity Convention[8] or CBD) - provides a legal framework for biodiversity conservation. Within the UK, delivery of the CBD and the Strategic Plan for Biodiversity 2011-2020[9] is guided by the UK Post-2010 Biodiversity Framework[10].

[5] Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2.2.1971 *https://www.ramsar.org/*

[6] Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 1979 *https://www.coe.int/*

[7] Convention on the Conservation of Migratory Species of Wild Animals, Bonn, June 1979 *https://www.cms.int/*

[8] Convention on Biological Diversity, Rio de Janeiro, June 1992*https://www.cbd.int/*

[9] In October 2010, at the 10th Conference of the Parties to the CBD in Nagoya, Japan, the Parties adopted a new 'Strategic Plan for Biodiversity 2011–2020' along with its 20 'Aichi targets'. *https://www.cbd.int/sp/*

[10] The framework is overseen by the Environment Departments of the four UK governments working through the Four Countries' Biodiversity Group. It demonstrates how the UK, through each of the four countries, contributes to achieving the 'Aichi targets', and identifies the activities required to complement the individual country biodiversity strategies *https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/*

3.3 The legal obligations of the multiple Conventions to which the UK is a Contracting Party are enacted through a suite of national environmental legislation. The most relevant are described in the following paragraphs.

Conservation of Habitats and Species Regulations

3.4 The Conservation of Habitats and Species Regulations 2017[11] (2017 Regulations) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into domestic law.

3.5 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[12] (2019 Regulations) amends the 2017 Regulations to make them operable following the withdrawal of the United Kingdom from the European Union (EU). Most of the changes involve transferral of functions from European Commission to the appropriate authorities in England and Wales, also extending to Scotland and Northern Ireland and applies to Scotland and Northern Ireland (including the adjacent territorial sea to a limited degree), as regards reserved and excepted matters respectively. It also amends Section 27 of the Wildlife and Countryside Act 1981 to maintain existing protections and enforcement for species of wild birds.

3.6 All other processes or terms in the 2017 Regulations remain unchanged and existing guidance and obligations (of a competent authority) remain relevant.

National Site Network

3.7 Under the 2019 Regulations, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) in the UK no longer form part of the EU's 'Natura 2000' ecological network, but instead (along with new SACs and SPAs designated under the 2019 Regulations) form the new National Site Network (NSN). Ramsar sites[5] do not form part of the NSN but remain protected in the same way as SACs and SPAs.

3.8 Proposals which may significantly affect a site belonging to the NSN and which are not connected with or necessary to the management of that site require (by Regulations 63 and 64 of the 2017 Regulations, as amended by Regulations 24 and 25 of the 2019 Regulations, respectively) competent authorities to undertake an Appropriate Assessment of the implications of the plan or project in view of that site's conservation objectives. This process is commonly referred to as a 'Habitats Regulations Assessment' (HRA). The assessment must consider the potential effects both of the plan/project itself and in combination with other plans or projects. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest (IROPI) and if the necessary compensatory measures can be secured.

[11] Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) *https://www.legislation.gov.uk/uksi/2017/1012/*

[12] Conservation of Habitats and Species Regulations 2019 (SI 2019/579) *https://www.legislation.gov.uk/uksi/2019/579/*

Protected Species

3.9 Certain animals and their breeding sites or resting places are protected under Regulation 43 of the 2017 Regulations, which makes it illegal to:

- Deliberately capture, injure or kill any such animal or to deliberately take or destroy the eggs of such an animal;
- Deliberately disturb such an animal; and
- Damage or destroy a breeding site or resting place of such an animal.

3.10 Disturbance is defined in the 2017 Regulations as an activity which is likely to impair a species' ability to survive, to breed or reproduce, to rear or nurture young or, in the case of animals hibernating or migratory species, to hibernate, migrate or which may affect significantly the local distribution or abundance; of the species.

3.11 A bat's resting place is known as a roost site. Because bats tend to be faithful to roost sites but their biology is such that different roost site characteristics are preferred at different times of the year by different species for different functions, a bat roost is considered to be afforded protection even when it is not occupied.

3.12 Certain plant species are protected under Regulation 47 of the 2017 Regulations against deliberate picking, collecting, cutting, uprooting or destruction. It is also an offence to be in possession or control and to transport any live or dead plant or part of a plant of such a species which has been taken in the wild.

3.13 The 2017 Regulations (Regulation 55) enables a relevant licensing body to grant a licence for certain activities that may affect animal or plant species protected by the above provisions. The purpose must conform to one of those listed under Regulation 55(2). For most development related activities, the purpose normally relates to Regulation 55(2)(e) 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment' – commonly known as the IROPI test. Regulation 55(9) introduces two further tests that the licensing body must consider:

- There is no satisfactory alternative; and
- The favourable conservation status of the species concerned will be maintained and/or enhanced.

3.14 Under Regulation 9(1) of the 2017 Regulations (as amended), competent authorities "must exercise their functions which are relevant to nature conservation… so as to secure compliance with the requirements of the Directives". Regulation 9(3) requires a competent authority, in exercising any of its function, to "have regard to the requirements of the Directives so far as they be affected by the exercise of those functions." Local planning authorities must therefore consider the above three 'tests' when determining if planning permission should be granted for developments likely to cause an offence under the Regulations.

Wildlife and Countryside Act 1981

3.15 The Wildlife and Countryside Act 1981 (as amended)[13] (WCA) is a major legal instrument for wildlife protection in the UK. In respect of habitats and flora, the WCA protects important habitats and/or species as Sites of Special Scientific Interest (SSSI). The designation of UK Ramsar sites[5] has usually been underpinned through prior notification of these areas as SSSI and accordingly they receive statutory protection under the WCA.

3.16 The obligations of the Bern Convention[6] (the protection of wild plant and animal species and their natural habitats) are transposed into law for England and Wales[14] by the WCA. The legal requirement for the protection of migratory species listed by the Bonn Convention[7] is also provided by the WCA.

3.17 All wild birds (as defined by the WCA and with exception to species listed in Schedule 2) are protected under the WCA, which makes it illegal to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest (whilst being built or in use) of any wild bird; or
- Take or destroy the eggs of any wild bird.

3.18 Special penalties are available for offences related to birds listed in Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The WCA also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

3.19 Certain animal species (listed under Schedule 5) of the WCA receive protection which makes it illegal (with certain exceptions) to:

- Intentionally kill, injure or take any such animal;
- Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal;
- Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.

3.20 Plant species listed under Schedule 8 of the WCA are protected from unauthorised intentional picking, uprooting and destruction. It is an offence to plant or otherwise cause to grow in the wild any plant that is included in Schedule 9.

[13] Wildlife and Countryside Act 1981 c. 69 *https://www.legislation.gov.uk/ukpga/1981/69/*

[14] In Scotland by the Nature Conservation (Scotland) Act 2004 (as amended) and in Northern Ireland by Wildlife (Northern Ireland) Order 1985 and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

Countryside and Rights of Way Act 2000

3.21 Part III of the Countryside and Rights of Way Act 2000[15] (CROW) deals specifically with wildlife protection and nature conservation. It requires that Government Departments have regard for the conservation of biodiversity, in accordance with the CBD. In addition, it requires that The Secretary of State publishes a list of living organisms and habitat types that are considered to be of principal importance in conserving biodiversity.

3.22 CROW also amends the WCA, expanding the terms of offences to include reckless activity. It increases the legal protection of threatened species, by also making it an offence to "recklessly" obstruct access to a sheltering place used by an animal listed in Schedule 5 of the WCA or "recklessly" disturb an animal occupying such a structure or place.

Natural Environment and Rural Communities (NERC) Act 2006

3.23 Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC)[16] places a duty to conserve biodiversity on public authorities in England. It requires local authorities and government departments to have regard to the purposes of conserving biodiversity in a manner that is consistent with the exercise of their normal functions such as policy and decision-making. 'Conserving biodiversity' may include enhancing, restoring or protecting a population or a habitat.

3.24 Section 41 requires the Secretary of State to publish and maintain lists of species and types of habitats which are regarded by Natural England to be of "principal importance" for the purposes of conserving biodiversity in England.

3.25 These habitats and species of principal importance (HPI and SPI) are drawn from earlier lists of United Kingdom Biodiversity Action Plan Priority Species and Habitats. The Section 41 (S41) lists of HPI and SPI are needed by decision-makers in local and regional authorities when carrying out their duties under Section 40 of the Act.

Environment Act 2021

3.26 The Environment Act 2021[17] was passed into law in November 2021. The Act applies only to England, although many of its measures are designed to be operable across the UK with the consent of devolved administrations. The Act requires statutory long-term (15+ years) targets to be set (and monitored, reported and reviewed) in the four priority areas of waste reduction, air quality, water resources and biodiversity as well as additional targets relating to species abundance and fine particulates by 2030.

[15] Countryside and Rights of Way Act 2000 c. 37 *https://www.legislation.gov.uk/ukpga/2000/37/*

[16] Natural Environment and Rural Communities Act 2006 c. 16 *https://www.legislation.gov.uk/ukpga/2006/16/*

[17] Environment Act 2001 c.30 *https://www.legislation.gov.uk/ukpga/2021/30/*

3.27 The Environment Act amends the Town and Country Planning Act 1990[18] in that planning permissions granted after the provisions come into force[19] are deemed to be subject to a condition prohibiting the start of development before a biodiversity gain plan has been submitted to and approved by the Local Planning Authority (LPA).

3.28 The biodiversity gain plan must demonstrate a net gain of at least 10% in the biodiversity value of the development site "as at the time the development is completed". Biodiversity net gain must be demonstrated by calculations using the biodiversity metric (currently version 3.1 published by Natural England)

3.29 The Environment Act introduces Local Nature Recovery Strategies (LNRS), a new system of spatial strategies for nature, covering the whole of England. LNRS are to be prepared and published by the 'responsible authority', namely the local authority, mayoral authority or National Park authority whose area is, or is within, the strategy area, the Broads Authority or Natural England. Section 40 of the NERC Act (duty to conserve biodiversity) makes provision about the duties of public authorities in relation to LNRS.

3.30 A 'responsible authority' is to be appointed to lead each LNRS area, which could include LPAs and which in mayoral combined authorities is highly likely to be the mayor. The responsible Authority must map the most valuable existing natural habitat in its area and develop a biodiversity strategy, including specific proposals for creating or improving habitats and priorities for nature recovery.

3.31 In addition to the above, the Environment Act Part 6 (Nature and biodiversity) will also:

- Strengthen the biodiversity duty through amendments to Section 40 of the NERC Act.
- Impose a duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Introduce Conservation Covenants (agreements between a landowner and a responsible body);
- Protected Site Strategies (prepared and published by Natural England) to improve the conservation and management of a protected site (including SACs, SPAs listed before exit day, Sites of Community Importance (SCI)[20] listed before exit day and those sites proposed before exit day as SACs).
- Species Conservation Strategies (prepared and published by Natural England) to improve the conservation status of any species of flora or fauna, with which a LPA in England and any prescribed authority must have regard so far as relevant to its functions, including when discharging its duties under the 2017 Regulations (as amended);
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation (where 'forest' is defined as "*an area of land of more than 0.5 hectares*

[18] Town and Country Planning Act 1990 c. 8 *https://www.legislation.gov.uk/ukpga/1990/8/*

[19] The Biodiversity Gain provision of the Environment Act requires the Secretary of State to first publish detailed regulations (see s147(3) of the Act). These are anticipated in November 2023.

[20] SCIs are established under the European Union Habitats Directive (92/43/EEC) and are (under the Habitats Directive) the pre-requisite step for establishing SACs and SPAs.

with a tree canopy cover of at least 10% (excluding trees planted for the purpose of producing timber or other commodities)", which includes "*land that is wholly or partly submerged in water whether temporarily or permanently*");

- Require regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system.

Hedgerow Regulations 1997

3.32 Important hedgerows are protected from removal by the Hedgerows Regulations[21] (as amended). Regulation 3 defines the hedgerows to which the Regulations apply. Regulation 4 sets out the criteria for identifying "important hedgerows" including ecological, landscape or historical/cultural reasons. Under the Hedgerow Regulations it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Works to "important hedgerows" are exempt under the Hedgerow Regulations if planning consent is granted which allows their removal.

3.33 The identification of important hedgerows also provides an additional means to value hedgerows aside from their botanical value (e.g. species richness) as the assessment of importance also includes characteristics relating to maturity and structure (e.g. associated features, connectivity, integrity) which will affect the functional value of the hedgerow.

Protection of Badgers Act 1992

3.34 Badgers and their setts receive statutory protection under the Protection of Badgers Act 1992 (PBA)[22]. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett.

3.35 Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "any structure or place, which displays signs indicating current use by a badger."

Relevant Policy

National Planning Policy Framework

3.36 The National Planning Policy Framework (NPPF21)[23] sets out the Government's planning policies for England and how these are expected to be applied at a local level in development plans and how developers should address them. The Framework places great emphasis on plans and developments contributing to sustainable development.

[21] The Hedgerow Regulations 1997 (SI 1997/1167) *https://www.legislation.gov.uk/uksi/1997/1160/*

[22] Protection of Badgers Act 1992 c. 51 *https://www.legislation.gov.uk/ukpga/1992/51/*

[23] National Planning Policy Framework (2021) Ministry of Housing, Communities and Local Government *www.gov.uk/government/publications*

3.37 Paragraph 174 states: Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

3.38 Paragraph 180 states: When determining planning applications, local planning authorities should apply the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless are wholly exceptional reasons and a suitable compensation strategy exists; and;
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

3.39 Paragraph 181 stipulates that the following should be given the same protection as habitats sites[24]:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

3.40 Paragraph 182 confirms: The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government Circular 06/2005

3.41 Government Circular 06/2005[25] remains pertinent in national policy even though PPS9, which it originally supported, was revoked by the NPPF.

3.42 The Circular outlines the legislative provisions relating to biodiversity and geological conservation which affect planning and development. The Circular provides guidance on the protection of designated international and national nature conservation sites, non-designated sites, the conservation of species, and advice on the related issues and statutory powers.

3.43 Paragraphs 123 and 124 of Part IV of Circular 06/2005 state that "the likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions. Although consideration of the case for granting a licence is separate from the process of applying for planning permission, a planning authority should advise anyone submitting an application for development in an area where there are known to be badger setts that they must comply with the provisions of the Act".

North Herts Local Plan 2011 – 2031

3.44 The North Herts Proposed Submission Local Plan 2011 – 2031 was adopted by North Hertfordshire District Council in November 2022. The Plan seeks to address the key issues facing North Hertfordshire and will set a strategic vision and spatial strategy for the District over the period 2011 to 2031.

[24] Defined by NPPF21 as "Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites".

[25] Office of the Deputy Prime Minister (2005) 'Government Circular: Geological and Biological Conservation – Statutory obligations and their implications within the planning system' ODPM circular 06/2005, DEFRA circular 01/2005 *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf*

3.45 The following strategic policies relate to biodiversity and nature conservation and the site in question:

- SP1: Sustainable development in North Hertfordshire
- SP5: Countryside and Green Belt
- SP12: Green infrastructure, landscape and biodiversity
- SP15: Site LG1 – North of Letchworth Garden City

3.46 The SP15 Policy relates directly to the proposed development area and its specific policy text relating to natural conservation and biodiversity is stated as:

"Development proposals should provide the following planning and masterplanning requirements:

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained and any hedgerow losses kept to a minimum;

i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach; and

j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east."

Biodiversity Initiatives and Strategies

Local Biodiversity Action Plans (LBAP)

3.47 The LBAP for Hertfordshire covers the local authority areas of Broxbourne, Dacorum, East Herts, Hertsmere, North Hertfordshire, St Albans, Stevenage, Three Rivers, Watford and Welwyn Hatfield. Consequently, as a joint BAP, not all local priority habitats or species may be of direct relevance to each local authority.

3.48 The LBAP priority habitats for Hertfordshire include:

- Woodlands;
- Wetlands;
- Heathlands and acid grasslands;
- Neutral grasslands;
- Chalk grasslands;
- Farmlands; and
- Urban habitats.

3.49 The LBAP priority species for Hertfordshire include:

- Water vole;
- Common dormouse;
- Natterer's bat;
- Otter;
- Tree sparrow;
- Bittern;
- Stone-curlew;
- Song thrush;
- Black-necked grebe;
- Great crested newt;
- Chalkhill blue;
- Grizzled skipper;
- Purple emperor;
- Stag beetle;
- White-clawed crayfish;
- Great pignut;
- Cornflower;
- River water-dropwort; and
- Pasqueflower.

Nature Recovery Network

3.50 Habitat Network maps are produced by Natural England in response to the Lawton report (Making Space for Nature, A review of England's Wildlife Sites and Ecological Network[26]).

3.51 These maps provide a useful baseline for the development of a Nature Recovery Network (NRN) as required within the 25 Year Environment Plan and for LRNS proposed within the Environment Act.

3.52 The Habitat Network maps in conjunction with other datasets and local knowledge can identify opportunities for biodiversity action. The Habitat Network comprises (a) Existing Habitats (HPI and associated habitats) and (b) Network Enhancement and Expansion Zones. These latter zones include:

- Network Enhancement Zone 1: Land connecting existing habitats which is likely to be suitable for habitat creation. Action in this zone to expand and join up existing habitat patches and improve the connections between them can be targeted here.
- Network Enhancement Zone 2: Land connecting existing habitats which is less likely to be suitable for habitat creation. Action in this zone that improves the biodiversity value through land management changes and/or green infrastructure provision can be targeted here.
- Fragmentation Action Zone: Land within Enhancement Zone 1 that connects existing habitats patches which are currently highly fragmented and where fragmentation could be reduced by habitat creation.
- Network Expansion Zone: Land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape.

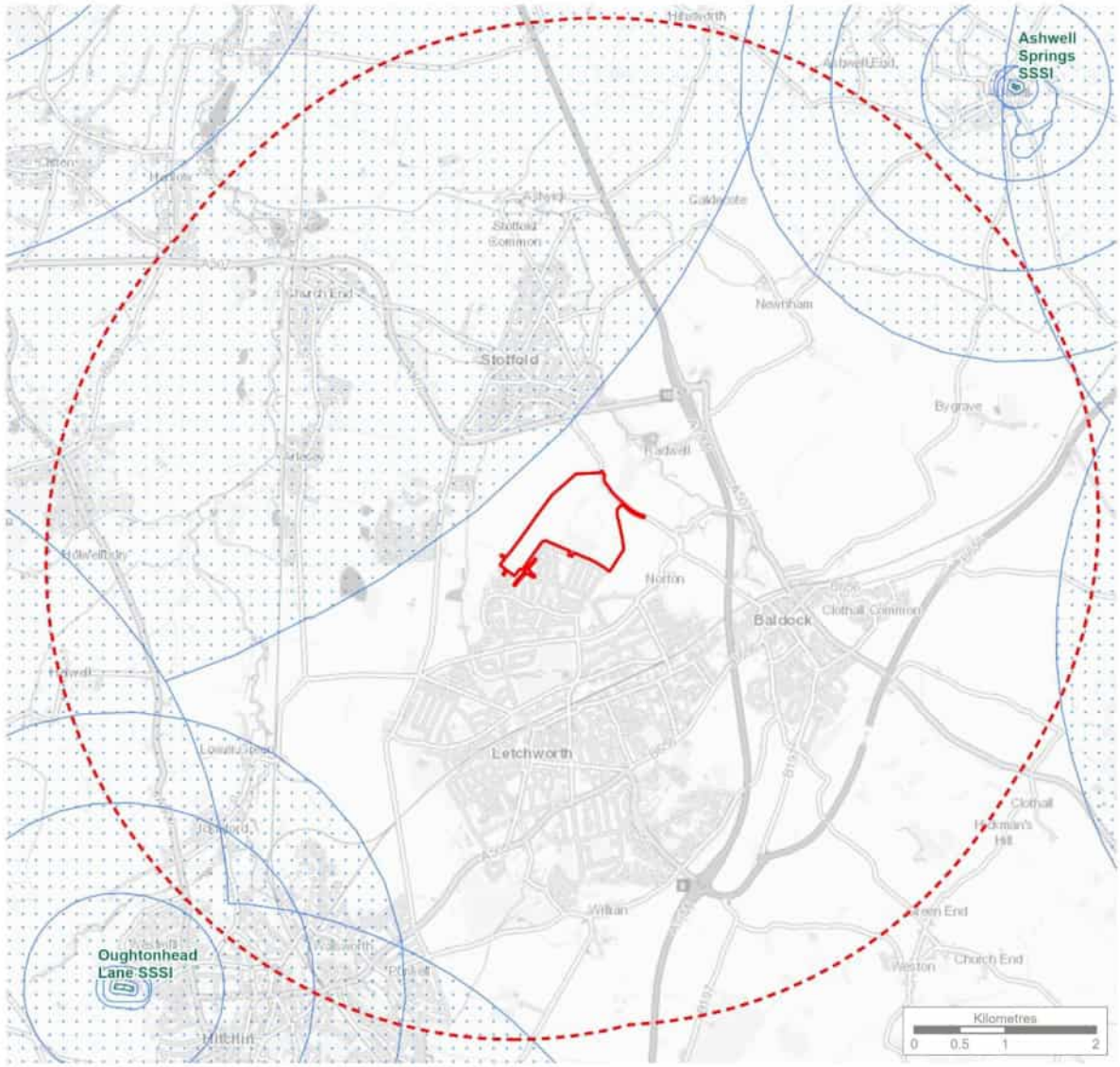
[26] Lawton, J.H., Brotherton, P.N.M., Brown, V.K., Elphick, C., Fitter, A.H., Forshaw, J., Haddow, R.W., Hilborne, S., Leafe, R.N., Mace, G.M., Southgate, M.P., Sutherland, W.A., Tew, T.E., Varley, J., & Wynne, G.R. (2010) *Making Space for Nature*: a review of England's wildlife sites and ecological network. Report to Defra

4.0 Wildlife Sites

Statutory Sites

4.1 There are no internationally significant statutory wildlife designations within 10km of the site (Figure 2) and no nationally significant statutory wildlife sites within 5km of the site (Figure 3).

The site does not fall within any SSSI Impact Risk Zone (IRZ) (Figure 4



Key

- Site boundary
- Site boundary - 5km buffer
- Sites of Special Scientific Interest
- Sites of Special Scientific Interest - Impact Risk Zone

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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project: LG1 Land North of Letchworth

Title: Sites of Special Scientific Interest - Impact Risk Zone

Drawing Number: G9546.011A

Scale	Date
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Drawn	Checked	Approved
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4.2 Figure 4), as determined by Natural England to identify likely impacts upon SSSIs, SACs, SPAs or Ramsar sites that may result from planned development.

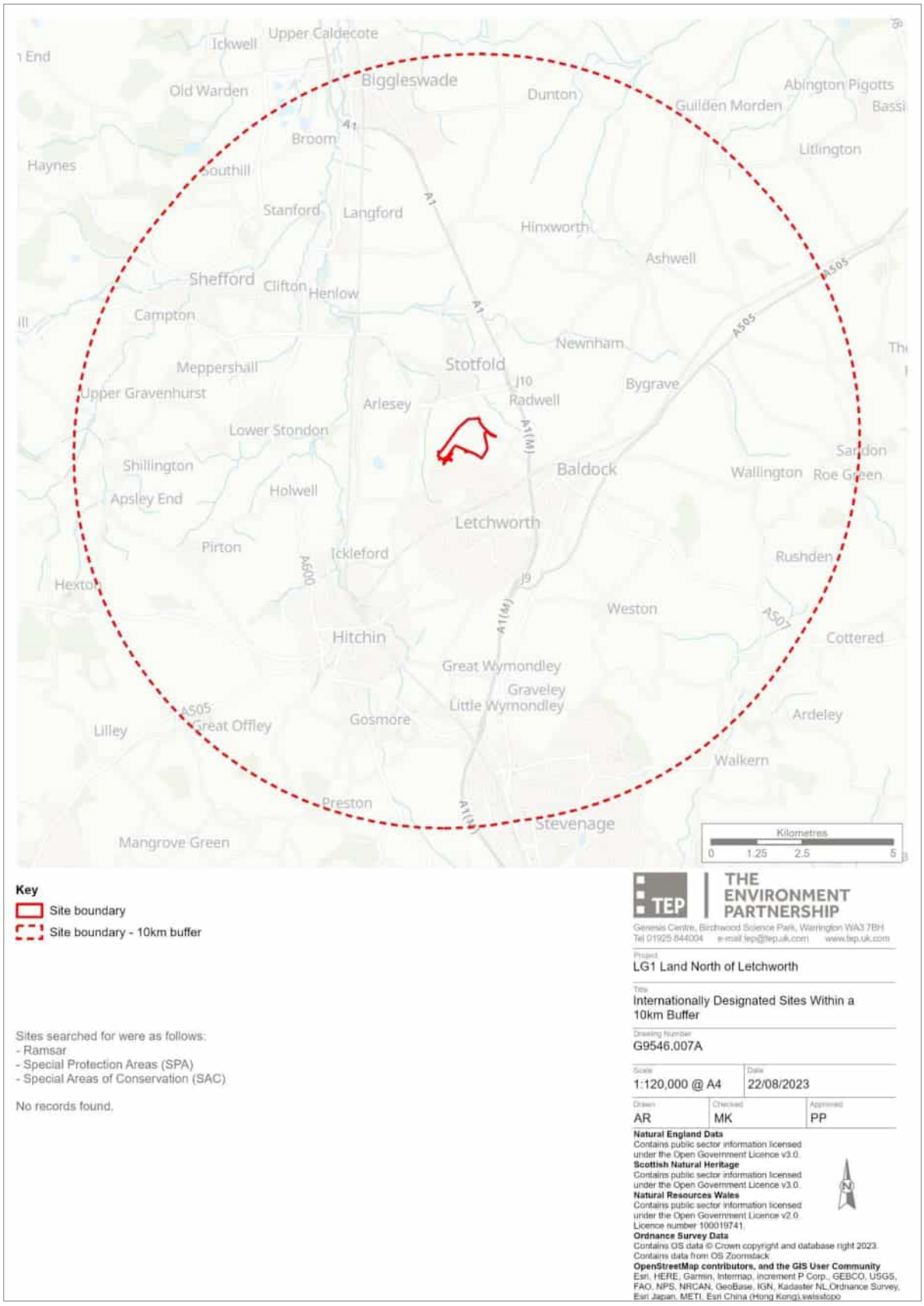
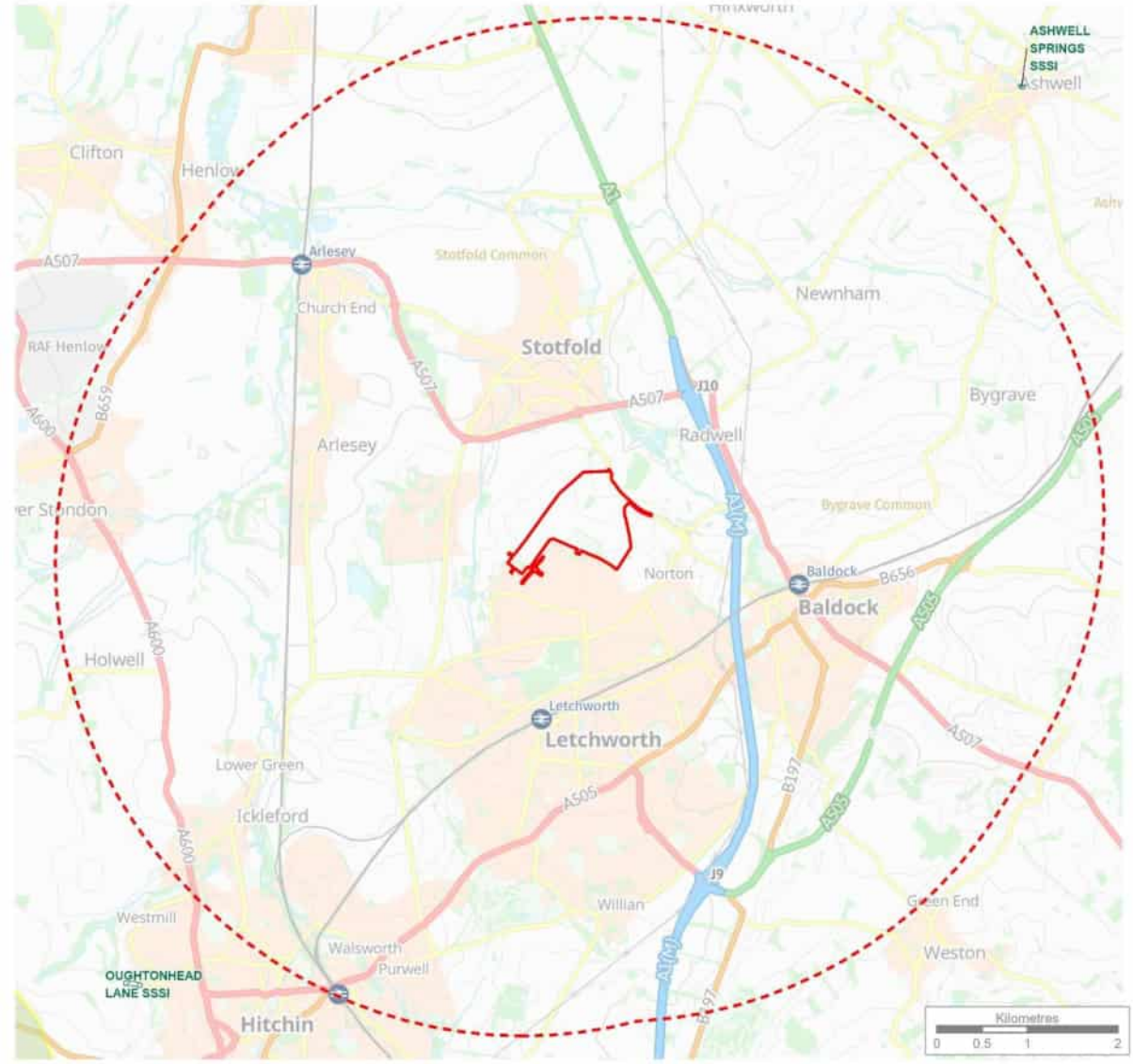


Figure 2: Statutory wildlife sites of international significance within 10km of the site



Key

- Site boundary
- Site boundary - 5km buffer
- Areas of Outstanding Natural Beauty
- Sites of Special Scientific Interest (SSSI)

Sites searched for were as follows:
- Sites of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Area of Outstanding Natural Beauty (AONB)

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Project
LG1 Land North of Letchworth

Title
Nationally Designated Sites Within a 5km Buffer

Drawing Number
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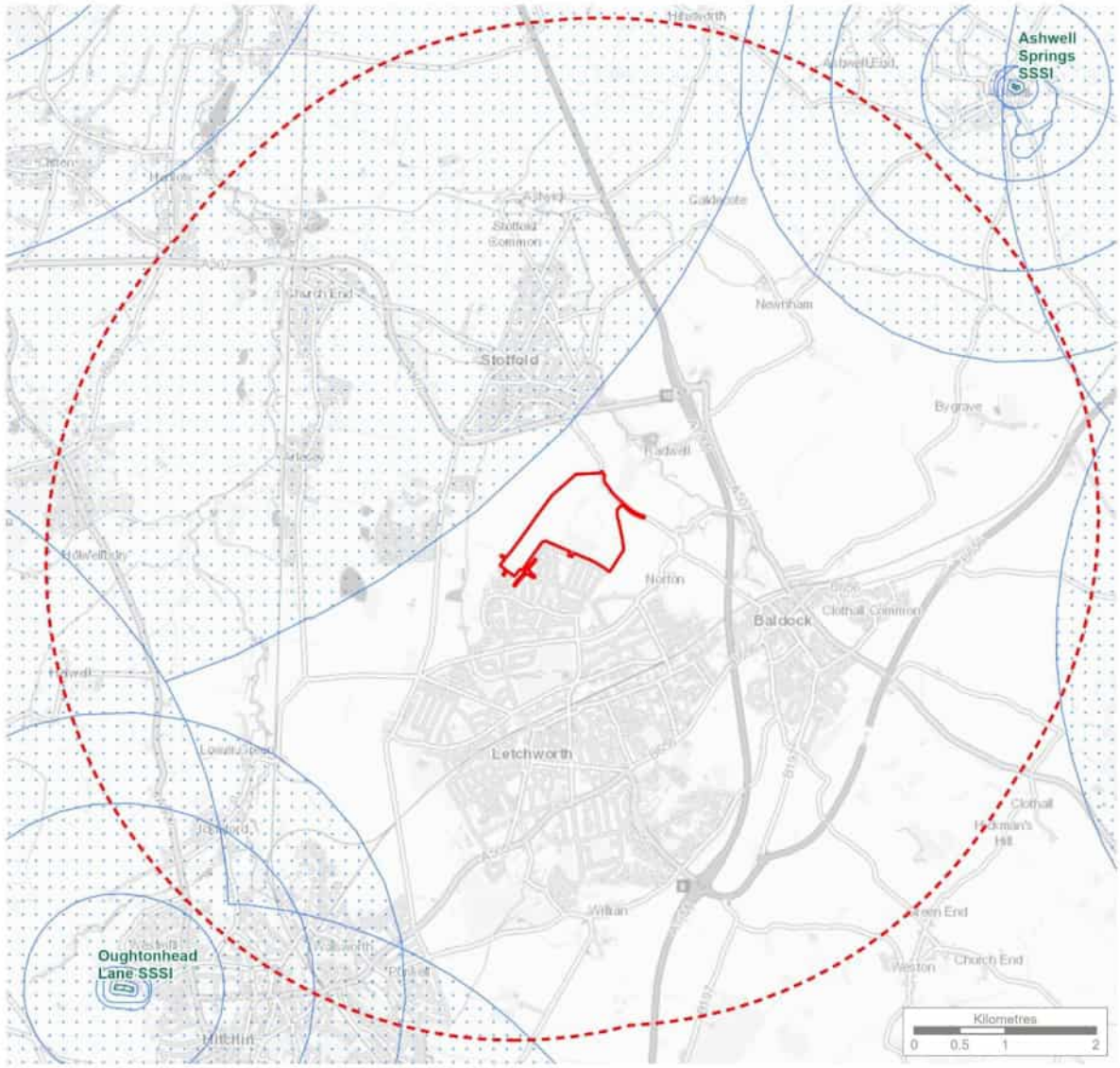
Figure 3: Statutory wildlife sites of national significance within 5km of the site



Key

- Site boundary
- Site boundary - 5km buffer
- Sites of Special Scientific Interest
- Sites of Special Scientific Interest - Impact Risk Zone

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Title
Sites of Special Scientific Interest - Impact Risk Zone

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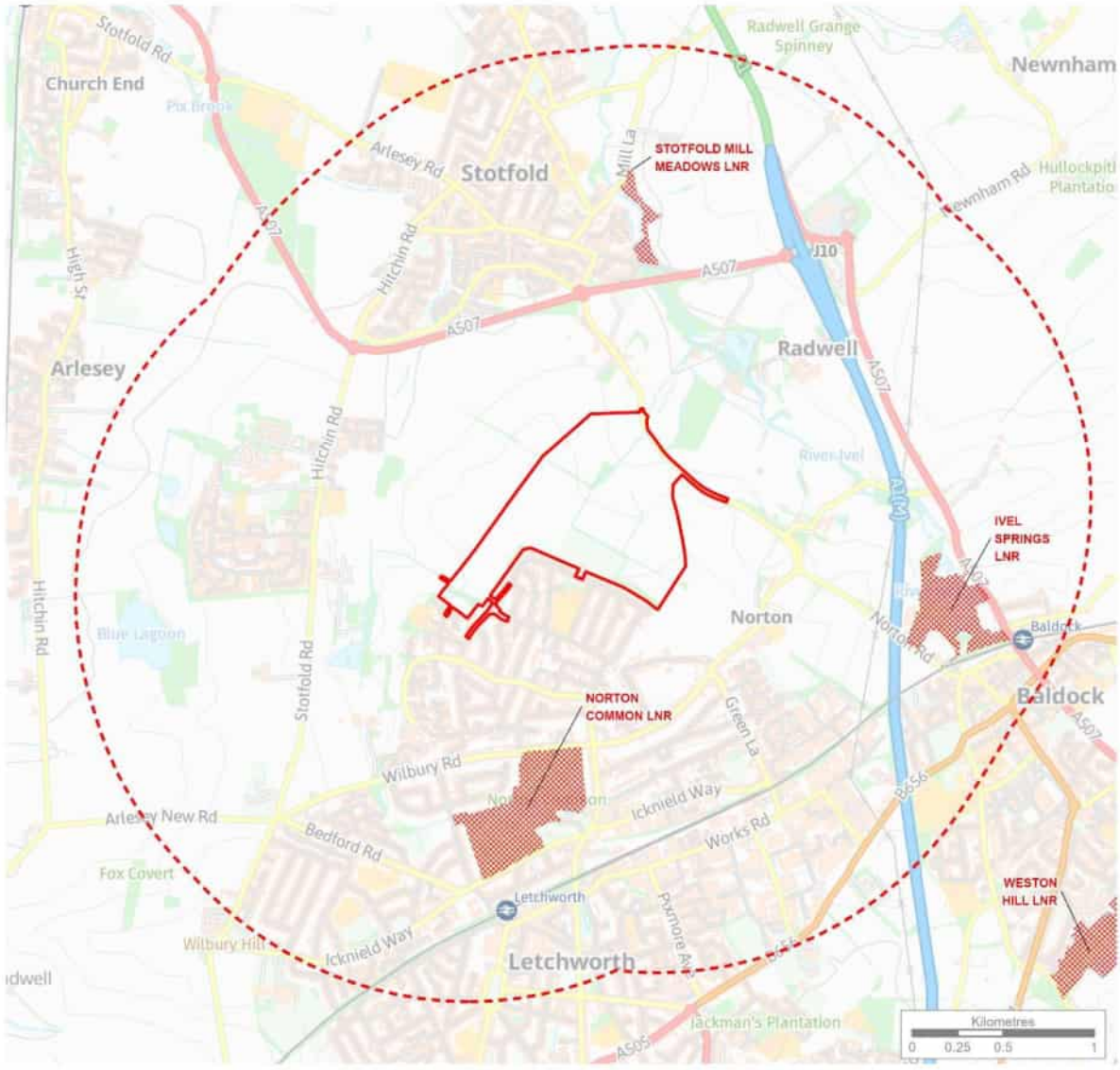
Figure 4: SSSI Impact Risk Zones crossed by the site

4.3 There are three statutory wildlife sites of regional / local significance within 2km of the site (Figure 5**Error! Reference source not found.**). These are summarised in Table 2 below.

Table 2: Statutory local wildlife sites of regional / local significance within 2km of the site

Site Name	Designation	Location Relevant to Site	Key Interest Feature(s)
Norton Common	Local Nature Reserve (LNR)	0.8km south	Woodland, grassland and running water habitats.
Stotfold Mill Meadows	LNR	1.0km north, beyond the A507	Woodland, grassland and pond habitats that support waterfowl and common amphibians.
Ivel Springs	LNR	1.3km east, beyond the A1(M)	Woodland, grassland and running water habitats.



Key

- Site boundary
- Site boundary - 2km buffer
- Local Nature Reserve

Sites searched for were as follows:
- Local Nature Reserves

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Project
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Title
Statutory Locally Designated Sites Within a 2km Buffer

Drawing Number
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Scale	Date
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Figure 5: Statutory wildlife sites of regional/local significance within 2km of the site

Non-Statutory Wildlife Sites

4.4 There are fifteen non statutory locally designated wildlife sites within 2km of the site (Figures 6 & Figure 7). These are summarised in Table 4 below.

Table 3: Non-statutory local wildlife sites within 2km of the site

Site Name	Map Ref	Designation	Location Relevant to Site	Key Interest Feature(s)
Norton Pond, Payne's Farm	Figure 6 12/032	Local Wildlife Site (LWS)	0.2km southeast	The pond supports important invertebrate and vertebrate species.
Radwell Meadows Northwestern Field	Figure 6 05/002/01	LWS	0.5km east	Grassland indicators NVC community MG6.
Radwell Lake	Figure 6 05/004	LWS	0.6km northeast	Bird species, particularly wildfowl
River Ivel, Nortonbury	Figure 6 05/005	LWS	0.6km northeast	Water vole and common kingfisher populations
Norton Common	Figure 6 12/007	LWS	0.8km south	Grassland indicators NVC community MG22.
Blackhorse Farm Storm Drain A1(M)	Figure 6 12/028/02	LWS	1.2km east, beyond the A1 (M)	Grassland indicators and fen and swamp indicators
Icknield Way Railway Bank	Figure 6 12/036	LWS	1.2km southeast	Protected species populations
Radwell (A507) Road Banks	Figure 6 05/007	LWS	1.3km northeast, beyond the A1 (M)	Grassland indicators
Ivel Springs, Norton Road	Figure 6 12/025	LWS	1.3km east, beyond the A1 (M)	Grassland indicators and amphibian, reptile, birds, and water vole populations
Blackhorse Farm Meadow	Figure 6 12/028/01	LWS	1.3km east, beyond the A1 (M)	Grassland indicators
Fairfield East Orchard	Figure 7	CWS	1.2km west	Traditional orchard habitats
Fairfield West Orchard	Figure 7	CWS	1.5km west	Traditional orchard habitats
Blue Lagoon	Figure 7	CWS	1.4km west	Open water body and calcareous grassland habitats.
Stotfold Watermill Wetland	Figure 7	CWS	1.0km north, beyond the A507	Stotfold Mill Meadows LNR comprises wildflower meadows with wetland of interconnected ponds and a small woodland and was recognized as an LNR in 2010. Only the southern-most meadow (Meadow 3) has been recognized as a CWS. The site was recognized as a County Wildlife Site on 17/08/2011 on account of its population of Water Voles.
Rivers Ivel and Hiz	Figure 7	CWS	0.8km north	The river system including adjacent habitats and features, and water vole populations

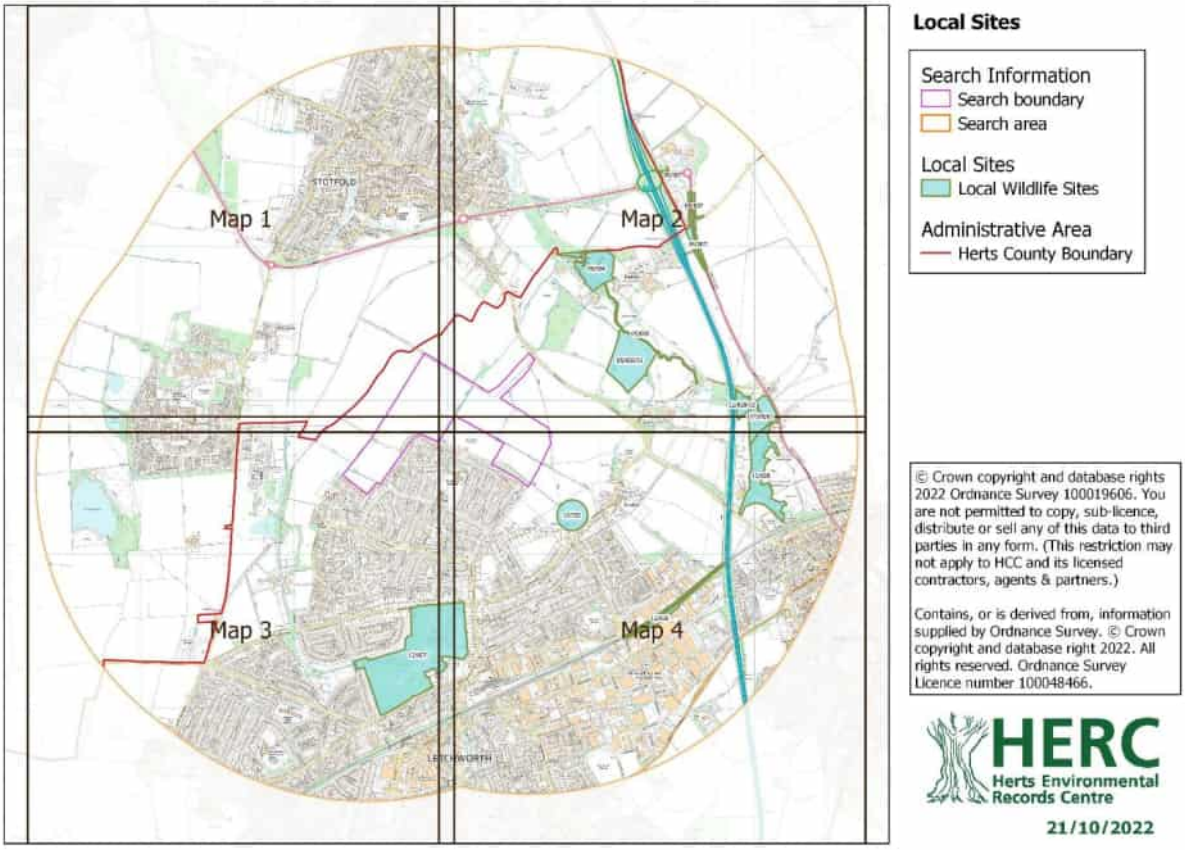


Figure 6: Non-statutory wildlife sites within 2km of the site (map provided by HERC)

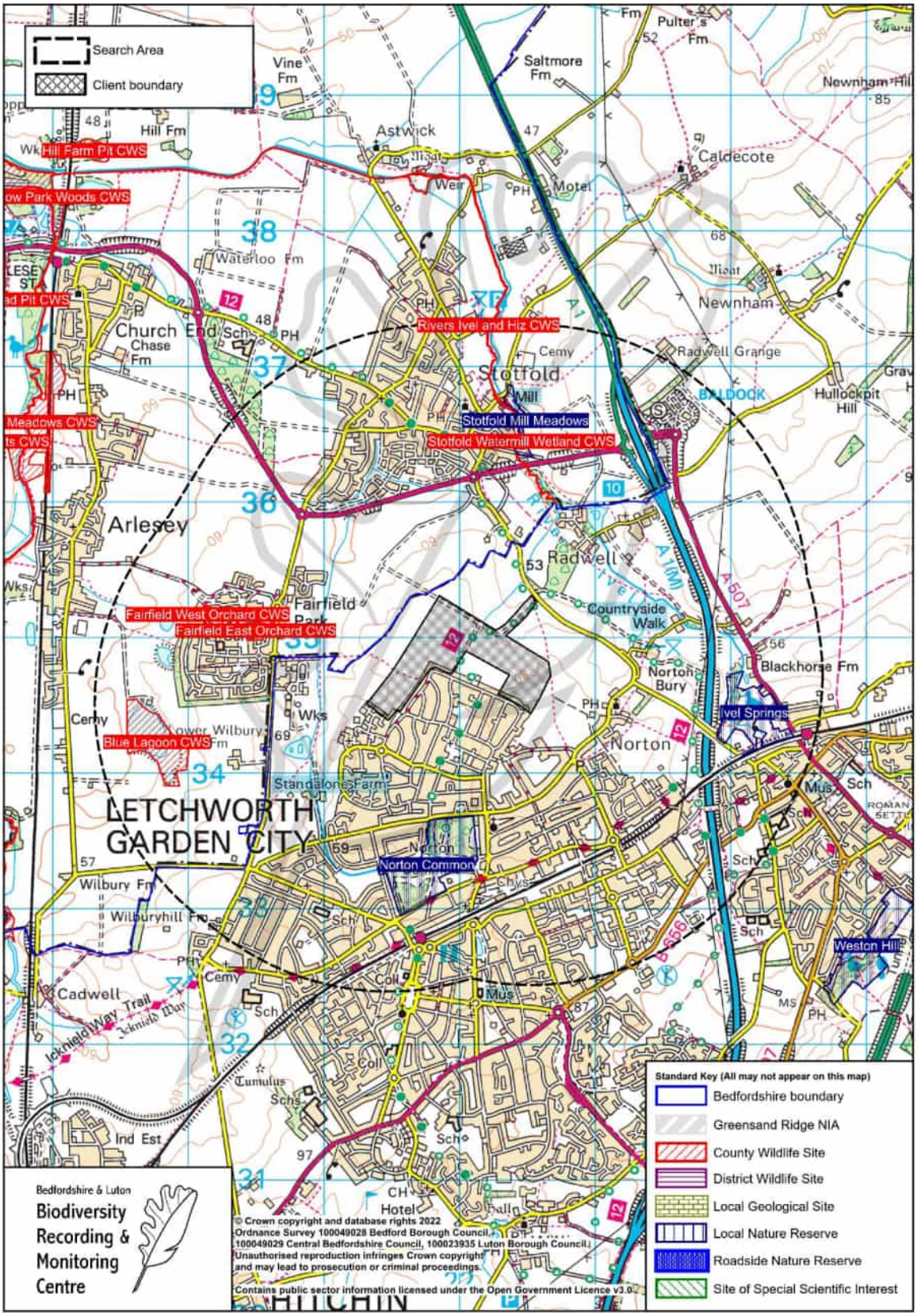


Figure 7: Non-statutory wildlife sites within 2km of the site (map provided by BLBRMC)

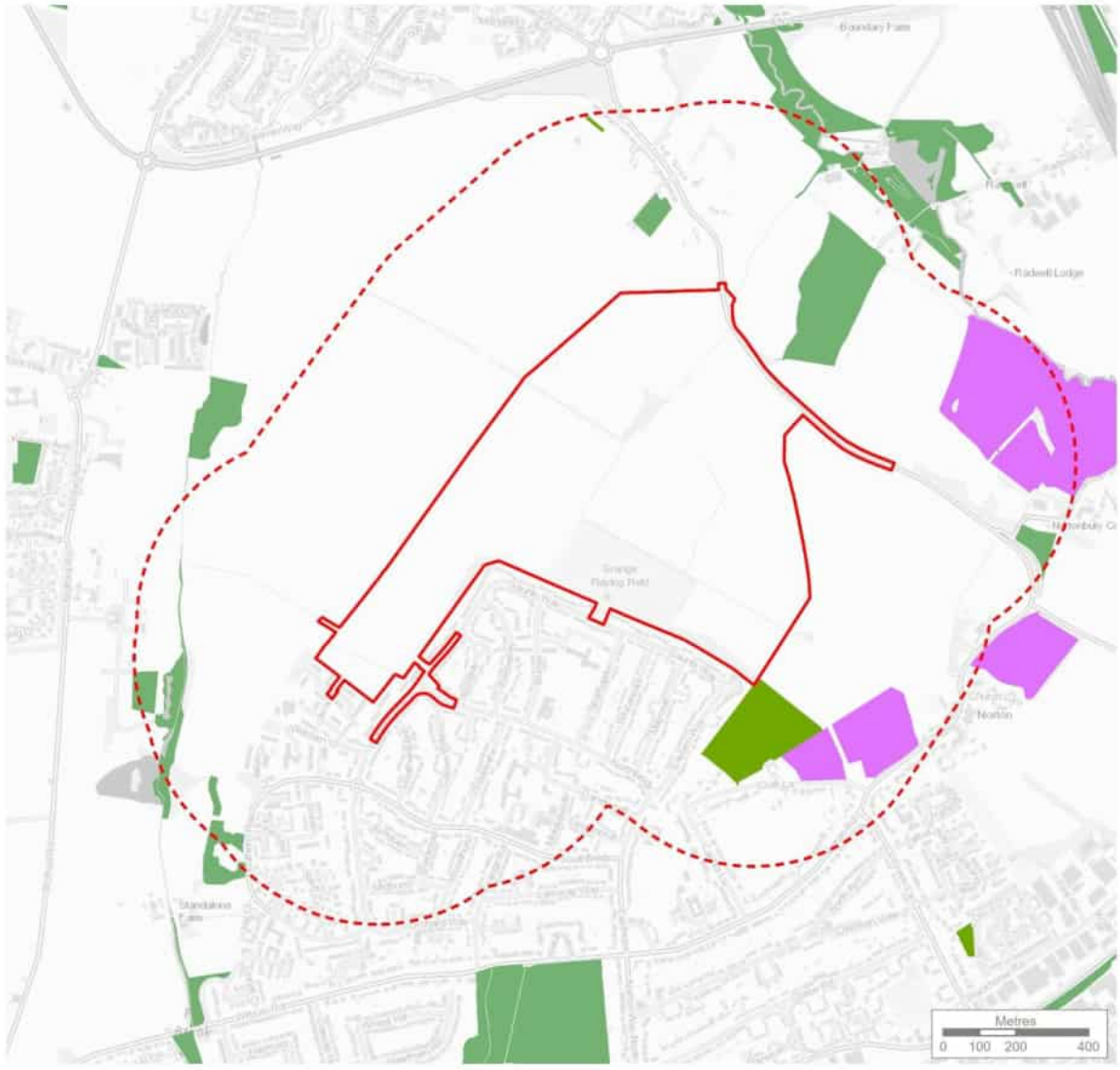
5.0 Notable Habitats

Habitats of Principal Importance (HPI)

5.1 There are no notable habitat types identified on Natural England's priority habitat inventories within the site (Figure 8). However, a small area of traditional orchard (HPI) is present adjacent to the southeast corner of the site. Another small area of traditional orchard lies just beyond this habitat, approximately 360m south of the site.

5.2 Several small areas of deciduous woodland are present offsite, with the most notable being a located approximately 100m north of the site, on the other side of Norton Road. Numerous smaller stretches run adjacent to Pix Brook and are located approximately 400m southwest of the site. Deciduous woodlands are a local priority habitat as well as HPI.

5.3 Numerous areas of good quality semi-improved grassland are located to the east of the site, the closest of which is located approximately 250m southeast, to the north of Croft Lane and Norton Road. Good quality semi-improved grasslands are a local priority habitat as well as HPI.



Key

- Site boundary
- Site boundary - 500m buffer
- Deciduous woodland
- Good quality semi-improved grassland
- Traditional orchard

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Project
LG1 Land North of Letchworth

Title
Notable Habitats Within and Adjacent to the Site

Drawing Number
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Figure 8: Notable habitats

6.0 Protected and Notable Species

Protected Species Licences

6.1 A review of Natural England's open datasets for granted protected species licences did not return any class licence returns or conclusive pond survey data for great crested newts between 2017 and 2019 within 2km of the site.

6.2 Two Natural England mitigation licences have been identified within 2km of the site. These are summarised in Table 4.

Table 4: Natural England mitigation licences within 2km of the site

Species	Licence Number	Dates	Licensable Activities
Brown long-eared bat	2016-22268-EPS-MIT	07/04/2016 to 30/04/2021	Destruction of a resting place
Common pipistrelle Brown long-eared bat	EPSM2011-3393	19/09/2011 to 31/12/2012	Destruction of a resting place

Pre-existing Species Records

6.3 Numerous species records were returned from HERC and BLBRMC for within 2km of the site. These are summarised in Table 5.

Table 5: Summary of pre-existing species records returned by HERC and BLBRMC

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Amphibians			
Common toad *Bufo bufo*	SPI	4	0.37km southwest
Great crested newt *Triturus cristatus*	EPS, WCA5, SPI, LBAP	11	Within 1.00km
Birds			
Barn owl *Tyto alba*	WCA1	12	Within 2.00km
Bittern *Botaurus stellaris*	WCA1, SPI, BAm, LBAP	2	Within 2.00km
Black redstart *Phoenicurus ochruros*	WCA1, BAm	5	Within 2.00km
Black-headed gull *Chroicocephalus ridibundus*	BAm	579	Within 2.00km
Black-tailed godwit *Limosa limosa*	WCA1, SPI, BRd	9	Within 2.00km
Brambling *Fringilla montifringilla*	WCA1	6	Within 2.00km
Bullfinch *Pyrrhula pyrrhula*	SPI, BAm	86	Within 2.00km
Cetti's warbler *Cettia cetti*	WCA1	24	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Common gull *Larus canus*	BAm	85	Within 2.00km
Common sandpiper *Actitis hypoleucos*	BAm	9	Within 2.00km
Common scoter *Melanitta nigra*	WCA1, SPI, BRd	1	Within 2.00km
Corn bunting *Emberiza calandra*	SPI, BRd	139	Within 2.00km
Cuckoo *Cuculus canorus*	SPI, BRd	12	Within 2.00km
Curlew *Numenius arquata*	SPI, BRd	2	Within 2.00km
Dunnock *Prunella modularis*	SPI, BAm	578	Within 2.00km
Egyptian goose *Alopochen aegyptiaca*	IAS	2	Within 2.00km
Fieldfare *Turdus pilaris*	WCA1, BRd	211	Within 2.00km
Firecrest *Regulus ignicapilla*	WCA1	3	Within 2.00km
Gadwall *Anas strepera*	BAm	194	Within 2.00km
Goldeneye *Bucephala clangula*	BRd	6	Within 2.00km
Grasshopper warbler *Locustella naevia*	SPI, BRd	1	Within 2.00km
Great black-backed gull *Larus marinus*	BAm	5	Within 2.00km
Green sandpiper *Tringa ochropus*	WCA1, BAm	264	Within 2.00km
Greenfinch *Chloris chloris*	BRd	557	Within 2.00km
Greenshank *Tringa nebularia*	WCA1, BAm	1	Within 2.00km
Grey partridge *Perdix perdix*	SPI, BRd	109	Within 2.00km
Grey plover *Pluvialis squatarola*	BAm	10	Within 2.00km
Grey wagtail *Motacilla cinerea*	BAm	135	Within 2.00km
Greylag goose *Anser anser*	WCA1, BAm	39	Within 2.00km
Hawfinch *Coccothraustes coccothraustes*	SPI, BRd	5	Within 2.00km
Hen harrier *Circus cyaneus*	WCA1, SPI, BRd	2	Within 2.00km
Herring gull	SPI, BRd	51	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Larus argentatus			
Hobby *Falco subbuteo*	WCA1	27	Within 2.00km
Honey buzzard *Pernis apivorus*	WCA1, BAm	2	Within 2.00km
House martin *Delichon urbicum*	BRd	89	Within 2.00km
House sparrow *Passer domesticus*	SPI, BRd	383	Within 2.00km
Iceland gull *Larus glaucoides*	BAm	1	Within 2.00km
Kestrel *Falco tinnunculus*	BAm	188	Within 2.00km
Kingfisher *Alcedo atthis*	WCA1	95	Within 2.00km
Lapwing *Vanellus vanellus*	SPI, BRd	32	Within 2.00km
Lesser black-backed gull *Larus fuscus*	BAm	155	Within 2.00km
Lesser redpoll *Acanthis cabaret*	SPI, BRd	6	Within 2.00km
Lesser spotted woodpecker *Dryobates minor*	SPI, BRd	9	Within 2.00km
Linnet *Linaria cannabina*	SPI, BRd	131	Within 2.00km
Mallard *Anas platyrhynchos*	BAm	489	Within 2.00km
Marsh harrier *Circus aeruginosus*	WCA1, BAm	1	Within 2.00km
Marsh tit *Poecile palustris*	SPI, BRd	15	Within 2.00km
Meadow pipit *Anthus pratensis*	BAm	95	Within 2.00km
Mediterranean gull *Larus melanocephalus*	WCA1, BAm	5	Within 2.00km
Merlin *Falco columbarius*	WCA1, BRd	9	Within 2.00km
Mistle thrush *Turdus viscivorus*	BRd	216	Within 2.00km
Montagu's harrier *Circus pygargus*	WCA1, BRd	3	Within 2.00km
Moorhen *Gallinula chloropus*	BAm	474	Within 2.00km
Osprey *Pandion haliaetus*	WCA1, BAm	4	Within 2.00km
Oystercatcher *Haematopus ostralegus*	BAm	4	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Peregrine *Falco peregrinus*	WCA1	8	Within 2.00km
Pied flycatcher *Ficedula hypoleuca*	BAm	3	Within 2.00km
Pink-footed goose *Anser brachyrhynchus*	BAm	1	Within 2.00km
Pintail *Anas acuta*	WCA1, BAm	1	Within 2.00km
Pochard *Aythya ferina*	BRd	12	Within 2.00km
Quail *Coturnix coturnix*	WCA1, BAm	2	Within 2.00km
Red kite *Milvus milvus*	WCA1	207	Within 2.00km
Redshank *Tringa totanus*	BAm	1	Within 2.00km
Redstart *Phoenicurus phoenicurus*	BAm	3	Within 2.00km
Redwing *Turdus iliacus*	WCA1, BAm	246	Within 2.00km
Reed bunting *Emberiza schoeniclus*	SPI, BAm	102	Within 2.00km
Ring ouzel *Turdus torquatus*	SPI, BRd	3	Within 2.00km
Rook *Corvus frugilegus*	BAm	114	Within 2.00km
Shelduck *Tadorna tadorna*	BAm	2	Within 2.00km
Short-eared owl *Asio flammeus*	BAm	3	Within 2.00km
Shoveler *Spatula clypeata*	BAm	95	Within 2.00km
Skylark *Alauda arvensis*	SPI, BRd	243	Within 2.00km
Snipe *Gallinago gallinago*	BAm	130	Within 2.00km
Song thrush *Turdus philomelos*	SPI, BAm, LBAP	335	Within 2.00km
Sparrowhawk *Accipiter nisus*	BAm	103	Within 2.00km
Spotted flycatcher *Muscicapa striata*	SPI, BRd	24	Within 2.00km
Starling *Sturnus vulgaris*	SPI, BRd	753	Within 2.00km
Stock dove *Columba oenas*	BAm	271	Within 2.00km
Stone-curlew *Burhinus oedicnemus*	WCA1, SPI, BAm, LBAP	2	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Swift *Apus apus*	BRd	224	Within 2.00km
Tawny owl *Strix aluco*	BAm	15	Within 2.00km
Teal *Anas crecca*	BAm	265	Within 2.00km
Tree pipit *Anthus trivialis*	SPI, BRd	1	Within 2.00km
Tree sparrow *Passer montanus*	SPI, BRd, LBAP	6	Within 2.00km
Turtle dove *Streptopelia turtur*	SPI, BRd	26	Within 2.00km
Velvet scoter *Melanitta fusca*	WCA1, BRd	9	Within 2.00km
Wheatear *Oenanthe oenanthe*	BAm	14	Within 2.00km
Whinchat *Saxicola rubetra*	BRd	5	Within 2.00km
Wigeon *Anas penelope*	BAm	17	Within 2.00km
Willow warbler *Phylloscopus trochilus*	BAm	95	Within 2.00km
Wood warbler *Phylloscopus sibilatrix*	SPI, BRd	12	Within 2.00km
Woodcock *Scolopax rusticola*	BRd	12	Within 2.00km
Wren *Troglodytes troglodytes*	BAm	508	Within 2.00km
Yellow wagtail *Motacilla flava*	SPI, BRd	38	Within 2.00km
Yellowhammer *Emberiza citrinella*	SPI, BRd	241	Within 2.00km
Yellow-legged gull *Larus michahellis*	BAm	2	Within 2.00km
Invertebrates			
August thorn *Ennomos quercinaria*	SPI	1	Within 2.00km
Autumnal rustic *Eugnorisma glareosa*	SPI	1	1.29km north, beyond the A507
Beaded chestnut *Agrochola lychnidis*	SPI	4	Within 1.00km
Blood-vein *Timandra comae*	SPI	15	0.42km north
Brindled beauty *Lycia hirtaria*	SPI	1	1.29km north, beyond the A507
Brown-spot pinion *Agrochola litura*	SPI	7	Within 1.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Buff ermine *Spilosoma lutea*	SPI	57	1.29km north, beyond the A507
Centre-barred sallow *Atethmia centrago*	SPI	11	1.29km north, beyond the A507
Chalk hill blue *Polyommatus coridon*	LBAP	2	0.5km south
Cinnabar *Tyria jacobaeae*	SPI	27	1.29km north, beyond the A507
Dot moth *Melanchra persicariae*	SPI	68	1.29km north, beyond the A507
Dusky brocade *Apamea remissa*	SPI	19	Within 2.00km
Dusky thorn *Ennomos fuscantaria*	SPI	11	1.29km north, beyond the A507
Dusky-lemon sallow *Cirrhia gilvago*	SPI	1	1.29km north, beyond the A507
Ear moth *Amphipoea oculea*	SPI	1	Within 2.00km
Feathered gothic *Tholera decimalis*	SPI	4	1.29km north, beyond the A507
Ghost moth *Hepialus humuli*	SPI	1	Within 2.00km
Green-brindled crescent *Allophyes oxyacanthae*	SPI	2	1.29km north, beyond the A507
Grey dagger *Acronicta psi*	SPI	12	Within 1.00km
Grizzled skipper *Pyrgus malvae*	SPI, LBAP	1	1.04km south
Lackey *Malacosoma neustria*	SPI	1	Within 2.00km
Large garden bumblebee *Bombus ruderatus*	SPI	1	1.31km northwest
Large nutmeg *Apamea anceps*	SPI	51	Within 1.00km
Large wainscot *Rhizedra lutosa*	SPI	1	Within 1.00km
Latticed heath *Chiasmia clathrata*	SPI	2	1.29km north, beyond the A507
Mottled rustic *Caradrina morpheus*	SPI	55	Within 1.00km
Mouse moth *Amphipyra tragopoginis*	SPI	3	0.71km north
Powdered quaker *Orthosia gracilis*	SPI	5	0.71km north
Rosy rustic *Hydraecia micacea*	SPI	10	Within 1.00km
Rustic *Hoplodrina blanda*	SPI	28	Within 1.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Sallow *Cirrhia icteritia*	SPI	1	Within 1.00km
Shaded broad-bar *Scotopteryx chenopodiata*	SPI	3	0.42km north
Small blue *Cupido minimus*	SPI	7	1.04km south
Small emerald *Hemistola chrysoprasaria*	SPI	11	0.42km north
Small heath *Coenonympha pamphilus*	SPI	9	1.04km south
Small square-spot *Diarsia rubi*	SPI	1	Within 2.00km
Stag beetle *Lucanus cervus*	WCA5, SPI, LBAP	1	0.62km west
Wall *Lasiommata megera*	SPI	1	1.04km south
White ermine *Spilosoma lubricipeda*	SPI	17	1.29km north, beyond the A507
White-letter hairstreak *Satyrium w-album*	SPI	8	0.95km east
Mammals			
Bat species Chiroptera	EPS, WCA5	28 field records 5 roosts	Field record – 0.55km north Roost - 0.69km northeast
Brown hare *Lepus europaeus*	SPI	1	1.22km northeast
Brown long-eared bat *Plecotus auritus*	EPS, WCA5, SPI	9 field records 7 roosts	Field record – 0.55km south Roost - 0.56km south
Chinese muntjac *Muntiacus reevesi*	IAS	14	0.79km north, beyond the A507
Common pipistrelle *Pipistrellus pipistrellus*	EPS, WCA5	43 field records 9 roosts	Field record – 0.53km southeast Roost – 0.75km northeast
Daubenton's bat *Myotis daubentonii*	EPS, WCA5	12 field records	0.68km northeast
Eastern grey squirrel *Sciurus carolinensis*	IAS	53	0.42km north
Eurasian badger *Meles meles*	PBA	<<redacted>>	<<redacted>>
Eurasian otter *Lutra lutra*	EPS, WCA5, SPI	13	0.89km north, beyond the A507
European water vole *Arvicola amphibius*	WCA5, SPI, LBAP	14	0.95km north, beyond the A507
Long-eared bat *Plecotus spp.*	EPS, WCA5	5 field records 5 roosts	Field record - Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
			Roost – 0.75km northeast
Noctule *Nyctalus noctula*	EPS, WCA5, SPI	14 field records	0.55km south
Pipistrelle bat *Pipistrellus spp.*	EPS, WCA5	15 field records 7 roosts	Field record – 0.85km southwest Roost - 0.56km south
Polecat *Mustela putorius*	SPI	1	Within the site
Serotine *Eptesicus serotinus*	EPS, WCA5	4 field records 2 roosts	Field record - Within 2.00km Roost – 0.89km northeast
Soprano pipistrelle *Pipistrellus pygmaeus*	EPS, WCA5, SPI	13 field records	0.55km south
West European hedgehog *Erinaceus europaeus*	SPI	111	0.05km north
Plants			
Bluebell *Hyacinthoides non-scripta*	WCA8	1	1.59km north, beyond the A507
Giant hogweed *Heracleum mantegazzianum*	WCA9, IAS	4	0.63km east
Himalayan balsam *Impatiens glandulifera*	WCA9, IAS	2	1.35km east, beyond the A1(M)
Lizard orchid *Himantoglossum hircinum*	WCA8	1	0.70km north
Nuttall's waterweed *Elodea nuttallii*	WCA9, IAS	1	1.47km west
Rhododendron *Rhododendron ponticum*	WCA9	1	Within 2.00km
Variegated Yellow Archangel *Lamiastrum galeobdolon subsp. argentatum*	WCA9	3	0.79km south
Wall cotoneaster *Cotoneaster horizontalis*	WCA9	1	1.47km west
Reptiles			
Common lizard *Zootoca vivipara*	WCA5, SPI	2	Within 2.0km

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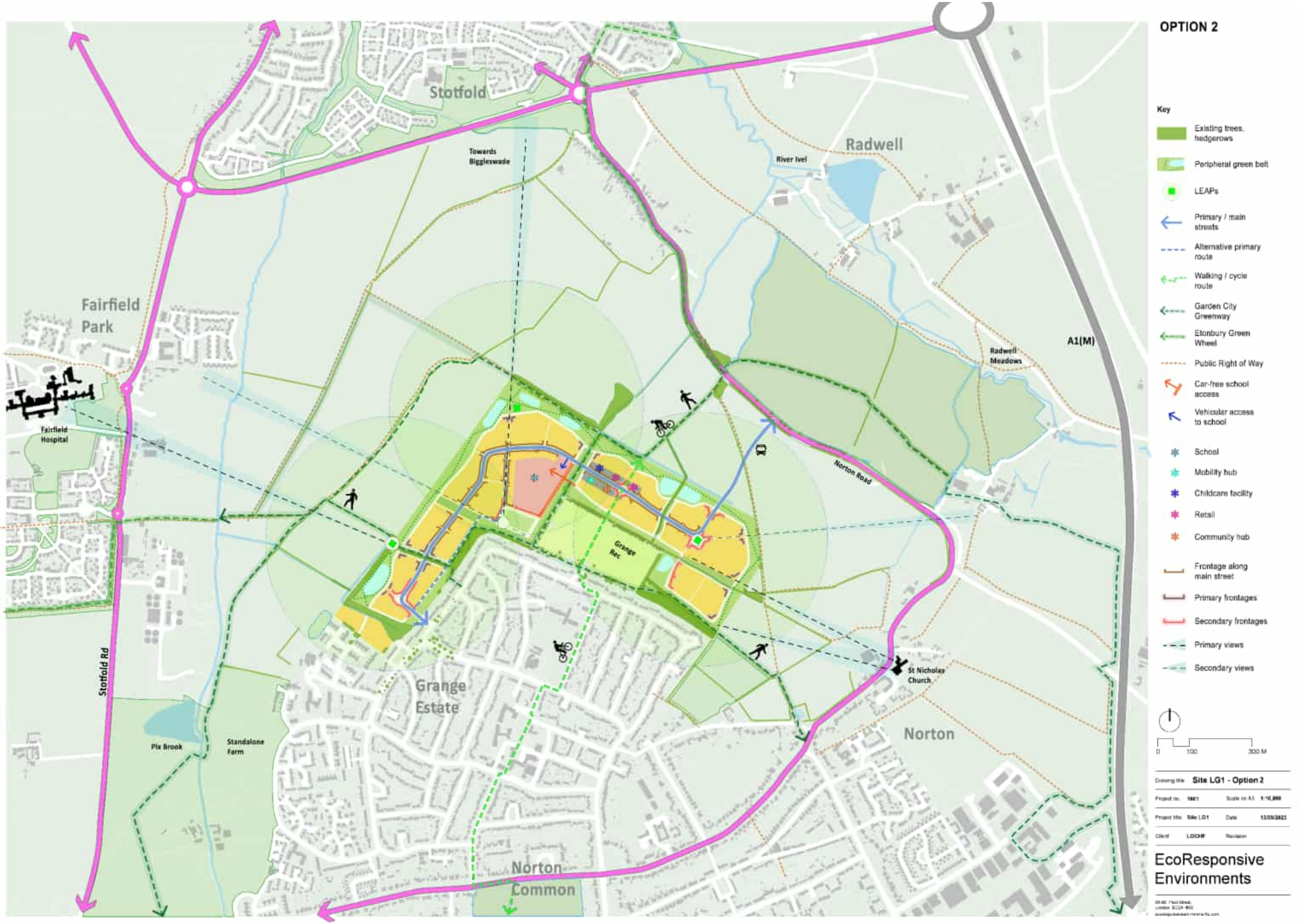
Appendix B

High Level Masterplan


OPTION 2
Stotfold
Towards Biggleswade
River Ivel
Radwell
Fairfield Park
Fairfield Hospital
Radwell Meadows
A1(M)
Norton Road
Grange Rec
Stotfold Rd
Grange Estate
Pix Brook
Standalone Farm
St Nicholas Church
Norton
Norton Common
Key
Existing trees, hedgerows
Peripheral green belt
LEAPs
Primary / main streets
Alternative primary route
Walking / cycle route
Garden City Greenway
Etonbury Green Wheel
Public Right of Way
Car-free school access
Vehicular access to school
School
Mobility hub
Childcare facility
Retail
Community hub
Frontage along main street
Primary frontages
Secondary frontages
Primary views
Secondary views
0
100
300 M
Drawing title Site LG1 - Option 2
Project no. 1921 Scale on A3 1:10,000
Project title Site LG1 Date 13/09/2023
Client LGCHP Revision
EcoResponsive Environments

Key

- Play Provision
- Other Outdoor Play
- Parks and Public Gardens
- Natural and Semi Natural
- Allotment
- Amenity Green Space
- Street
- Dev. Area A
- Dev. Area B
- Dev. Area C
- Dev. Area D
- Dev. Area E
- Dev. Area F

Dev. Area C
9.37 hectare
(340 units)

Dev. Area D
3.87 hectare
(140 units)

Dev. Area E
4.20 hectare
(150 units)

Dev. Area B
4.30 hectare
(155 units)

Dev. Area F
2.19 hectare
(80 units)

Dev. Area A
0.95 hectare
(35 units)

Appendix C

Target Notes 9546.006

Target Notes Report

Survey 9546 LG1 Land North of the Grange, Letchworth

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Target Note TN1		
Crataegus monogyna	Common hawthorn	D
Urtica dioica	Common nettle	D
Rubus fruticosus agg.	Bramble	A
Alliaria petiolata	Garlic mustard	F
Prunus spinosa	Blackthorn	F
Acer campestre	Field maple	O
Hedera helix	Ivy	O
Sambucus nigra	Elder	O
Ligustrum vulgare	Wild privet	R
Target Note TN2		
Arrhenatherum elatius	False oat-grass	D
Cirsium arvense	Creeping thistle	O
Heracleum sphondylium	Hogweed	O
Urtica dioica	Common nettle	O
Convolvulus arvensis	Field bindweed	R
Crataegus monogyna	Common hawthorn	R
Hedera helix	Ivy	R
Rubus fruticosus agg.	Bramble	R
Target Note TN3		
Epilobium hirsutum	Great willowherb	D
Target Note TN4		
Rubus fruticosus agg.	Bramble	D
Target Note TN5		
Prunus spinosa	Blackthorn	D
Target Note TN6		
Cirsium arvense	Creeping thistle	F
Odontites vernus	Red bartsia	F
Ranunculus repens	Creeping buttercup	F
Rumex obtusifolius	Broad-leaved dock	F
Achillea millefolium	Yarrow	O
Arrhenatherum elatius	False oat-grass	O
Epilobium sp.	Willowherb species	O
Plantago lanceolata	Ribwort plantain	O
Plantago major	Greater plantain	O
Crepis capillaris	Smooth hawk's-beard	R
Daucus carota	Wild carrot	R
Medicago lupulina	Black medick	R
Prunella vulgaris	Selfheal	R
Rubus fruticosus agg.	Bramble	R
Target Note TN7		
Lolium perenne	Perennial rye-grass	D
Plantago major	Greater plantain	R

Poa annua	Annual meadow-grass	R

Target Note TN8

Capsella bursa-pastoris	Shepherd's-purse	R
Cirsium arvense	Creeping thistle	R
Lolium perenne	Perennial rye-grass	R
Medicago lupulina	Black medick	R
Plantago major	Greater plantain	R
Poa annua	Annual meadow-grass	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN9

Plantago major	Greater plantain	O
Ranunculus repens	Creeping buttercup	O
Rumex obtusifolius	Broad-leaved dock	O
Achillea millefolium	Yarrow	O
Dactylis glomerata	Cock's-foot	R
Plantago lanceolata	Ribwort plantain	R
Crepis capillaris	Smooth hawk's-beard	R

Target Note TN10

Arrhenatherum elatius	False oat-grass	A
Dactylis glomerata	Cock's-foot	A
Cirsium arvense	Creeping thistle	F
Epilobium hirsutum.	Great willowherb	F
Holcus lanatus	Yorkshire-fog	F
Achillea millefolium	Yarrow	O
Agrimonia eupatoria	Agrimony	O
Festuca rubra	Red fescue	O
Lolium perenne	perennial rye-grass	O
Plantago lanceolata	Ribwort plantain	O
Urtica dioica	Common nettle	O
Crepis capillaris	Smooth hawk's-beard	R
Medicago lupulina	Black medick	R
Rubus fruticosus agg.	Bramble	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN11

Acer campestre	Field maple	A
Anisantha sterilis	Barren brome	A
Fraxinus excelsior	Ash	A
Populus alba	White poplar	A
Prunus spinosa	Blackthorn	F
Agrimonia eupatoria	Agrimony	O
Arrhenatherum elatius	False oat-grass	O
Crataegus monogyna	Common hawthorn	O
Dactylis glomerata	Cock's-foot	O
Hedera helix	Ivy	O
Rosa canina	Dog rose	O
Clinopodium vulgare	Wild basil	R
Sambucus nigra	Elder	R

Target Note TN12

Carduus tenuiflorus	Slender thistle	F
Cirsium arvense	Creeping thistle	F

Arrhenatherum elatius	False oat-grass	O
Helminthotheca echioides	Bristly oxtongue	O
Prunus spinosa	Blackthorn	O
Cirsium vulgare	Spear thistle	R
Rumex sanguineus	Wood dock	R

Target Note TN13

Urtica dioica	Common nettle	D
Fraxinus excelsior	Ash	O
Populus alba	White poplar	O
Rubus fruticosus agg.	Bramble	O
Rosa canina	Dog rose	R
Sambucus nigra	Elder	R

Target Note TN14

Phragmites australis	Common reed	D

Target Note TN15

Populus x *canadensis*	Hybrid black poplar	D
Epilobium hirsutum	Great willowherb	A
Phragmites australis	Common reed	A
Calystegia sepium	Hedge bindweed	F
Galium aparine	Cleavers	F
Arctium minus	Lesser burdock	O
Carex acutiformis	Lesser pond-sedge	O
Sambucus nigra	Elder	O
Solanum dulcamara	Bittersweet	O
Urtica dioica	Common nettle	O
Cirsium arvense	creeping thistle	R
Crataegus monogyna	Common hawthorn	R
Euonymus europaeus	Spindle	R
Galeopsis tetrahit	Common hemp-nettle	R
Populus tremula	Aspen	R
Salix alba	White willow	R

Target Note TN16

Epilobium hirsutum	Great willowherb	A
Phragmites australis	Common reed	A
Urtica dioica	Common nettle	A

Target Note TN17

Rubus fruticosus agg.	Bramble	F
Salix cinerea	Grey willow	F
Sambucus nigra	Elder	F
Urtica dioica	Common nettle	F
Calystegia sepium	Hedge bindweed	O
Calystegia silvatica	Large bindweed	O
Crataegus monogyna	Common hawthorn	O
Galium aparine	Cleavers	O
Prunus spinosa	Blackthorn	O
Salix caprea	Goat willow	R

Target Note TN18

Arrhenatherum elatius	False oat-grass	F
Dactylis glomerata	Cock’s-foot	F

Plantago lanceolata	Ribwort plantain	F
Cirsium arvense	Creeping thistle	O
Holcus lanatus	Yorkshire-fog	O
Achillea millefolium	Yarrow	O
Agrimonia eupatoria	Agrimony	O
Festuca rubra	Red fescue	O
Lolium perenne	Perennial rye-grass	O
Crepis capillaris	Smooth hawk's-beard	R
Elytrigia repens	Common couch	R
Medicago lupulina	Black medick	R
Odontites vernus	Red bartsia	R
Polygonum aviculare	knotgrass	R
Rubus fruticosus agg.	Bramble	R
Rumex obtusifolius	Broad-leaved dock	R
Urtica dioica	Common nettle	R

Target Note TN19

Cirsium arvense	Creeping thistle	F
Arctium minus	Lesser burdock	O
Artemisia vulgaris	Mugwort	O
Calystegia sepium	Hedge bindweed	O
Carduus tenuiflorus	Slender thistle	O
Cirsium vulgare	Spear thistle	O
Dactylis glomerata	Cock's-foot	O
Helminthotheca echioides	Bristly oxtongue	O
Malva sylvestris	Common mallow	O
Plantago lanceolata	Ribwort plantain	O
Rubus fruticosus agg.	Bramble	O
Rumex sanguineus	Wood dock	O
Heracleum sphondylium	Hogweed	R
Reseda luteola	Weld	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN20

Arrhenatherum elatius	False oat-grass	A
Dactylis glomerata	Cock's-foot	F
Helminthotheca echioides	Bristly oxtongue	O
Plantago lanceolata	Ribwort plantain	O
Rumex obtusifolius	Broad-leaved dock	O

Target Note TN21

Helminthotheca echioides	Bristly oxtongue	F
Lepidium didymum	Lesser swine-cress	F
Plantago lanceolata	Ribwort plantain	F
Rumex obtusifolius	Broad-leaved dock	F

Target Note TN22

Acer campestre	Field maple	A
Fraxinus excelsior	Ash	A
Festuca rubra	Red fescue	F
Quercus robur	Pedunculate oak	F
Agrimonia eupatoria	Agrimony	O
Arrhenatherum elatius	False oat-grass	O
Crataegus monogyna	Common hawthorn	O
Dactylis glomerata	Cock's-foot	O

Hedera helix	Ivy	O
Rosa canina	Dog rose	O
Sorbus aucuparia	Rowan	O
Fagus sylvatica	Beech	R

Target Note TN23

Arrhenatherum elatius	False oat-grass	A
Dactylis glomerata	Cock's-foot	A
Festuca rubra	Red fescue	F
Holcus lanatus	Yorkshire-fog	O
Achillea millefolium	Yarrow	O
Lolium perenne	Perennial rye-grass	O
Plantago lanceolata	Ribwort plantain	O
Centaurea nigra	Common knapweed	R
Cirsium arvense	Creeping thistle	R
Crepis capillaris	Smooth hawk's-beard	R
Medicago lupulina	Black medick	R
Rumex obtusifolius	Broad-leaved dock	R
Urtica dioica	Common nettle	R

Target Note TN24

Arrhenatherum elatius	False oat-grass	D
Dactylis glomerata	Cock's-foot	D
Festuca rubra	Red fescue	F
Achillea millefolium	Yarrow	O
Agrimonia eupatoria	Agrimony	O
Centaurea nigra	Common knapweed	O
Cirsium arvense	Creeping thistle	O
Daucus carota	Wild carrot	O
Epilobium hirsutum	Great willowherb	O
Equisetum arvense	Field horsetail	O
Holcus lanatus	Yorkshire-fog	O
Oenothera glazioviana	Large-flowered evening-primrose	O
Plantago lanceolata	Ribwort plantain	O
Crepis capillaris	Smooth hawk's-beard	R
Lolium perenne	Perennial rye-grass	R
Medicago lupulina	Black medick	R
Rumex obtusifolius	Broad-leaved dock	R
Urtica dioica	Common nettle	R

Target Note TN25

Arrhenatherum elatius	False oat-grass	D
Dactylis glomerata	Cock's-foot	D
Festuca rubra	Red fescue	F
Holcus lanatus	Yorkshire-fog	O
Achillea millefolium	Yarrow	O
Lolium perenne	Perennial rye-grass	O
Plantago lanceolata	Ribwort plantain	O
Centaurea nigra	Common knapweed	R
Crepis capillaris	Smooth hawk's-beard	R
Medicago lupulina	Black medick	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN26

Prunus spinosa	Blackthorn	D

Target Note TN27

Acer campestre	Field maple	O
Alliaria petiolata	Garlic mustard	O
Arrhenatherum elatius	False oat-grass	O
Cornus sanguinea	Dogwood	O
Corylus avellana	hazel	O
Crataegus monogyna	Common hawthorn	O
Dactylis glomerata	Cock's-foot	O
Prunus spinosa	Blackthorn	O
Rubus fruticosus agg.	Bramble	O
Cirsium arvense	Creeping thistle	R
Euonymus europaeus	Spindle	R
Fraxinus excelsior	Ash	R
Malus domestica	Apple	R
Rosa canina	Dog rose	R
Urtica dioica	Common nettle	R
Viburnum opulus	Guelder-rose	R

Target Note TN28

Rubus fruticosus agg.	Bramble	D
Arrhenatherum elatius	False oat-grass	O
Dactylis glomerata	Cock's-foot	O
Cirsium arvense	Creeping thistle	R
Urtica dioica	Common nettle	R

Target Note TN29

Arrhenatherum elatius	False oat-grass	F
Crataegus monogyna	Common hawthorn	F
Fraxinus excelsior	Ash	F
Acer campestre	Field maple	O
Agrimonia eupatoria	Agrimony	O
Alliaria petiolata	Garlic mustard	O
Betula pendula	Silver birch	O
Dactylis glomerata	Cock's-foot	O
Festuca rubra	Red fescue	O
Geum urbanum	Wood avens	O
Hedera helix	Ivy	O
Prunus avium	Wild cherry	O
Prunus spinosa	Blackthorn	O
Quercus robur	Pedunculate oak	O
Rosa canina	Dog rose	O
Tilia x *europaea*	Common lime	O
Urtica dioica	Common nettle	O
Euonymus europaeus	Spindle	R
Malus domestica	Apple	R

Target Note TN30

Dactylis glomerata	Cock's-foot	D
Arrhenatherum elatius	False oat-grass	F
Achillea millefolium	Yarrow	O
Cirsium arvense	Creeping thistle	O
Holcus lanatus	Yorkshire-fog	O
Lolium perenne	Perennial rye-grass	O
Plantago lanceolata	Ribwort plantain	O

Centaurea nigra	Common knapweed	R
Rumex obtusifolius	Broad-leaved dock	R
Urtica dioica	Common nettle	R

Target Note TN31

Rubus fruticosus agg.	Bramble	D

Target Note TN32

Epilobium hirsutum	Great willowherb	D

Target Note TN33

Acer campestre	Field maple	F
Corylus avellana	Hazel	F
Crataegus monogyna	Common hawthorn	F
Acer platanoides	Norway maple	O
Acer pseudoplatanus	Sycamore	O
Fraxinus excelsior	Ash	O
Ligustrum vulgare	Wild privet	O
Pinus nigra	Black pine	O
Prunus spinosa	Blackthorn	O
Rosa canina	Dog rose	O
Rubus fruticosus agg.	Bramble	O
Agrimonia eupatoria	Agrimony	R
Anisantha sterilis	Barren brome	R
Arrhenatherum elatius	False oat-grass	R
Betula pendula	Silver birch	R
Buddleja davidii	Butterfly-bush	R
Cirsium arvense	Creeping thistle	R
Dactylus glomerata	Cock's-foot	R
Epilobium hirsutum	Great willowherb	R
Festuca rubra	Red fescue	R
Galium aparine	Cleavers	R
Geum urbanum	Wood avens	R
Hedera helix	Ivy	R
Rumex sanguineus	Wood dock	R
Salix spp.	Willow species	R
Sorbus aucuparia	Rowan	R
Urtica dioica	Common nettle	R

Target Note TN34

Dactylis glomerata	Cock's-foot	D
Arrhenatherum elatius	False oat-grass	D
Holcus lanatus	Yorkshire-fog	F
Achillea millefolium	Yarrow	O
Cirsium arvense	Creeping thistle	O
Plantago lanceolata	Ribwort plantain	O
Urtica dioica	Common nettle	O
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN35

Rubus fruticosus agg.	Bramble	D

Target Note TN36

Fraxinus excelsior	Ash	D
Prunus spinosa	Blackthorn	A

Anthriscus sylvestris	Cow parsley	F
Acer campestre	Field maple	R
Betula pendula	Silver birch	R
Crataegus monogyna	Common hawthorn	R
Euonymus europaeus	Spindle	R
Populus x *canadensis*	Hybrid black poplar	R
Quercus robur	Pedunculate oak	R

Target Note TN37

Prunus spinosa	Blackthorn	D

Target Note TN38

Triticum aestivum	Common wheat	D
Arrhenatherum elatius	False oat-grass	R
Capsella bursa-pastoris	Shepherd's-purse	R
Cirsium arvense	Creeping thistle	R
Dactylis glomerata	Cock's-foot	R
Helminthotheca echioides	Bristly oxtongue	R
Lolium perenne	Perennial rye-grass	R
Medicago lupulina	Black medick	R
Plantago lanceolata	Ribwort plantain	R
Plantago major	Greater plantain	R
Poa annua	Annual meadow-grass	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN39

Anisantha sterilis	Barren brome	A
Cirsium arvense	Creeping thistle	F
Urtica dioica	Common nettle	F
Capsella Bursa-pastoris	Shepherd's-purse	O
Helminthotheca echioides	Bristly oxtongue	O
Lolium perenne	Perennial rye-grass	O
Sonchus asper	Prickly sow-thistle	O
Sonchus oleraceus	Smooth sow-thistle	O
Arrhenatherum elatius	False oat-grass	R
Dactylis glomerata	Cock's-foot	R
Plantago lanceolata	Ribwort plantain	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN40

Achillea millefolium	Yarrow	A
Arrhenatherum elatius	False oat-grass	A
Daucus carota	Wild carrot	A
Geranium dissectum	Cut-leaved crane's-bill	A
Leucanthemum vulgare	Oxeye daisy	A
Anisantha sterilis	Barren brome	F
Centaurea nigra	Common knapweed	F
Geranium molle	Dove's-foot crane's-bill	F
Silene dioica	Red campion	F
Anthriscus sylvestris	Cow parsley	O
Cirsium arvense	Creeping thistle	O
Conium maculatum	Hemlock	O

Dactylis glomerata	Cock's-foot	O
Galium verum	Lady's-bedstraw	O
Holcus lanatus	Yorkshire-fog	O
Lamium album	White dead-nettle	O
Lamium purpureum	Red dead-nettle	O
Medicago lupulina	Black medick	O
Trifolium pratense	Red clover	O
Artemisia vulgaris	Mugwort	R
Barbarea vulgaris	Winter-cress	R
Brachypodium sylvatica	False-brome	R
Cerastium fontanum	Common mouse-ear	R
Cirsium vulgare	Spear thistle	R
Epilobium parviflorum.	Hoary willowherb	R
Epilobium sp.	Willowherb species	R
Galega officinalis	Goat's-rue	R
Galium album	Hedge bedstraw	R
Galium aparine	Cleavers	R
Prunella vulgaris	Selfheal	R
Ranunculus acris	Meadow buttercup	R
Rosa sp.	Rose species	R
Rumex obtusifolius	Broad-leaved dock	R
Rumex sanguineus	Wood dock	R
Urtica dioica	Common nettle	R

Target Note TN41

Rubus fruticosus agg.	Bramble	D
Crataegus monogyna	Common hawthorn	A
Acer campestre	Field maple	R
Carpinus betulus	Hornbeam	R
Sambucus nigra	Elder	R

Target Note TN42

Galium aparine	Cleavers	A
Anisantha sterilis	Barren brome	F
Anthriscus sylvestris	Cow parsley	F
Arrhenatherum elatius	False oat-grass	F
Lamium album	White dead-nettle	F
Urtica dioica	Common nettle	F
Achillea millefolium	Yarrow	O
Cirsium arvense	Creeping thistle	O
Geranium dissectum	Cut-leaved crane's-bill	O
Glechoma hederacea	Ground-ivy	O
Artemisia vulgaris	Mugwort	R
Barbarea vulgaris	Winter cress	R
Centaurea nigra	Common knapweed	R
Cirsium vulgare	Spear thistle	R
Conium maculatum	Hemlock	R
Heracleum sphondylium	Hogweed	R
Rumex crispus	Curled dock	R
Silene dioica	Red campion	R
Silene latifolia	White campion	R

Target Note TN43

Fagus sylvatica	Beech	A
Fraxinus excelsior	Ash	A
Arum maculatum	Lords-and-Ladies	F
Galium aparine	Cleavers	F
Hedera helix	Ivy	F
Urtica dioica	Common nettle	F
Veronica hederifolia	Ivy-leaved speedwell	F
Anthriscus sylvestris	Cow parsley	O
Euonymus europaeus	Spindle	O
Geum urbanum	Wood avens	O
Glechoma hederacea	Ground-ivy	O
Lamium album	White dead-nettle	O
Mercurialis perennis	Dog's-mercury	O
Myotis sylvatica	Wood forget-me-not	O
Prunus spinosa	Blackthorn	O
Quercus cerris	Turkey oak	O
Sambucus nigra	Elder	O
Alliaria petiolata	Garlic mustard	R
Hyacinthioides x *massartiana*	Hybrid bluebell	R
Prunus avium	Wild cherry	R
Stellaria media	Common chickweed	R
Ulmus sp.	Elm species	R

Target Note TN44

Crataegus monogyna	Common hawthorn	D
Sambucus nigra	Elder	O
Rubus fruticosus agg.	Bramble	R
Acer campestre	Field maple	R

Target Note TN45

Anisantha sterilis	Barren brome	A
Bromus hordeaceus	Soft-brome	F
Achillea millefolium	Yarrow	O
Anthriscus sylvestris	Cow parsley	O
Arrhenatherum elatius	False oat-grass	O
Centaurea nigra	Common knapweed	O
Cirsium arvense	Creeping thistle	O
Cochlearia danica	Danish scurvygrass	O
Geranium pyrenaicum	Hedgerow crane's-bill	O
Heracleum sphondylium	Hogweed	O
Lamium album	White dead-nettle	O
Rumex crispus	Curled dock	O
Taraxacum sp.	Dandelion species	O
Urtica dioica	Common nettle	O
Alliaria petiolata	Garlic mustard	R
Artemisia vulgaris	Mugwort	R
Chenopodium album	Fat-hen	R
Cirsium vulgare	Spear thistle	R
Conium maculatum	Hemlock	R
Galium aparine	Cleavers	R
Hypericum perforatum	Perforate St John's-wort	R

Lapsana communis	Nipplewort	R
Potentilla reptans	Creeping cinquefoil	R
Rubus fruticosus agg.	Bramble	R
Stellaria media	Common chickweed	R

Target Note TN46

Arrhenatherum elatius	False oat-grass	A
Dactylis glomerata	Cock's-foot	A
Holcus lanatus	Yorkshire-fog	A
Achillea millefolium	Yarrow	O
Agrimonia eupatoria	Agrimony	O
Centaurea nigra	Common knapweed	O
Daucus carota	Wild carrot	O
Festuca rubra	Red fescue	O
Galium album	Hedge bedstraw	O
Galium verum	Lady's-bedstraw	O
Geranium dissectum	Cut-leaved crane's-bill	O
Knautia arvensis	Field scabious	O
Lamium album	White dead-nettle	O
Leucanthemum vulgare	Oxeye daisy	O
Medicago lupulina	Black medick	O
Poa trivialis	Rough meadow-grass	O
Ranunculus acris	Meadow buttercup	O
Silene dioica	Red campion	O
Trifolium pratense	Red clover	O
Anisantha sterilis	Barren brome	R
Anthriscus sylvestris	Cow parsley	R
Lamium purpureum	Red dead-nettle	R
Brachypodium sylvatica	False-brome	R
Cerastium fontanum	Common mouse-ear	R
Epilobium sp.	Willowherb species	R
Prunella vulgaris	Selfheal	R
Rumex obtusifolius	Broad-leaved dock	R

Target Note TN47

Unvegetated

Target Note TN48

Lolium perenne	Perennial rye-grass	D
Bellis perennis	Daisy	A
Agrostis capillaris	Common bent	F
Ranunculus repens	Creeping buttercup	F
Taraxacum sp.	Dandelion species	F
Trifolium repens	White clover	F
Plantago lanceolata	Ribwort plantain	O
Plantago major	Greater plantain	O
Dactylis glomerata	Cock's-foot	R
Geranium molle	Dove's-foot crane's-bill	R
Ranunculus acris	Meadow buttercup	R

Target Note TN49

Prunus spinosa	Blackthorn	D
Acer platanoides	Norway maple (sapling)	R
Anisantha sterilis	Barren brome	R
Anthriscus sylvestris	Cow parsley	R
Rosa sp.	Rose species	R

Target Note TN50

Rubus fruticosus agg.	Bramble	D
Crataegus monogyna	Common hawthorn	R
Sambucus nigra	Elder	R

Target Note TN51

Lolium perenne	Perennial rye-grass	D
Bellis perennis	Daisy	A
Taraxacum sp.	Dandelion species	A
Geranium molle	Dove's-foot crane's-bill	F
Plantago lanceolata	Ribwort plantain	F
Achillea millefolium	Yarrow	O
Alopecurus pratensis	Meadow foxtail	O
Capsella bursa-pastoris	Shepherd's-purse	O
Dactylis glomerata	Cock's-foot	O
Poa annua	Annual meadow-grass	O
Ranunculus repens	Creeping buttercup	O
Anthriscus sylvestris	Cow parsley	R
Lamium purpureum	Red dead-nettle	R
Malva sylvestris	Common mallow	R
Medicago arabica	Spotted medick	R
Prunus sp.	Cherry species	R
Rumex crispus	Curled dock	R
Rumex obtusifolius	Broad-leaved dock	R
Schedonorus arundinacea	Tall fescue	R
Veronica arvensis	Wall speedwell	R
Veronica chamaedrys	Germander speedwell	R
Veronica persica	Common field -speedwell	R
Crepis vesicaria	Beaked Hawk's-beard	R

Target Note TN52

Unidentified ornamental shrub species	D

Target Note TN53

Pyracantha sp.	Firethorn species	D

Target Note TN54

Several unidentified ornamental perennial plants	D

Ditch 1

No wetland species. Ground composition (without shrub species) as H12

Ditch 2

No wetland species. Ground composition as TN24

Ditch 3

No wetland species. Ground composition as TN37

Ditch 4

unvegetated

Ditch 5

No wetland species. Ground composition as TN41

Line of Trees 1

Acer pseudoplatanus	Sycamore	D
Acer platanoides	Norway maple	R

Line of Trees 2

Pinus nigra	Austrian pine	D

The Hedgerow Target notes are located within the Hedgerow Regulations Assessment.

Appendix D

Badger Survey 9546.003

Appendix E

Reptile Survey 9546.04.001

Appendix F

Amphibian Report 9546.01.001

Appendix G

Water Vole and Otter Report 9546.004

Appendix H

Hedgerow Regulations Assessment 9546.005

Appendix I

Breeding Birds Survey Report 9546.02.001

Appendix J

Winter Bird Survey Report 9546.03.001

Appendix K

Dormouse Survey Report 9546.07.001

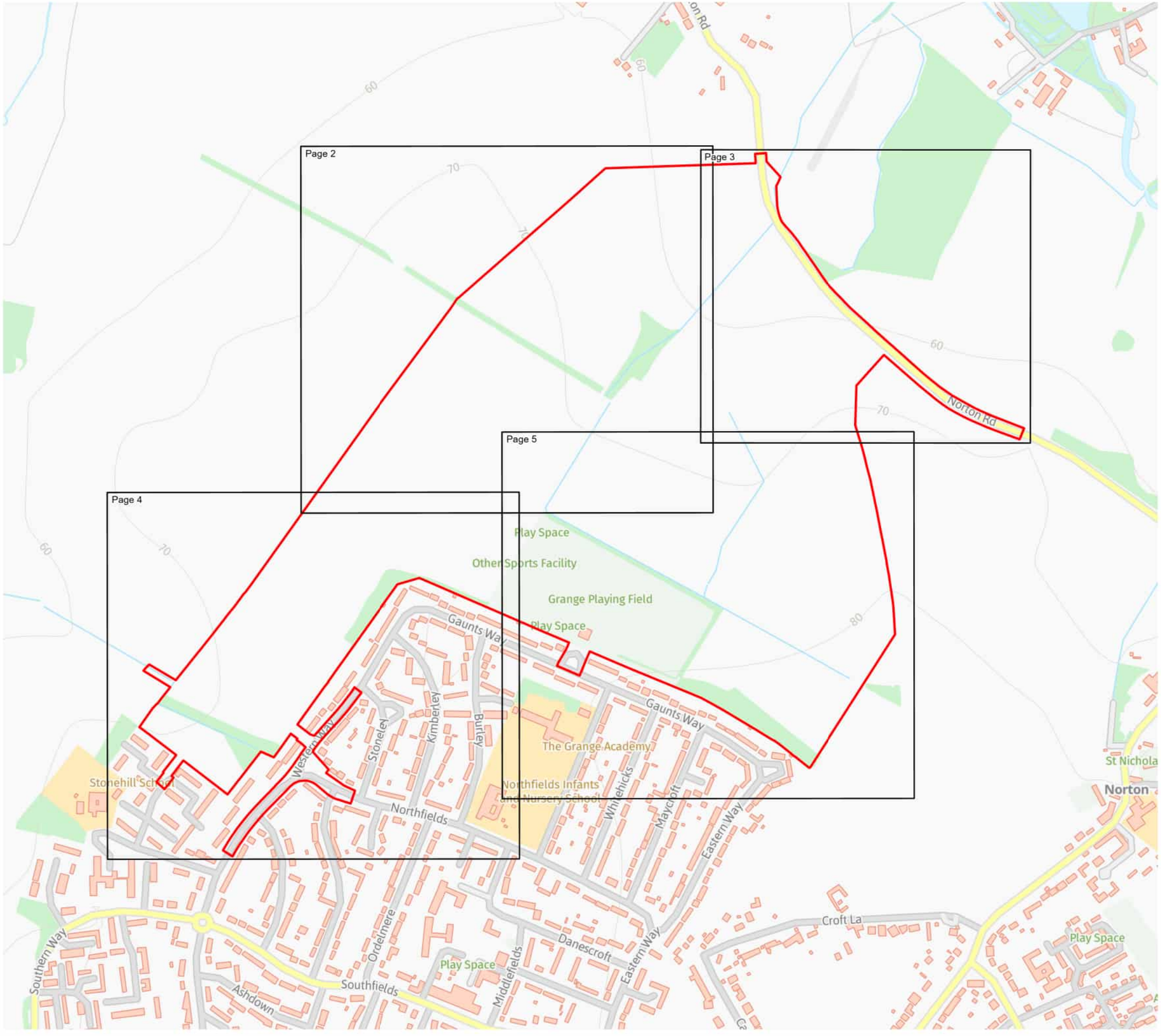
Appendix L

Bat Survey Report 9546.01.002

Drawings

Phase 1 Habitat Survey G9546.002A

Opportunities and Constraints Plan G9546.08.001



KEY

Site boundary

Page and page number

Metres
0 50 100 200

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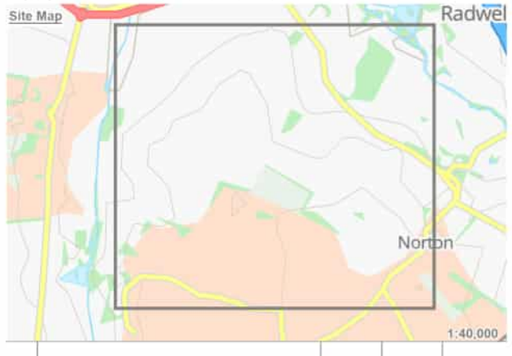

Rev	Description	Drawn	Approved	Date
A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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Project
LG1 Land North of Letchworth

Title
Phase 1 Habitat Survey

Drawing Number
G9546.002.1A

Drawn	Checked	Approved	Scale	Date
SA	MK	TW	1:7,000 @ A3	22/08/2023

KEY

- Site boundary
- Target note
- Scattered broad-leaved tree
- Standing water
- Line of trees
- Native species-rich intact hedge
- Species-poor intact hedge
- Native species-rich hedge and trees with ditch
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Poor semi-improved grassland
- Tall ruderal
- Swamp
- Arable
- Amenity grassland
- Bare ground

Metres
0 15 30 60

Note:
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A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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Title
Phase 1 Habitat Survey

Drawing Number
G9546.002.2A

Drawn	Checked	Approved	Scale	Date
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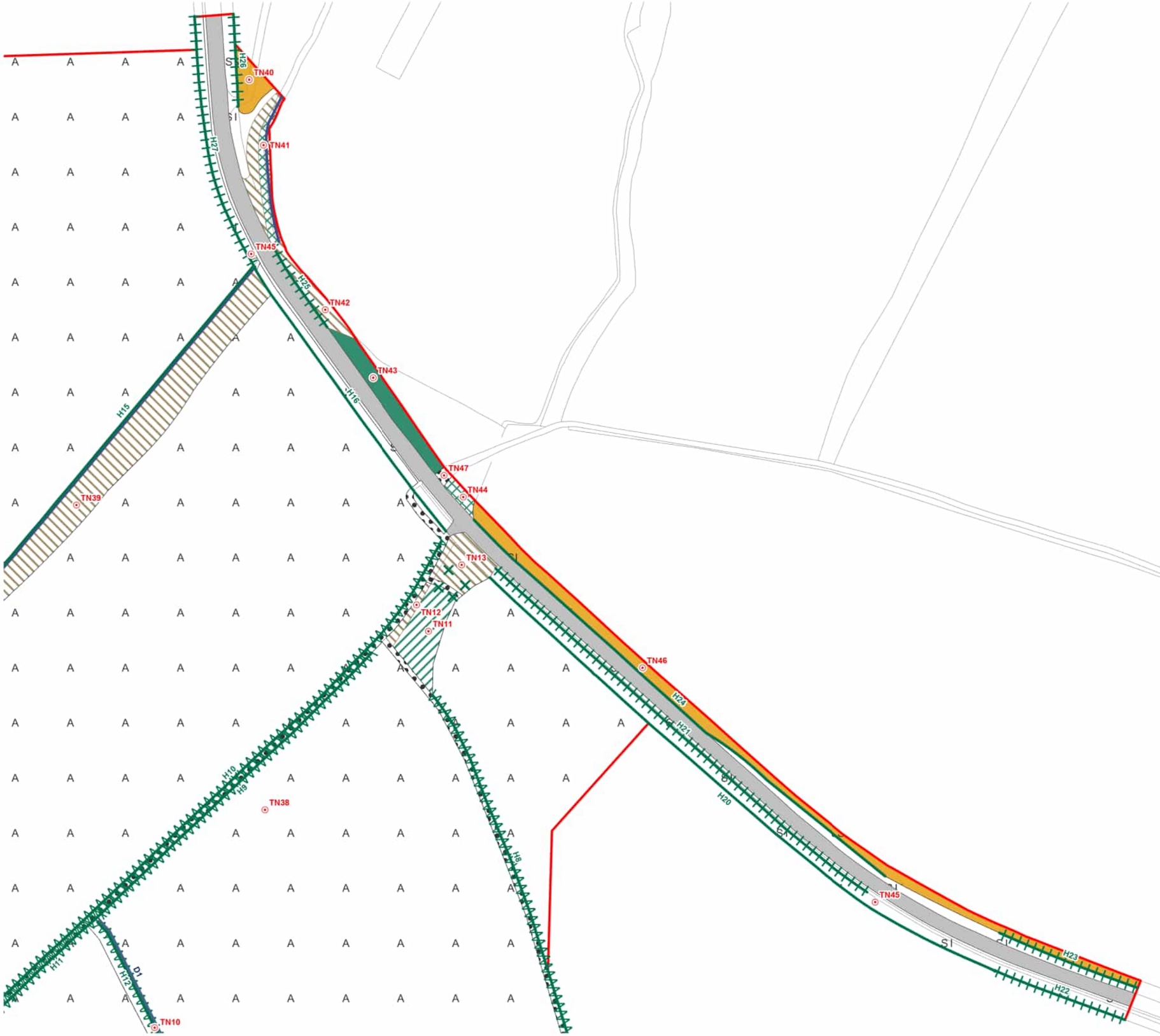

KEY

- Site boundary
- Target note
- Scattered scrub
- Standing water
- Native species-rich intact hedge
- Native species-rich intact hedge and ditch
- Species-poor intact hedge
- Species-poor hedge and trees
- Semi-natural broad-leaved woodland
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Semi-improved neutral grassland
- Poor semi-improved grassland
- Tall ruderal
- Arable
- Bare ground
- Hardstanding

Metres
0 15 30 60

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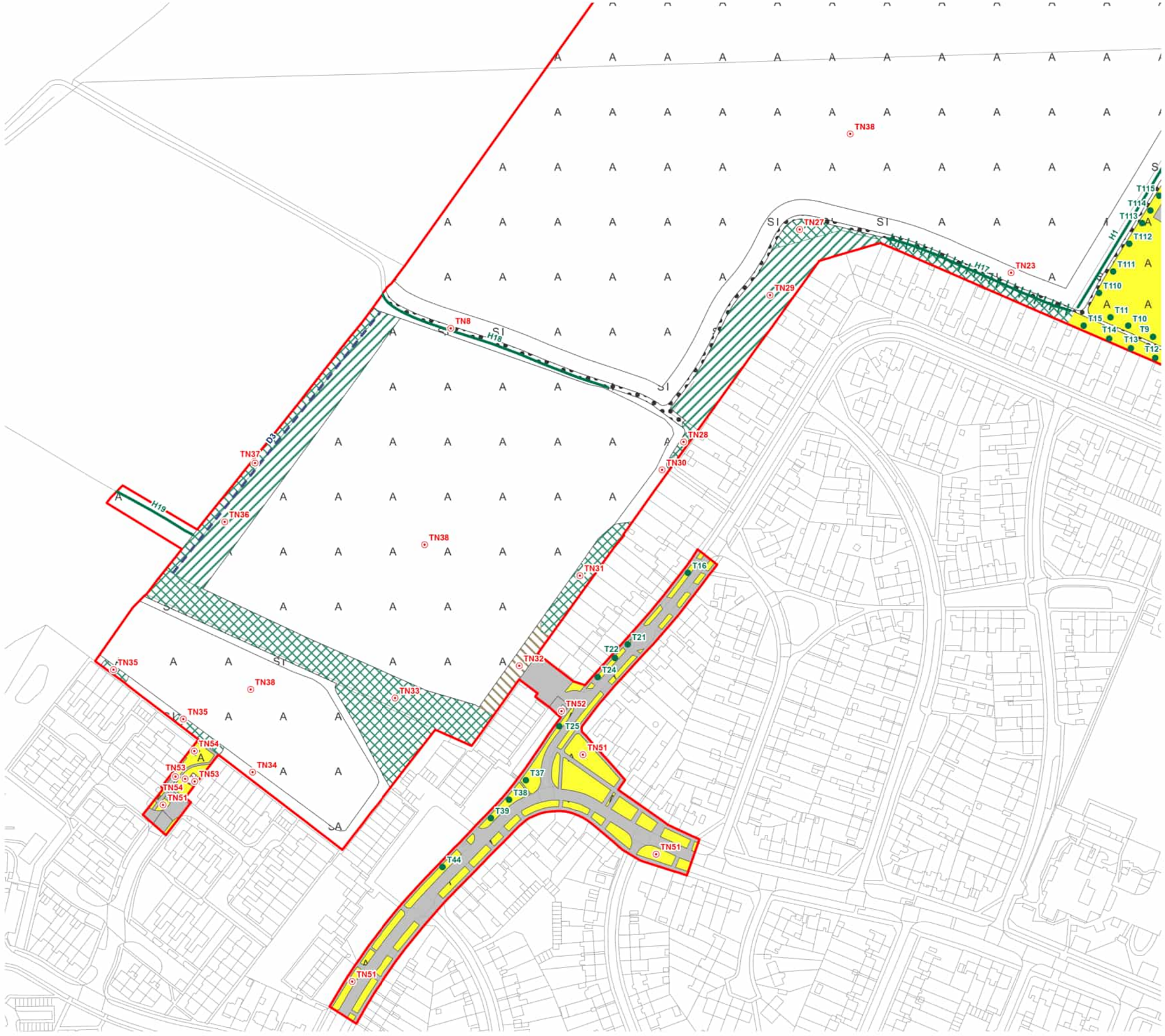

KEY

- Site boundary
- Target note
- Scattered broad-leaved tree
- Species-poor intact hedge
- Species-poor hedge and trees
- Dry ditch
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Poor semi-improved grassland
- Tall ruderal
- Arable
- Amenity grassland
- Introduced shrub
- Private garden
- Bare ground
- Hardstanding

Metres
0 15 30 60

Note:
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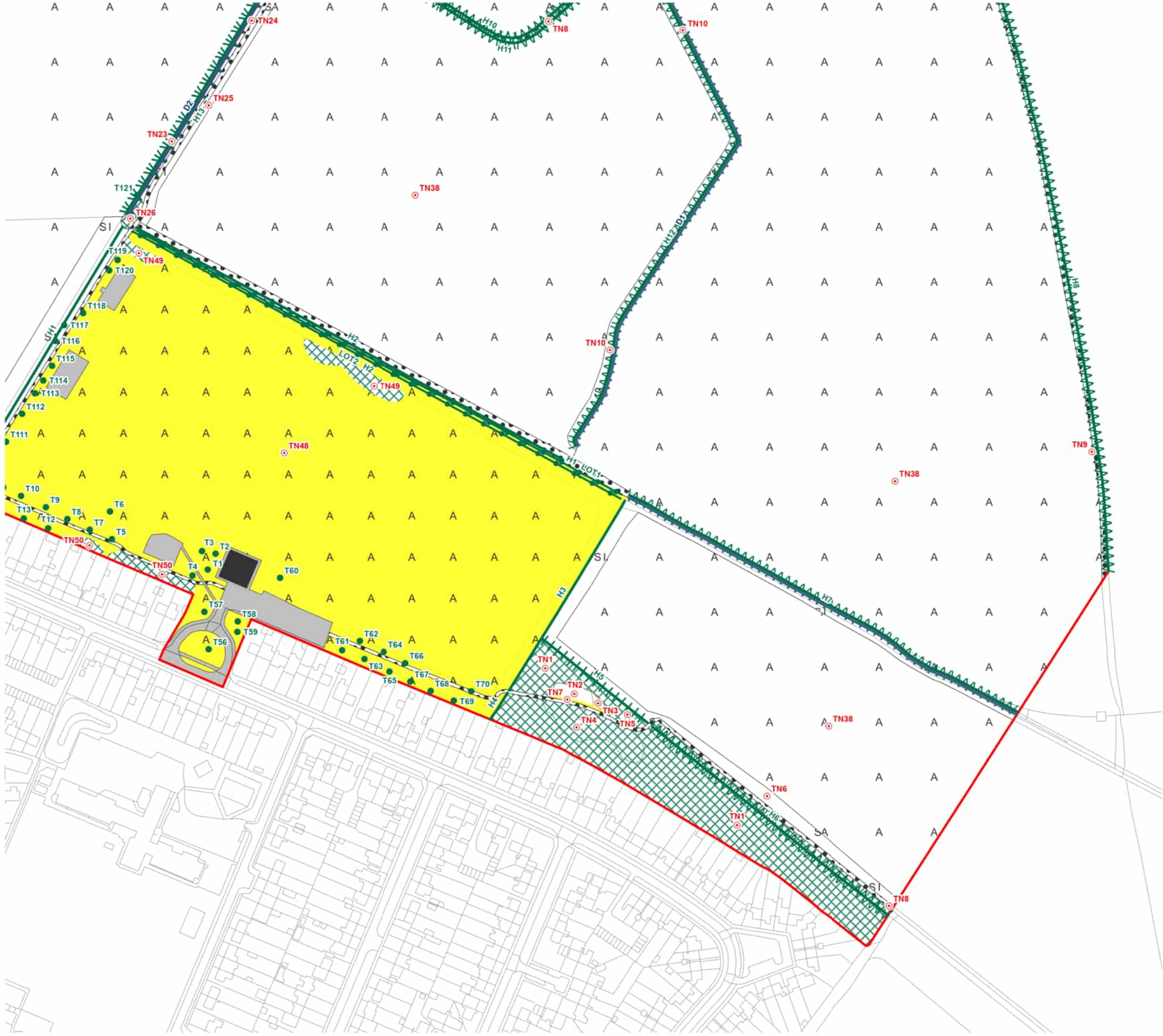

KEY

- Site boundary
- Target note
- Scattered broad-leaved tree
- Line of trees
- Native species-rich intact hedge
- Native species-rich intact hedge and ditch
- Species-poor intact hedge
- Native species-rich hedge and trees with ditch
- Species-poor hedge and trees
- Dense/continuous scrub
- Poor semi-improved grassland
- Tall ruderal
- Arable
- Amenity grassland
- Building
- Bare ground
- Hardstanding

Metres
0 15 30 60

Note:
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Title
Phase 1 Habitat Survey

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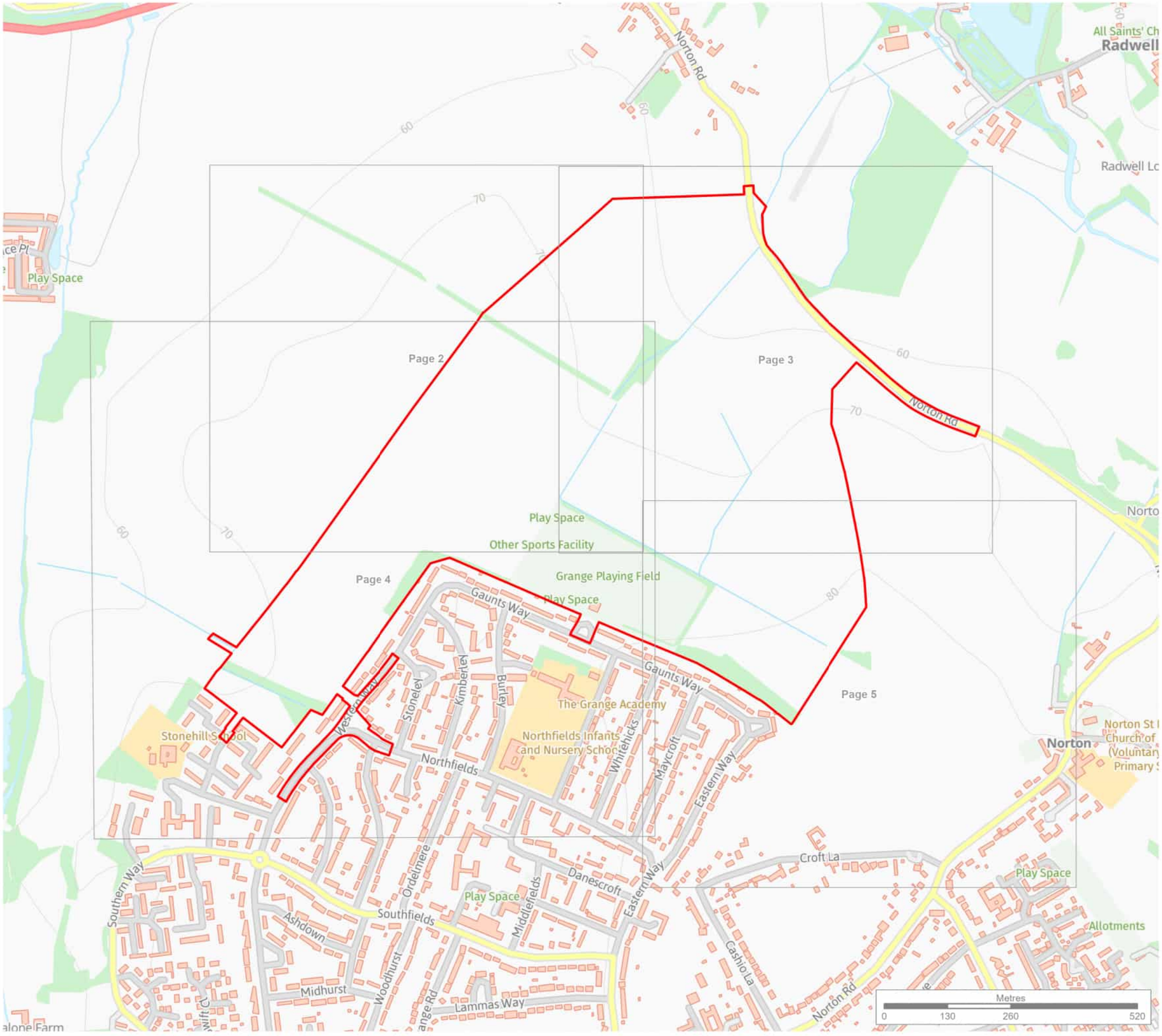

KEY

Site boundary

Page and page number

Note:

The locations of habitats and habitat features are indicative.

All hedgerows are S41 Habitats of Principal Importance that support breeding birds and provide important bat foraging habitat as well as linking habitats across the site for all species as wildlife corridors.

All arable field areas offer opportunities for the creation of new grassland, scrub and woodland habitat to assist with linking current wildlife corridors, creating new wildlife corridors and open space habitats for biodiversity benefits.

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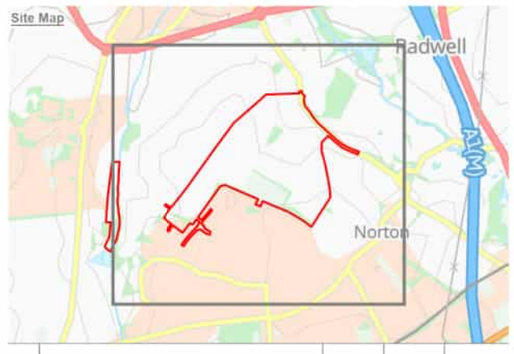

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Project
Letchworth Gardens

Title
Opportunities and Constraints Plan

Drawing Number				
G9546.08.001.1				Page 1 of 5
Drawn	Checked	Approved	Scale	Date
SP	##	TW	1:8,000 @ A3	12/09/2023

Locally important scrub and plantation woodland habitat for a variety of wildlife species including breeding birds, bats and mammals.

Trees of importance for breeding and foraging birds and bat roost features.

T136
T132
T130
T129
T127
T126
T125
T124
T123
T121
T237
T236

Metres
0 50 100 200

KEY

Site boundary

Phase 1 Habitat Survey

Scattered broad-leaved tree

Medium constraint level hedgerow

Ecological Constraints

Medium level constraint area

Low level constraint area

Opportunities

Ecological opportunity area

Wildlife corridor opportunity area

Note:

The locations of habitats and habitat features are indicative.

All hedgerows are S41 Habitats of Principal Importance that support breeding birds and provide important bat foraging habitat as well as linking habitats across the site for all species as wildlife corridors.

All arable field areas offer opportunities for the creation of new grassland, scrub and woodland habitat to assist with linking current wildlife corridors, creating new wildlife corridors and open space habitats for biodiversity benefits.

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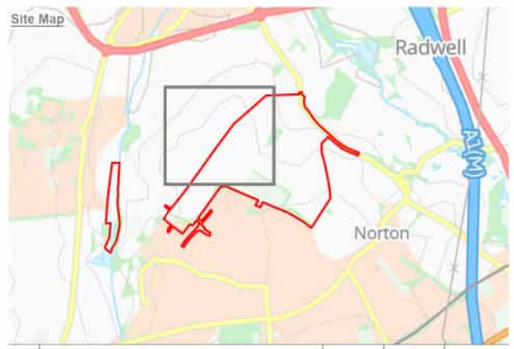

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Title
Opportunities and Constraints Plan

Drawing Number
G9546.08.001.2

Drawn	Checked	Approved	Scale	Date
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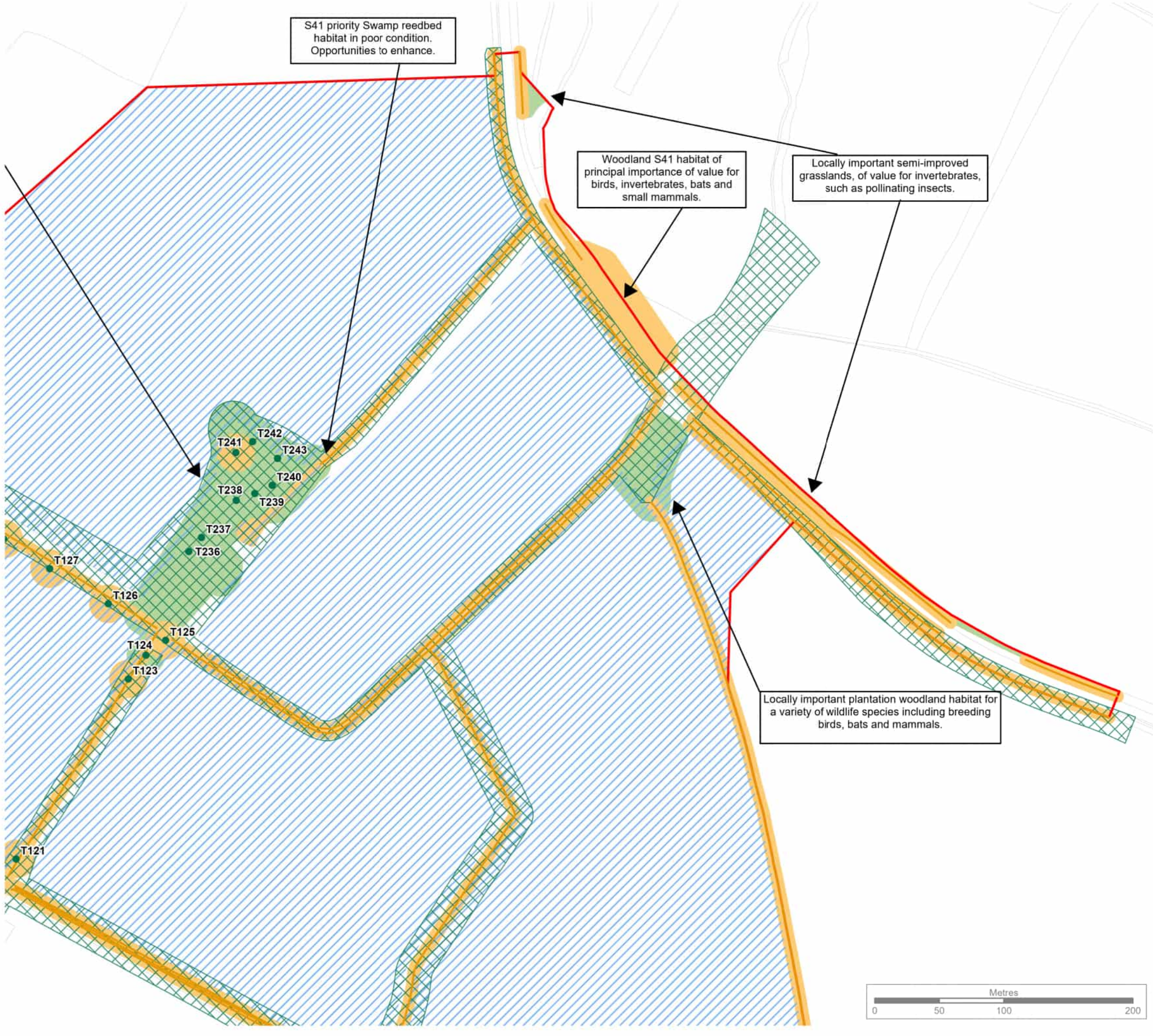

KEY

- Site boundary

Phase 1 Habitat Survey

- Scattered broad-leaved tree
- Medium constraint level hedgerow

Ecological Constraints

- Medium level constraint area
- Low level constraint area

Opportunities

- Ecological opportunity area
- Wildlife corridor opportunity area

Note:

The locations of habitats and habitat features are indicative.

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All arable field areas offer opportunities for the creation of new grassland, scrub and woodland habitat to assist with linking current wildlife corridors, creating new wildlife corridors and open space habitats for biodiversity benefits.

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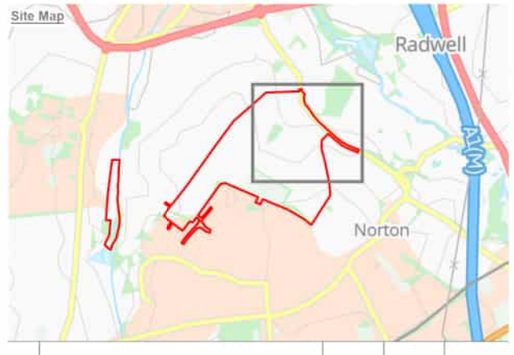

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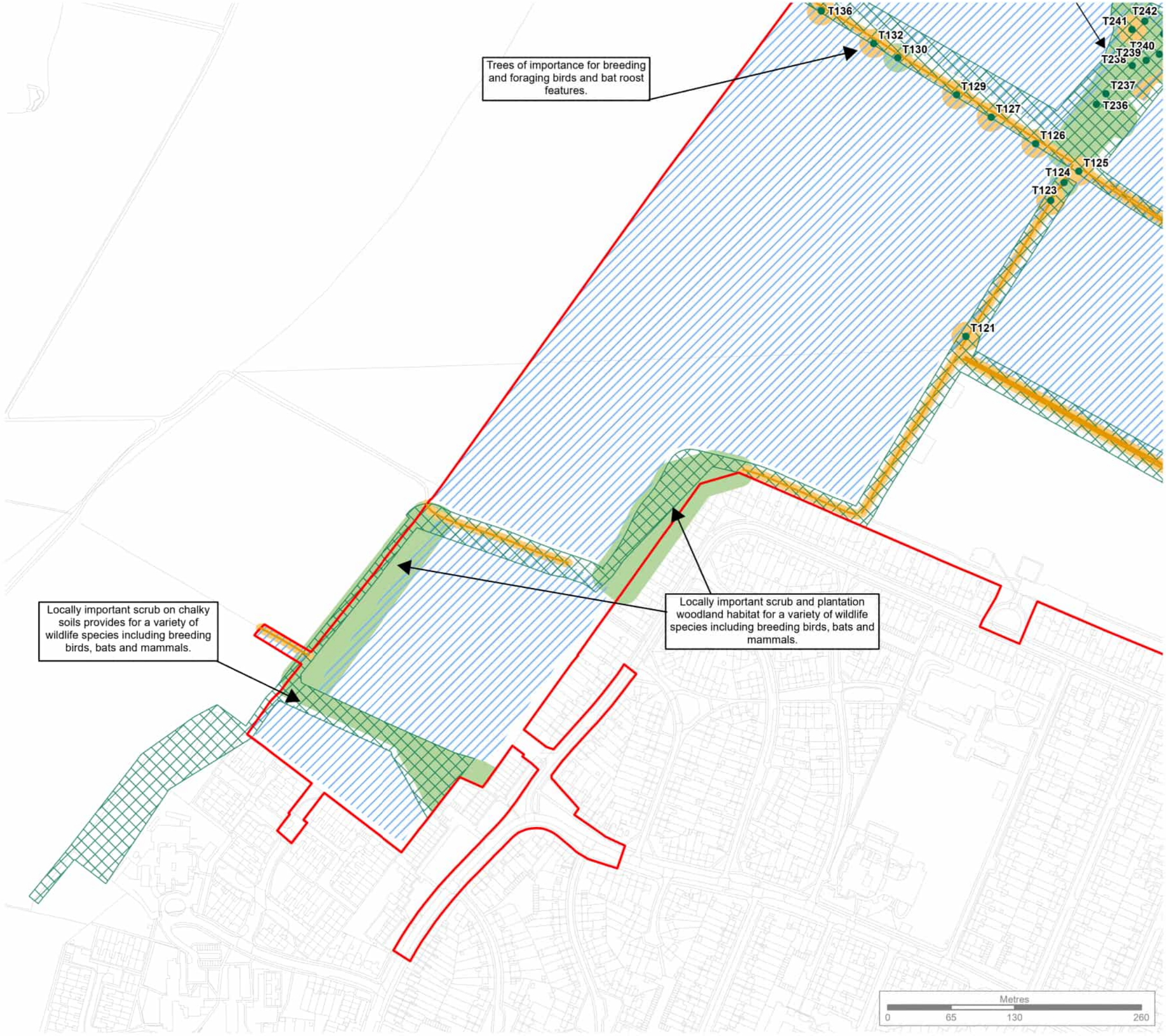
Project
Letchworth Gardens

Title
Opportunities and Constraints Plan

Drawing Number				
G9546.08.001.3				Page 3 of 5
Drawn	**Checked**	**Approved**	**Scale**	**Date**
SP	##	TW	1:3,000 @ A3	12/09/2023



KEY

- Site boundary

Phase 1 Habitat Survey

- Scattered broad-leaved tree
- Medium constraint level hedgerow

Ecological Constraints

- Medium level constraint area
- Low level constraint area

Opportunities

- Ecological opportunity area
- Wildlife corridor opportunity area

Note:

The locations of habitats and habitat features are indicative.

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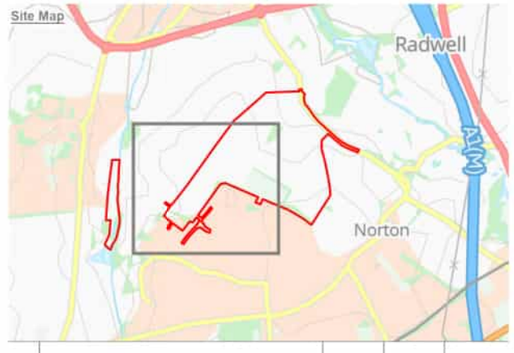
Site Map



Rev	Description	Drawn	Approved	Date

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Letchworth Gardens

Title
Opportunities and Constraints Plan

Drawing Number
G9546.08.001.4

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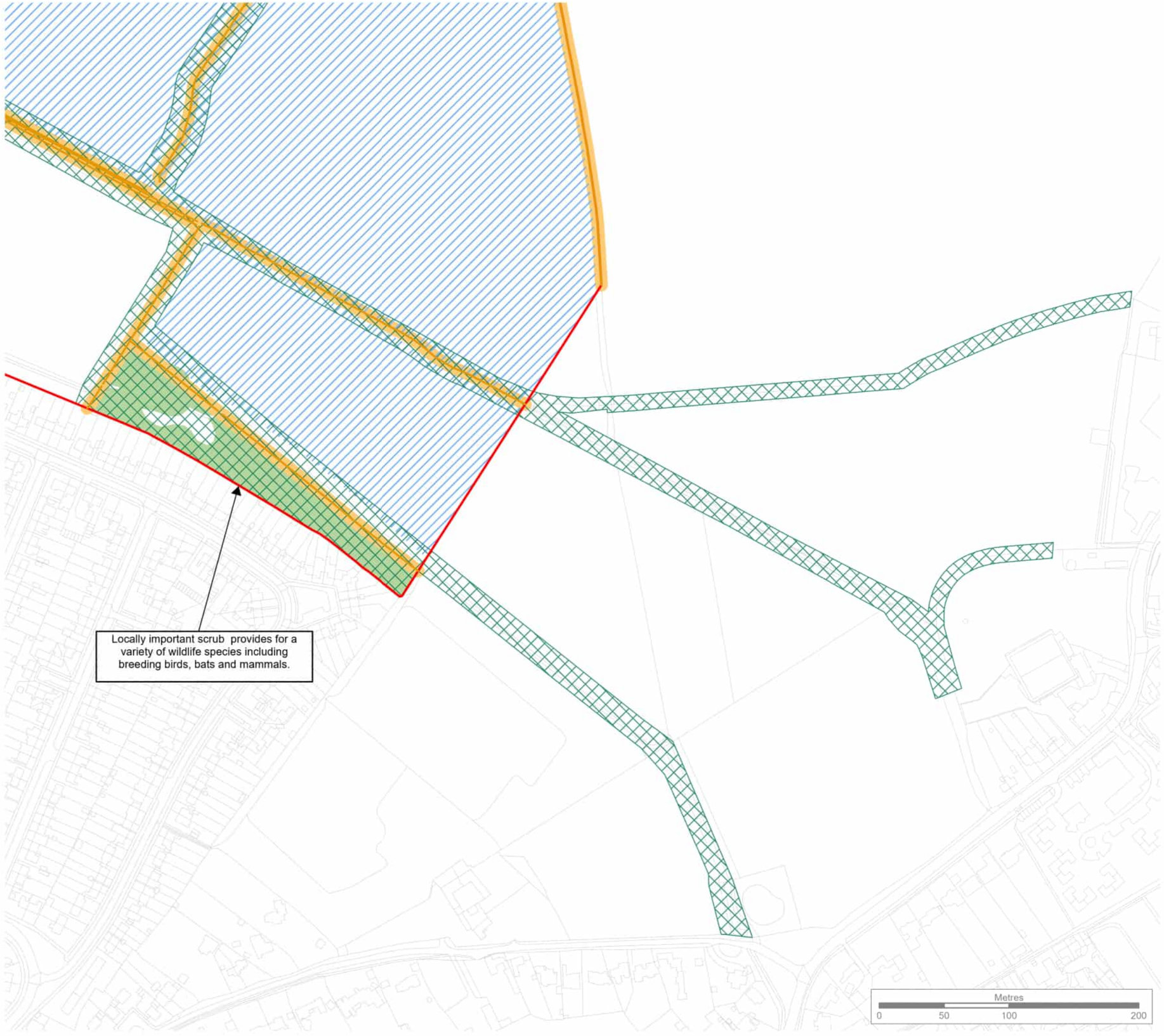
SP	##	TW	1:4,000 @ A3	12/09/2023



KEY

- Site boundary
- Medium constraint level hedgerow

Ecological Constraints

- Medium level constraint area
- Low level constraint area

Opportunities

- Ecological opportunity area
- Wildlife corridor opportunity area

Note:

The locations of habitats and habitat features are indicative.

All hedgerows are S41 Habitats of Principal Importance that support breeding birds and provide important bat foraging habitat as well as linking habitats across the site for all species as wildlife corridors.

All arable field areas offer opportunities for the creation of new grassland, scrub and woodland habitat to assist with linking current wildlife corridors, creating new wildlife corridors and open space habitats for biodiversity benefits.

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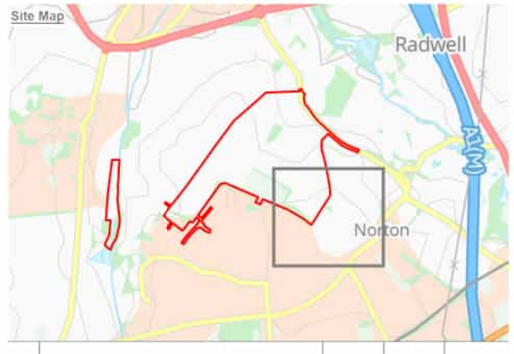
Site Map



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Opportunities and Constraints Plan

Drawing Number				
G9546.08.001.5				Page 5 of 5
Drawn	Checked	Approved	Scale	Date
SP	##	TW	1:3,000 @ A3	12/09/2023

Appendix H

Hedgerow Assessment

LG1 Land North of the Grange

Letchworth, Hertfordshire

Hedgerow Assessment

Prepared For: Letchworth Garden City Heritage Foundation

Document Reference: 9546.005

December 2023

Version 1.0

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Project Name:	LG1 Land North of the Grange, Letchworth
Location:	Letchworth Garden City, Hertfordshire
Document Title:	Hedgerow Assessment
Client:	Letchworth Garden City Heritage Foundation
Year of Surveys:	2023
Report Prepared:	December 2023
Prepared by:	The Environment Partnership Ltd
Office:	London
Document Ref:	9546.005

Document history and status:

Version	Date	Description of Issue	Author	Checked	Approved
1.0	August 2023	First Issue	Fiadh Wileman	Andrew Nyul	Andrew Nyul
1.1	December 2023	Updated to include results from additional bat and dormouse surveys	Fiadh Wileman	Andrew Nyul	Andrew Nyul

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The content of this document has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Professional Conduct and is compliant with British Standard BS42020:2013 Biodiversity Code of Practice for Planning and Development.

The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

Contents

Page

1.0 INTRODUCTION 1
2.0 METHODS 2
3.0 RESULTS 3
4.0 CONCLUSIONS 5
5.0 RECOMMENDATIONS 6

Figures

Figure 1: Site Plan. 1

Tables

Table 1: Hedgerows within the Site 3

Appendices

Appendix A: Hedgerow Regulations Assessment Data
Appendix B: Hedgerow Target Notes

Drawings

Drawing G9546.002A

1.0 Introduction

1.1 Letchworth Garden City Heritage Foundation are seeking to obtain planning permission for residential development on land known as LG1 Land North of the Grange, Letchworth, Hertfordshire (hereafter referred to as 'the site').

1.2 TEP was commissioned, in June 2022, to undertake a hedgerow assessment at the site.

1.3 The aim of the hedgerow assessment was to identify whether any of the hedgerows qualify as being "Important" under the wildlife and landscape criteria outlined in the Hedgerow Regulations (1997). For clarity, the scope of the survey and assessment does not cover the archaeology and history criteria set out in the Hedgerow Regulations.

Description of Site

1.4 The central grid reference of the site is approximately TL 22131 34974 and the location of the surveyed area is shown in Figure 1 below.

1.5 The site occupies approximately 83.41ha and is located at land north of Gaunts Way of the Grange Estate in Letchworth, Hertfordshire.

1.6 The site is bound by mostly residential units to the south which form the northern extent of Letchworth Garden City, while the rest of the area is largely rural agricultural fields with associated hedgerows and small woodlands between the villages of Radwell, Stotfold and Fairfield Park.

Figure 1: Site Plan.

2.0 Methods

2.1 The hedgerow assessment was carried out by TEP experienced botanist Fiadh Wileman (FISC Level 5) on 9th October 2022 (for hedgerows numbered 1-18). Additionally, on the 17th May 2023 the hedgerows numbered 1-18 were checked for spring/early summer flowering species and the additional hedgerows 19-27 were fully assessed.

2.2 Native hedgerows in the site were subject to a detailed sampling survey in accordance with the criteria set out in the Hedgerow Regulations (1997) in terms of wildlife and landscape criteria for determining "important" hedgerows[1]. This entailed recording the number of woody species (as listed on Schedule 3 of the Hedgerow Regulations) within 30m sample sections[2] as well as any features within 2m associated with the hedge. These features include the presence of any bank or wall, ditch, standard trees and ground flora species (as listed on Schedule 2 of the Hedgerow Regulations). Also, the number of connections with adjacent hedgerows was recorded. Hedgerow target notes were made on standard data recording forms. For each hedgerow this included a description of the hedge and detailed plant species list.

2.3 For the purposes of this assessment a hedgerow is defined as a boundary line of native shrubs or a mix of native shrubs and trees over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide. Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. Only hedgerows consisting predominantly (80% or more cover) of at least one woody UK native species (listed on Schedule 3 of the Hedgerow Regulations) are considered to be native and covered by this assessment.

2.4 The above definition of a hedgerow is largely based on the UK Biodiversity Action Plan (UKBAP) definition of a hedgerow, but it also takes into account details from the Hedgerow Regulations 1997 and Handbook for Phase 1 Habitat survey (JNCC 2010) in order to ensure all hedgerow features considered native are assessed.

2.5 Further factors which are considered during this assessment include the proximity of public by-ways and footpaths, parallel hedgerows, semi-natural woodland and ponds. The presence of these features adjacent to a hedgerow increases the likelihood that it could qualify as "important".

2.6 In addition, presence of or field signs of any legally protected species or species which are listed on Section 41 of the NERC Act 2006 or are included in the Local BAP were mapped and noted. This includes species which form part of Schedule 1, 5 & 8 of the Wildlife and Countryside Act (WCA), as amended (1981).

[1] *http://www.legislation.gov.uk/uksi/1997/1160/schedule/1/made*

[2] The length of the hedge determines the number of samples required. For hedgerows 30m-100m in length, species in the central 30m were recorded. For hedgerows 100m-200m, species in the central 30m of each half of the hedge were recorded. For hedgerows >200m species in the central 30m of each third of the hedge were recorded.

3.0 Results

3.1 The hedgerows surveyed, assessed and mapped as a result of this hedgerow assessment are illustrated in Drawing G9546.005 The survey results including species composition and details are provided in Appendix A.

3.2 All 27 of the hedgerows on site were subject to the hedgerow assessment. Target notes for these hedgerows are included in Appendix B.

3.3 No hedgerows within the site were found to have sufficient species diversity and associated features to qualify as "important" under the Hedgerow Regulations in terms of the wildlife and landscape criteria. Three hedgerows (H9, H11, and H13) achieve the 'important' requirement of six woody species but lack the adequate number of additional features to qualify as 'important'.

3.4 No other legally protected species (Schedule 1 (birds which are protected by special penalties), Schedule 5 (animals which are protected) or Schedule 8 (plants which are protected) to the Wildlife and Countryside Act 1981) or Red Data Book species were found to be present within any hedgerow during the surveys. Bat activity was recorded from twelve of the hedgerows (H1, H2, H3, H4, H5, H6, H9, H10, H12, H13, H14, H15, and H16) but confirmation of roosts sites within these was not established.

3.5 The details of the hedges are set out in Table 1 below and the locations are included in Drawing G9546.005. A species rich hedgerow is one defined in the UK Habitat Action plan as having five or more native woody species in a 30m length, or hedges that contain less than 5 woody species (trees and shrubs) in each 30m but have a rich variety of herbaceous plants at their base.

Table 1: Hedgerows within the Site

Hedgerow Ref	Start Grid Ref	End Grid Ref	Hedgerow Type
1	TL 21949 34739	TL 22046 34898	Intact native hedgerow
2	TL 22055 34899	TL 22324 34751	Defunct native hedgerow
3	TL 22367 34720	TL 22296 34604	Intact native hedgerow
4	TL 22295 34599	TL 22284 34586	Intact native hedgerow
5	TL 22319 34635	TL 22383 34581	Intact native hedgerow
6	TL 22388 34580	TL 22540 34457	Intact species rich native hedgerow
7	TL 22375 34724	TL 22623 34590	Intact species rich native hedgerow with ditch
8	TL 22687 34600	TL 22545 35620	Intact species rich native hedgerow
9	TL 22521 35220	TL 22386 35089	Intact species rich native hedgerow

10	TL 22549 35275	TL 22193 35086	Intact species rich native hedgerow
11	TL 22367 35073	TL 22189 35081	Intact species rich native hedgerow
12	TL 22380 35080	TL 22346 34773	Intact species rich native hedgerow with ditch
13	TL 22063 34928	TL 22162 35090	Intact species rich native hedgerow with ditch and trees
14	TL 22158 35101	TL21832 35307	Intact species rich native hedgerow
15	TL 22287 35220	TL 22457 35411	Intact native hedgerow with ditch
16	TL 22457 35411	TL 22538 35304	Intact native hedgerow
17	TL 21943 34733	TL 21824 34784	Intact native hedgerow with trees
18	TL 21676 34676	Tl 21499 34745	Intact native hedgerow
19	TL 21371 34597	TL 21146 34727	Intact native hedgerow
20	TL 22576 35258	TL 22932 35020	Intact recently planted native hedgerow
21	TL 22576 35258	TL 22775 35090	Intact native hedgerow with trees
22	TL 22838 35058	TL 22932 35020	Intact native hedgerow with trees
23	TL 22828 35084	TL 22957 35030	Intact native hedgerow with trees
24	TL 22784 35108	TL 22576 35290	Intact species rich native hedgerow
25	TL 22515 35368	TL 22461 35451	Defunct native hedgerow with trees
26	TL 22447 35507	TL 22431 35664	Intact native hedgerow with trees
27	TL 22411 35663	TL 22457 35411	Intact native hedgerow with trees

4.0 Conclusions

4.1 All native hedgerows qualify as S41 and LBAP habitat. None of the hedgerows have been assessed to qualify as “important” under the Hedgerow Regulations 1997. Several of the hedges are species-rich (five or more woody species present in the hedgerow) and provide foraging, commuting and refuge habitat for range of faunal species and form part of a network of hedgerows across the wider landscape. As such, the hedges are considered to have local importance within the landscape.

4.2 Although no hedgerows were assessed to be “important” at this stage, a precautionary approach needs to be undertaken on hedgerows that contain trees with low, medium or high potential bat roost features (PBRF’s) as these hedgerows will become classified as ‘important’ if bats are identified as roosting within them.

5.0 Recommendations

5.1 Where possible, detailed design should seek to retain all native hedgerows within an appropriate setting in the final design. Best practice pollution prevention measures should be implemented to protect retained hedgerows within and adjacent to the site from construction activities, including dust, airborne debris and run-off.

5.2 Where hedgerow retention is not possible, priority for retention should be placed upon the species rich hedgerows and those that have the potential to be ' important' as well as hedgerows which provide an important connectivity function.

5.3 The hedgerows that are included under these definitions are: H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, and H24.

5.4 Where hedgerow loss cannot be avoided, losses will be mitigated or compensated for. As far as practical, all native hedgerows which cannot be retained in situ should be translocated to appropriate alternative location(s). Any remaining hedgerow losses will be compensated for through new planting. New planting and gap-planting of hedgerows will also be implemented to further enhance ecological networks within the site and local landscape and to deliver net biodiversity gain, both in terms of habitat quantity and ecological function.

5.5 Retained and new hedgerows (including those translocated) within the site should be within a setting appropriate to the maintenance of the ecological function i.e. avoiding private boundaries, road margins etc. New hedgerows proposed in such situations should not contribute to the balance of existing hedgerows to be lost.

5.6 All new hedgerows should be planted with a diverse (species rich) native mix to mitigate and improve this habitat resource within the local area.

Appendix A

Hedgerow Regulations Assessment Data

Hedgerow 1			
Date of survey	09/10/2022 and 17/05/2023	**Surveyor**	TW
GPS start of hedgerow	TL 21949 34739	**GPS end of hedgerow**	TL 22046 34898
Hedge height	6m	**Hedge width**	5m
Length	206m	**Signs of management**	None

Does the hedge have the appearance of being over 30 years old?	Y
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N

Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Dog rose Elder	Hawthorn blackthorn	Hawthorn Dog rose	
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	3				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	3				
Total number of features:	**1**	**Average number of woody species = 3**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 2						
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22055 34899		**GPS end of hedgerow**	TL 22324 34751		
Hedge height	6m		**Hedge width**	5m		
Length	298		**Signs of management**	None		
Does the hedge have the appearance of being over 30 years old?	N					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Blackthorn Dog rose	Hawthorn Dog rose	Blackthorn Dog rose Hawthorn Dogwood		
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	3					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	0					
Total score for connections:	3					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 3						
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22367 34720		**GPS end of hedgerow**	TL 22296 34604		
Hedge height	8m		**Hedge width**	5m		
Length	m		**Signs of management**	None		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Elder Dog rose	Hawthorn Elder Dog rose			
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	3					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	0					
Total score for connections:	3					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 4							
Date of survey	09/10/2022 and 17/05/2023			**Surveyor**	TW		
GPS start of hedgerow	TL 22295 34599			**GPS end of hedgerow**	TL 22284 34586		
Hedge height	7m			**Hedge width**	6m		
Length	38m			**Signs of management**	None		
Does the hedge have the appearance of being over 30 years old?	Y						
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y						
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N						
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*					
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**		
Wall/bank along at least half its length?	N	Hawthorn Elder Dog rose			Wood avens		
Average of at least one standard tree per 50m?	N						
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N						
Ditch along at least half of the hedgerow?	N						
Parallel hedge within 15m of the hedgerow?	N						
Gaps less than 10% of hedgerow length?	Y						
Connection (within 10m) with another hedgerow?	1						
Connection (within 10m) with a pond?	0						
Connection (within 10m) broadleaved woodland?	0						
Total score for connections:	1						
Total number of features:	**1**	**Average number of woody species = 3**					
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important					

Hedgerow 5					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22319 34635		**GPS end of hedgerow**	TL 22383 34581	
Hedge height	9m		**Hedge width**	8m	
Length	84		**Signs of management**	None	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Elder Dog rose			Sweet violet
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	2				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	2				
Total number of features:	**1**	**Average number of woody species = 3**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 6					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22388 34580		**GPS end of hedgerow**	TL 22540 34457	
Hedge height	8m		**Hedge width**	6m	
Length	191m		**Signs of management**	None	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Blackthorn Elder	Field maple Elder Blackthorn Hawthorn Dog rose		Sweet violet
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	2				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	2				
Total number of features:	**1**	**Average number of woody species = 4**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 7					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22375 34724		**GPS end of hedgerow**	TL 22623 34590	
Hedge height	4m		**Hedge width**	5m	
Length	275m		**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Dog rose Blackthorn Goat willow Buckthorn	Blackthorn Dog rose Hawthorn Elder	Blackthorn Hawthorn Dog rose Elder	
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	Y				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	1				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	1				
Total score for connections:	2				
Total number of features:	**2**	**Average number of woody species = 4**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 8					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22687 34600		**GPS end of hedgerow**	TL 22545 356206	
Hedge height	4m		**Hedge width**	3m	
Length	625m		**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	N				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Field maple Hazel Ash	Hazel Dogwood Field maple Hawthorn	Hawthorn Hazel Dogwood Field maple Apple	
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	0				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	1				
Total score for connections:	1				
Total number of features:	**1**	**Average number of woody species = 4**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 9						
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22521 35220		**GPS end of hedgerow**	TL 22386 35089		
Hedge height	3m		**Hedge width**	3m		
Length	186m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hazel Hawthorn Blackthorn Spindle Field maple Dogwood	Field maple Blackthorn Dogwood Hawthorn Spindle Hazel			
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	Y					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	1					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	2					
Total number of features:	**2**	**Average number of woody species = 6**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 10					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22549 35275		**GPS end of hedgerow**	TL 22193 35086	
Hedge height	3m		**Hedge width**	3m	
Length	477m		**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Field maple Dogwood Blackthorn Hazel	Field maple Hazel Dogwood Hawthorn Blackthorn	Hawthorn Field maple Blackthorn Hazel Dogwood	
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	Y				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	4				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	1				
Total score for connections:	5				
Total number of features:	**2**	**Average number of woody species = 5**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 11					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22367 35073		**GPS end of hedgerow**	TL 22189 35081	
Hedge height	3m		**Hedge width**	3m	
Length	218m		**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Hazel Field maple Blackthorn Dogwood	Field maple Blackthorn Hawthorn Hazel Spindle Dogwood Dog rose	Hawthorn Blackthorn Field maple Hazel Dog rose Dogwood	
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	Y				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	2				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	2				
Total number of features:	**2**	**Average number of woody species = 6**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 12					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22380 35080		**GPS end of hedgerow**	TL 22346 34773	
Hedge height	5m		**Hedge width**	5m	
Length	344m		**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Filed maple Blackthorn Hawthorn Hazel	Field maple Hawthorn Rose sp. Blackthorn	Hawthorn Elder Dog rose Field maple Hazel Blackthorn	
Average of at least one standard tree per 50m?	Y				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	Y				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	2				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	O				
Total score for connections:	2				
Total number of features:	**3**	**Average number of woody species = 4**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 13			
Date of survey	09/10/2022 and 17/05/2023	**Surveyor**	TW
GPS start of hedgerow	TL 22063 34928	**GPS end of hedgerow**	TL 22162 35090
Hedge height	4m	**Hedge width**	4m
Length	186m	**Signs of management**	Signs of flailing in the past on west side only

Does the hedge have the appearance of being over 30 years old?	N
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N

Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Blackthorn Hazel Hawthorn Pedunculate oak Dog rose	Hawthorn Hazel Blackthorn Ash Field maple Dogwood		
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	Y				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	2				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	2				
Total number of features:	**2**	**Average number of woody species = 6**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 14					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22158 35101		**GPS end of hedgerow**	TL21832 35307	
Hedge height	2m		**Hedge width**	2m	
Length			**Signs of management**	None	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Blackthorn Field maple Hawthorn	Hawthorn Dog rose Blackthorn Pedunculate oak Field maple	Hawthorn Blackthorn Pedunculate oak Wild cherry Field maple	
Average of at least one standard tree per 50m?	Y				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	N				
Connection (within 10m) with another hedgerow?	1				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	1				
Total score for connections:	2				
Total number of features:	**1**	**Average number of woody species = 5**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 15						
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22287 35220		**GPS end of hedgerow**	TL 22457 35411		
Hedge height	7m		**Hedge width**	5m		
Length	259m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Dogwood Goat willow Hawthorn Elder	Goat willow Blackthorn Dog rose Hawthorn	Hawthorn Goat willow Dog rose		
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	2					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	3					
Total number of features:	**1**	**Average number of woody species = 4**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 16						
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22457 35411		**GPS end of hedgerow**	TL 22538 35304		
Hedge height	6m		**Hedge width**	5m		
Length	131m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Spindle Ash	Hawthorn Elder Field maple			
Average of at least one standard tree per 50m?	Y					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	2					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	3					
Total number of features:	**2**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 17					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 21943 34733		**GPS end of hedgerow**	TL 21824 34784	
Hedge height	7m		**Hedge width**	5m	
Length			**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	N				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hazel Dogwood Rose sp.	Hazel Whitebeam sp. Dogwood Guelder-rose		
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	1				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	1				
Total score for connections:	2				
Total number of features:	**1**	**Average number of woody species = 3**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 18					
Date of survey	09/10/2022 and 17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 21676 34676		**GPS end of hedgerow**	TI 21499 34745	
Hedge height	4m		**Hedge width**	4m	
Length	180m		**Signs of management**	Signs of flailing in the past	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Hawthorn Dog rose Apple Blackthorn	Blackthorn Dog rose		
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	1				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	1				
Total number of features:	**1**	**Average number of woody species = 3**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 19						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 21371 34597		**GPS end of hedgerow**	TL 21146 34727		
Hedge height	4m		**Hedge width**	3m		
Length	258		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	N					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Hazel Field maple	Hazel Hawthorn Field ample			
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	1					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	2					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 20			
Date of survey	17/05/2023	**Surveyor**	TW
GPS start of hedgerow	TL 22576 35258	**GPS end of hedgerow**	TL 22932 35020
Hedge height	1.5m	**Hedge width**	1m
Length	428m	**Signs of management**	Recent laying of some older shrubs present along newly planted hedge line

Does the hedge have the appearance of being over 30 years old?	N
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N

Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Elm sp. Hawthorn Elder	Dogwood Hawthorn Elder	Hawthorn	
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	Y				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	2				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	2				
Total number of features:	**2**	**Average number of woody species = 3**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 21					
Date of survey	17/05/2023		**Surveyor**	TW	
GPS start of hedgerow	TL 22576 35258		**GPS end of hedgerow**	TL 22775 35090	
Hedge height	6m		**Hedge width**	4m	
Length	251m		**Signs of management**	Recent laying of some sections	
Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*			
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**
Wall/bank along at least half its length?	N	Field maple Blackthorn	Blackthorn Dogwood Dog rose Hawthorn	Elm sp. Hawthorn	Sweet violet Lord-and-Ladies
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	Y				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	1				
Connection (within 10m) with a pond?	0				
Connection (within 10m) broadleaved woodland?	0				
Total score for connections:	1				
Total number of features:	**1**	**Average number of woody species = 3**			
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important			

Hedgerow 22						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22838 35058		**GPS end of hedgerow**	TL 22932 35020		
Hedge height	4.5m		**Hedge width**	3m		
Length			**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Blackthorn Dogwood Field maple			Lord-and-Ladies Dog's-mercury	
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	1					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	1					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	0					
Total score for connections:	1					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 23						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22828 35084		**GPS end of hedgerow**	TL 22957 35030		
Hedge height	4m		**Hedge width**	4m		
Length	114m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	hawthorn	Hawthorn			
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	0					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	1					
Total number of features:	**1**	**Average number of woody species = 1**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 24						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22784 35108		**GPS end of hedgerow**	TL 22576 35290		
Hedge height	6m		**Hedge width**	6m		
Length	281m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Ash Dog rose Field maple Blackthorn	Blackthorn Hawthorn	Hawthorn Field maple		
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	0					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	1					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 25						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22515 35368		**GPS end of hedgerow**	TL 22461 35451		
Hedge height	5m		**Hedge width**	4m		
Length	92m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Blackthorn Elder Elm sp. Hawthorn				
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	0					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	0					
Total score for connections:	0					
Total number of features:	**1**	**Average number of woody species = 4**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 26						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22447 35507		**GPS end of hedgerow**	TL 22431 35664		
Hedge height	5m		**Hedge width**	4m		
Length	41m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Elder Dog rose				
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	0					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	1					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Hedgerow 27						
Date of survey	17/05/2023		**Surveyor**	TW		
GPS start of hedgerow	TL 22411 35663		**GPS end of hedgerow**	TL 22457 35411		
Hedge height	5m		**Hedge width**	4m		
Length	146m		**Signs of management**	Signs of flailing in the past		
Does the hedge have the appearance of being over 30 years old?	Y					
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	Y					
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N					
Features and Connections		**Woody species present in 30m samples (listed on Schedule 3 of the *Hedgerow Regulations 1997*) -** *For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows >200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.*				
		Sample 1	**Sample 2**	**Sample 3**	**Schedule 2 species**	
Wall/bank along at least half its length?	N	Hawthorn Elder Hornbeam	Field ample Hawthorn Blackthorn			
Average of at least one standard tree per 50m?	N					
3+ woodland ground flora species (***listed on Sch. 2***) within 1m?	N					
Ditch along at least half of the hedgerow?	N					
Parallel hedge within 15m of the hedgerow?	N					
Gaps less than 10% of hedgerow length?	Y					
Connection (within 10m) with another hedgerow?	2					
Connection (within 10m) with a pond?	0					
Connection (within 10m) broadleaved woodland?	1					
Total score for connections:	3					
Total number of features:	**1**	**Average number of woody species = 3**				
Does this hedge meet the wildlife and countryside criteria for Importance?	**NO**	Does not meet the criteria for important				

Appendix B

Hedgerow Target Notes

Target Notes Report

Survey 9546 LG1 Land North of the Grange, Letchworth

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Schedule 2 woodland species highlighted in Yellow
Schedule 3 woody species highlighted in Red

Hedgerow H1

Crataegus monogyna	Common hawthorn	D
Arrhenatherum elatius	False oat-grass	A
Dactylis glomerata	Cock's-foot	A
Lolium perenne	Perennial rye-grass	F
Rubus fruticosus agg.	Bramble	F
Achillea millefolium	Yarrow	O
Agrimonia eupatoria	Agrimony	O
Anthriscus sylvestris	Cow parsley	O
Bellis perennis	Daisy	O
Centaurea nigra	Common knapweed	O
Plantago lanceolata	Ribwort plantain	O
Ranunculus repens	Creeping buttercup	O
Rosa canina	Dog rose	O
Cirsium arvense	Creeping thistle	R
Phleum bertolonii	Smaller cat's-tail	R
Plantago major	Greater plantain	R
Prunus spinosa	Blackthorn	R
Rumex obtusifolius	Broad-leaved dock	R
Sambucus nigra	Elder	R

Hedgerow H2

Crataegus monogyna	Common hawthorn	D
Arrhenatherum elatius	False oat-grass	A
Rubus fruticosus agg.	Bramble	A
Anisantha sterilis	Barren brome	F
Acer pseudoplatanus	Sycamore	O
Anthriscus sylvestris	Cow parsley	O
Ballota nigra	Black horehound	O
Cirsium arvense	Creeping thistle	O
Dactylis glomerata	Cock's-foot	O
Elytrigia repens	Common couch	O
Galium aparine	Cleavers	O
Prunus spinosa	Blackthorn	O
Rosa canina	Dog rose	O
Rumex sanguineus	Wood dock	O
Urtica dioica	Common nettle	O
Achillea millefolium	Yarrow	R
Convolvulus arvensis	Field bindweed	R
Cornus sanguinea	Dogwood	R
Geranium molle	Dove's-foot crane's-bill	R
Sonchus oleraceus	Smooth sow-thistle	R

Hedgerow H3

Arrhenatherum elatius	False oat-grass	D
Crataegus monogyna	Common hawthorn	D
Anisantha sterilis	Barren brome	F
Cirsium arvense	Creeping thistle	F
Galium aparine	Cleavers	F
Hedera helix	Ivy	F
Anthriscus sylvestris	Cow parsley	O
Convolvulus arvensis	Field bindweed	O
Dactylis glomerata	Cock's-foot	O
Urtica dioica	Common nettle	O
Rosa canina	Dog rose	R
Sambucus nigra	Elder	R

Hedgerow H4

Crataegus monogyna	Common hawthorn	D
Alliaria petiolata	Garlic mustard	F
Hedera helix	Ivy	F
Lolium perenne	Perennial rye-grass	F
Anthriscus sylvestris	Cow parsley	O
Bellis perennis	Daisy	O
Galium aparine	Cleavers	O
Rosa canina	Dog rose	O
Rubus fruticosus agg.	Bramble	O
Sambucus nigra	Elder	O
Urtica dioica	Common nettle	O
Geum urbanum	Wood avens	R
Plantago major	Greater plantain	R
Stellaria media	Common chickweed	R
Veronica Chamaedrys	Germander speedwell	R

Hedgerow H5

Crataegus monogyna	Common hawthorn	D
Cirsium arvense	Creeping thistle	F
Geranium molle	Dove's-foot crane's-bill	F
Hedera helix	Ivy	F
Rumex sanguineus	Wood dock	F
Urtica dioica	Common nettle	F
Arrhenatherum elatius	False oat-grass	O
Dactylis glomerata	Cock's-foot	O
Festuca rubra	Red fescue	O
Lolium perenne	Perennial rye-grass	O
Sambucus nigra	Elder	O
Sisymbrium officinale	Hedge mustard	O
Ballota nigra	Black horehound	R
Epilobium hirsutum	Great willowherb	R
Rosa canina	Dog rose	R
Tamus communis	Black bryony	R
Viola odorata	Sweet violet	R

Hedgerow H6

Crataegus monogyna	Common hawthorn	D
Lolium perenne	Perennial rye-grass	F

Urtica dioica	Common nettle	F
Acer campestre	Field maple	O
Agrostis capillaris	Common bent	O
Galium aparine	Cleavers	O
Prunus spinosa	Blackthorn	O
Rumex sanguineus	Wood dock	O
Sisymbrium officinale	Hedge mustard	O
Sambucus nigra	Elder	O
Bryonia dioica	White bryony	R
Iris foetida	Stinking iris	R
Plantago major	Greater plantain	R
Polygonum aviculare	Knotgrass	R
Rosa canina	Dog rose	R
Rubus fruticosus agg.	Bramble	R
Viola odorata	Sweet violet	R

Hedgerow H7

Arrhenatherum elatius	False oat-grass	D
Dactylis glomerata	Cock's-foot	D
Rubus fruticosus agg.	Bramble	A
Crataegus monogyna	Common hawthorn	F
Hedera helix	Ivy	F
Prunus spinosa	Blackthorn	F
Urtica dioica	Common nettle	F
Cirsium arvense	Creeping thistle	O
Epilobium hirsutum	Great willowherb	O
Galium aparine	Cleavers	O
Rumex sanguineus	Wood dock	O
Sambucus nigra	Elder	O
Rosa canina	Dog rose	O
Acer pseudoplatanus	Sycamore	R
Anthriscus sylvestris	Cow parsley	R
Convolvulus arvensis	Field bindweed	R
Heracleum sphondylium	Hogweed	R
Rhamnus cathartica	Buckthorn	R
Salix spp.	Willow species	R
Sisymbrium officinale	Hedge mustard	R
Tamus communis	Black bryony	R

Hedgerow H8

Crataegus monogyna	Common hawthorn	A
Lolium perenne	Perennial rye-grass	A
Anisantha sterilis	Barren brome	F
Plantago lanceolata	Ribwort plantain	F
Acer campestre	Field maple	O
Arrhenatherum elatius	False oat-grass	O
Bromus communis	Soft-brome	O
Centaurea nigra	Common knapweed	O
Corylus avellana	Hazel	O
Crepis vesicaria	Beaked hawk's-beard	O
Festuca ovina	Sheep's fescue	O
Festuca rubra	Red fescue	O
Heracleum sphondylium	Hogweed	O

Leucanthemum vulgare	Oxeye daisy	O
Lolium perenne	Perennial rye-grass	O
Plantago major	Greater plantain	O
Poa pratensis	Smooth meadow -grass	O
Primula veris	Cowslip	O
Rubus fruticosus agg.	Bramble	O
Taraxacum officinale agg.	Dandelion species	R
Achillea millefolium	Yarrow	R
Agrimonia eupatoria	Agrimony	R
Anthriscus sylvestris	Cow parsley	R
Bellis perennis	Daisy	R
Capsella bursa-pastoris	Shepherd's-purse	R
Cirsium arvense	Creeping thistle	R
Clinopodium vulgare	Wild basil	R
Cornus sanguinea	Dogwood	R
Galium aparine	Cleavers	R
Galium verum	Lady's bedstraw	R
Geranium dissectum	Cut-leaved crane's-bill	R
Medicago lupulina	Black medick	R
Rumex acetosa	Common sorrel	R
Rumex sanguineus	Wood dock	R
Sonchus asper	Prickly sow-thistle	R

Hedgerow H9

Anisantha sterilis	Barren brome	A
Arrhenatherum elatius	False oat-grass	A
Crataegus monogyna	Common hawthorn	A
Galium aparine	Cleavers	A
Acer campestre	Field maple	F
Cornus sanguinea	Dogwood	F
Corylus avellana	Hazel	F
Dactylis glomerata	Cock's-foot	F
Festuca rubra	Red fescue	F
Prunus spinosa	Blackthorn	F
Anthriscus sylvestris	Cow parsley	O
Geranium pyrenaicum	Hedgerow crane's-bill	O
Heracleum sphondylium	Hogweed	O
Rubus fruticosus agg.	Bramble	O
Achillea millefolium	Yarrow	R
Alliaria petiolata	Garlic mustard	R
Arctium minus	Lesser burdock	R
Euonymus europaeus	Spindle	R
Rumex crispus	Curled dock	R
Stellaria media	Common chickweed	R
Taraxacum officinale agg.	Dandelion species	R
Urtica dioica	Common nettle	R

Hedgerow H10

Arrhenatherum elatius	False oat-grass	A
Crataegus monogyna	Common hawthorn	A
Acer campestre	Field maple	F
Cornus sanguinea	Dogwood	F
Corylus avellana	Hazel	F

Galium aparine	Cleavers	F
Prunus spinosa	Blackthorn	F
Anisantha sterilis	Barren brome	O
Anthriscus sylvestris	Cow parsley	O
Chenopodium album	Fat-hen	O
Dactylis glomerata	Cock's-foot	O
Helminthotheca echioides	Bristly oxtongue	O
Malva sylvestris	Common mallow	O
Plantago lanceolata	Ribwort plantain	O
Heracleum sphondylium	Hogweed	R
Polygonum aviculare	Knotgrass	R
Potentilla reptans	Creeping cinquefoil	R
Euonymus europaeus	Spindle	R

Hedgerow H11

Anisantha sterilis	Barren brome	A
Arrhenatherum elatius	False oat-grass	A
Crataegus monogyna	Common hawthorn	A
Acer campestre	Field maple	F
Cornus sanguinea	Dogwood	F
Corylus avellana	Hazel	F
Galium aparine	Cleavers	F
Prunus spinosa	Blackthorn	F
Dactylis glomerata	Cock's-foot	O
Lolium perenne	Perennial rye-grass	O
Plantago major	Greater plantain	O
Rubus fruticosus agg.	Bramble	O
Rumex obtusifolius	Broad-leaved dock	O
Anthriscus sylvestris	Cow parsley	R
Ballota nigra	Black horehound	R
Euonymus europaeus	Spindle	R
Helminthotheca echioides	Bristly oxtongue	R
Malva sylvestris	Common mallow	R
Rosa canina	Dog rose	R
Rumex sanguineus	Wood dock	R
Taraxacum officinale agg.	Dandelion species	R

Hedgerow H12

Crataegus monogyna	Common hawthorn	A
Epilobium hirsutum	Great willowherb	A
Rubus fruticosus agg.	Bramble	A
Acer campestre	Field maple	F
Arrhenatherum elatius	False oat-grass	F
Dactylis glomerata	Cock's-foot	F
Prunus spinosa	Blackthorn	F
Anisantha sterilis	Barren brome	O
Centaurea nigra	Common knapweed	O
Corylus avellana	Hazel	O
Dipsacus fullonum	Teasel	O
Equisetum arvense	Field horsetail	R
Helminthotheca echioides	Bristly oxtongue	R
Heracleum sphondylium	Hogweed	R

Rosa canina	Dog rose	R
Rumex sanguineus	Wood dock	R
Sambucus nigra	Elder	R
Urtica dioica	Common nettle	R

Hedgerow H13

Arrhenatherum elatius	False oat-grass	A
Crataegus monogyna	Common hawthorn	F
Prunus spinosa	Blackthorn	F
Corylus avellana	Hazel	F
Acer campestre	Field maple	O
Achillea millefolium	Yarrow	O
Agrimonia eupatoria	Agrimony	O
Centaurea nigra	Common knapweed	O
Cirsium arvense	Creeping thistle	O
Dactylis glomerata	Cock's-foot	O
Lamium album	White dead-nettle	O
Leucanthemum vulgare	Oxeye daisy	O
Lolium perenne	Perennial rye-grass	O
Plantago lanceolata	Ribwort plantain	O
Rubus fruticosus agg.	Bramble	O
Rumex sanguineus	Wood dock	O
Anthriscus sylvestris	Cow parsley	R
Bellis perennis	Daisy	R
Convolvulus arvensis	Field bindweed	R
Cornus sanguinea	Dogwood	R
Fraxinus excelsior	Ash	R
Galium aparine	Cleavers	R
Glechoma hederacea	Ground-ivy	R
Helminthotheca echioides	Bristly oxtongue	R
Malva sylvestris	Common mallow	R
Prunella vulgaris	Selfheal	R
Ranunculus repens	Creeping buttercup	R
Quercus robur	Pedunculate oak	R
Rosa canina	Dog rose	R
Rumex obtusifolius	Broad-leaved dock	R
Urtica dioica	Common nettle	R

Hedgerow H14

Arrhenatherum elatius	False oat-grass	A
Crataegus monogyna	Common hawthorn	A
Dactylis glomerata	Cock's-foot	A
Festuca rubra	Red fescue	A
Acer campestre	Field maple	F
Agrimonia eupatoria	Agrimony	F
Plantago lanceolata	Ribwort plantain	F
Prunus spinosa	Blackthorn	F
Rubus fruticosus agg.	Bramble	F
Anisantha sterilis	Barren brome	O
Anthriscus sylvestris	Cow parsley	O
Equisetum arvense	Field horsetail	O
Hypericum perforatum	Perforate St John's-wort	O
Knautia arvensis	Field scabious	O

Lolium perenne	Perennial rye-grass	O
Malva sylvestris	Common mallow	O
Potentilla reptans	Creeping cinquefoil	O
Quercus robur	Pedunculate oak	O
Cirsium arvense	Creeping thistle	R
Cirsium vulgare	Spear thistle	R
Clinopodium vulgaris	Wild basil	R
Jacobaea vulgaris	Common ragwort	R
Prunus avium	Wild cherry	R
Rosa arvensis	Field rose	R
Rosa canina	Dog rose	R
Rumex obtusifolius	Broad-leaved dock	R
Tamus communis	Black bryony	R
Taraxacum agg.	Dandelion species	R
Torilis japonica	Upright hedge-parsley	R
Urtica dioica	Common nettle	R

Hedgerow H15

Crataegus monogyna	Common hawthorn	D
Salix caprea	Goat willow	D
Hedera helix	Ivy	A
Arrhenatherum elatius	False oat-grass	F
Dactylis glomerata	Cock's-foot	O
Epilobium hirsutum	Great willowherb	O
Festuca rubra	Red fescue	O
Prunus spinosa	Blackthorn	O
Rosa canina	Dog rose	O
Rubus fruticosus agg.	Bramble	O
Cornus sanguinea	Dogwood	R
Sambucus nigra	Elder	R

Hedgerow H16

Arrhenatherum elatius	False oat-grass	D
Crataegus monogyna	Common hawthorn	D
Hedera helix	Ivy	A
Galium aparine	Cleavers	F
Rubus fruticosus agg.	Bramble	F
Urtica dioica	Common nettle	F
Acer campestre	Field maple	F
Heracleum sphondylium	Hogweed	O
Lamium album	White dead-nettle	O
Malva sylvestris	Common mallow	O
Cirsium arvense	Creeping thistle	R
Euonymus europaeus	Spindle	R
Fraxinus excelsior	Ash	R
Rumex sanguineus	Wood dock	R
Sambucus nigra	Elder	R

Hedgerow H17

Lolium perenne	Perennial rye-grass	A
Anthriscus sylvestris	Cow parsley	F
Cornus sanguinea	Dogwood	F
Corylus avellana	Hazel	F

Galium aparine	Cleavers	F
Calystegia sepium	Hedge bindweed	O
Sonchus oleraceus	Smooth sow-thistle	O
Urtica dioica	Common nettle	O
Veronica hederifolia	Ivy-leaved speedwell	O
Alliaria petiolata	Garlic mustard	R
Convolvulus arvensis	Field bindweed	R
Heracleum sphondylium	Hogweed	R
Malva sylvestris	Common mallow	R
Rosa canina	Dog rose	R
Sambucus nigra	Elder	R
Sisymbrium officinale	Hedge mustard	R
Sorbus spp.	Whitebeam species	R
Taraxacum agg.	Dandelion species	R
Viburnum opulus	Guelder-rose	R

Hedgerow H18

Crataegus monogyna	Common hawthorn	D
Anisantha sterilis	Barren brome	O
Dactylis glomerata	Cock's-foot	F
Galium aparine	Cleavers	F
Lolium perenne	Perennial rye-grass	F
Prunus spinosa	Blackthorn	F
Alliaria petiolata	Garlic mustard	O
Anthriscus sylvestris	Cow parsley	O
Arrhenatherum elatius	False oat-grass	O
Rubus fruticosus agg.	Bramble	O
Geranium pyrenaicum	Hedgerow crane's-bill	O
Rosa canina	Dog rose	R
Malus domestica	Apple	R
Tamus communis	Black bryony	R
Taraxacum agg.	Dandelion species	R

Hedgerow H19

Corylus avellana	Hazel	F
Crataegus monogyna	Common hawthorn	F
Anisantha sterilis	Barren brome	O
Dactylis glomerata	Cock's-foot	O
Lolium perenne	Perennial rye-grass	O
Urtica dioica	Common nettle	O
Arrhenatherum elatius	False oat-grass	R
Cirsium arvense	Creeping thistle	R
Sonchus oleraceus	Smooth sow-thistle	R

Hedgerow H20

Anisantha sterilis	Barren brome	D
Crataegus monogyna	Common hawthorn	D
Galium aparine	Cleavers	F
Cirsium vulgare	Spear thistle	O
Cornus sanguinea	Dogwood	O

Heracleum sphondylium	Hogweed	O
Lamium album	White dead-nettle	O
Sonchus asper	Prickly sow-thistle	O
Ulmus sp.	Elm Species	O
Urtica dioica	Common nettle	O
Alliaria petiolata	Garlic mustard	R
Arctium minus	Lesser burdock	R
Cirsium arvense	Creeping thistle	R
Conium maculatum	Hemlock	R
Cornus sanguinea	Dogwood	R
Geranium dissectum	Cut-leaved crane's-bill	R
Hedera helix	Ivy	R
Malva sylvestris	Common mallow	R
Poa trivialis	Rough meadow-grass	R
Ranunculus acris	Meadow buttercup	R
Rumex crispus	Curled dock	R
Rumex sanguineus	Wood dock	R
Sambucus nigra	Elder	R
Veronica persica	Common field-speedwell	R
Viburnum lantana	Wayfaring tree	R

Hedgerow H21

Anthriscus sylvestris	Cow parsley	D
Crataegus monogyna	Common hawthorn	D
Anisantha sterilis	Barren brome	F
Galium aparine	Cleavers	F
Prunus spinosa	Blackthorn	F
Cirsium vulgare	Spear thistle	O
Heracleum sphondylium	Hogweed	O
Sonchus asper	Prickly sow-thistle	O
Ulmus sp.	Elm Species	O
Urtica dioica	Common nettle	O
Viola odorata	Sweet violet	O
Acer campestre	Field maple	F
Alliaria petiolata	Garlic mustard	R
Arctium minus	Lesser burdock	R
Arum maculatum	Lord-and-Ladies	R
Cirsium arvense	Creeping thistle	R
Conium maculatum	Hemlock	R
Geranium dissectum	Cut-leaved crane's-bill	R
Hedera helix	Ivy	R
Malva sylvestris	Common mallow	R
Poa trivialis	Rough meadow-grass	R
Ranunculus acris	Meadow buttercup	R
Rosa canina	Dog rose	R
Rumex sanguineus	Wood dock	R

Hedgerow H22

Anthriscus sylvestris	Cow parsley	D

Prunus spinosa	Blackthorn	D
Anisantha sterilis	Barren brome	F
Galium aparine	Cleavers	F
Cirsium vulgare	Spear thistle	O
Cornus sanguinea	Dogwood	O
Heracleum sphondylium	Hogweed	O
Lamium album	White dead-nettle	O
Urtica dioica	Common nettle	O
Acer campestre	Field maple	F
Alliaria petiolata	Garlic mustard	R
Arctium minus	Lesser burdock	R
Arum maculatum	Lord-and-Ladies	R
Cirsium arvense	Creeping thistle	R
Geranium dissectum	Cut-leaved crane's-bill	R
Hedera helix	Ivy	R
Malva sylvestris	Common mallow	R
Mercurialis perenne	Dog's-mercury	R
Poa trivialis	Rough meadow-grass	R
Prunus cerisfera	Cherry plum	R
Prunus domestica	Wild plum	R
Ranunculus acris	Meadow buttercup	R
Rumex sanguineus	Wood dock	R

Hedgerow H23

Crataegus monogyna	Common hawthorn	D
Rubus fruticosus agg.	Bramble	A
Anisantha sterilis	Barren brome	F
Urtica dioica	Common nettle	F
Anthriscus sylvestris	Cow parsley	O
Hedera helix	Ivy	O
Geranium pyrenaicum	Hedgerow crane's-bill	O
Cirsium vulgare	Spear thistle	R
Aesculus hippocastanum	Horse-chestnut	R
Arctium minus	Lesser burdock	R
Centaurea nigra	Common knapweed	R
Conium maculatum	Hemlock	R
Helminthotheca echioides	Bristly oxtongue	R
Prunus avium	Wild cherry	R
Sonchus asper	Prickly sow-thistle	R
Veronica chamaedrys	Germander speedwell	R

Hedgerow H24

Crataegus monogyna	Common hawthorn	D
Prunus spinosa	Blackthorn	A
Rubus fruticosus agg.	Bramble	A
Urtica dioica	Common nettle	F
Acer campestre	Field maple	O
Anisantha sterilis	Barren brome	O
Anthriscus sylvestris	Cow parsley	O

Cirsium arvense	Creeping thistle	O
Fraxinus excelsior	Ash	O
Hedera helix	Ivy	O
Geranium pyrenaicum	Hedgerow crane's-bill	O
Cirsium vulgare	Spear thistle	R
Arctium minus	Lesser burdock	R
Centaurea nigra	Common knapweed	R
Prunus avium	Wild cherry	R
Veronica chamaedrys	Germander speedwell	R

Hedgerow H25

Conium maculatum	Hemlock	D
Prunus spinosa	Blackthorn	A
Anisantha sterilis	Barren brome	F
Anthriscus sylvestris	Cow parsley	F
Urtica dioica	Common nettle	F
Crataegus monogyna	Common hawthorn	O
Hedera helix	Ivy	O
Sambucus nigra	Elder	O
Acer campestre	Field maple	R
Acer pseudoplatanus	Sycamore	R
Betula pendula	Silver birch	R
Buddleja davidii	Butterfly-bush	R
Fraxinus excelsior	Ash	R
Ulmus sp.	Elm Species	R

Hedgerow H26

Anthriscus sylvestris	Cow parsley	D
Crataegus monogyna	Common hawthorn	D
Anisantha sterilis	Barren brome	A
Galium aparine	Cleavers	A
Urtica dioica	Common nettle	F
Rosa canina.	Dog Rose	O
Clematis vitalba	Traveller's-joy	O
Rubus fruticosus agg.	Bramble	O
Acer campestre	Field maple	R
Acer pseudoplatanus	Sycamore	R
Conium maculatum	Hemlock	R
Heracleum sphondylium	Hogweed	R
Prunus avium	Wild cherry	R
Sambucus nigra	Elder	R

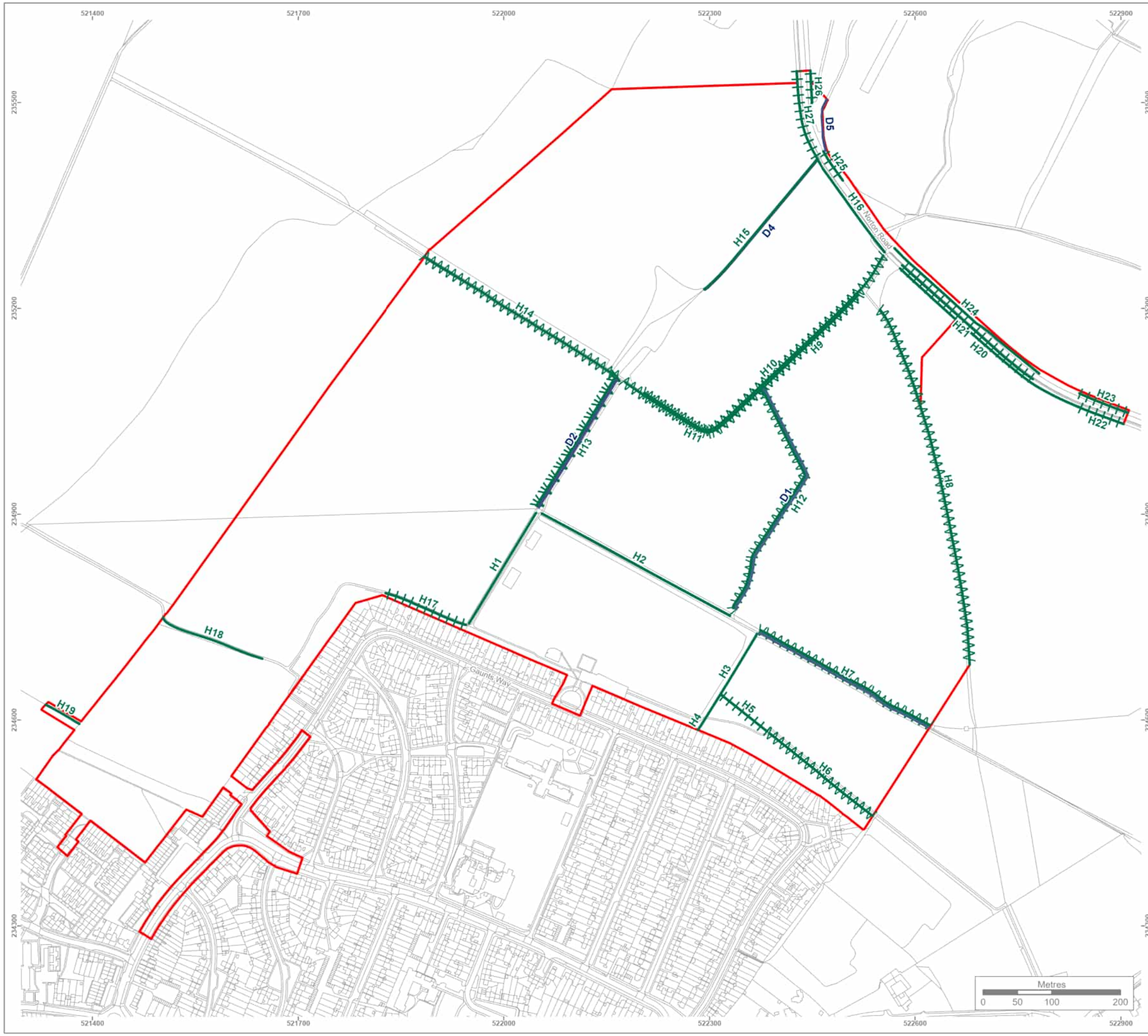
Hedgerow H27

Crataegus monogyna	Common hawthorn	D
Galium aparine	Cleavers	D
Anisantha sterilis	Barren brome	F
Anthriscus sylvestris	Cow parsley	O
Sambucus nigra	Elder	O
Urtica dioica	Common nettle	O

Acer campestre	Field maple	R
Alliaria petiolata	Garlic mustard	R
Carpinus betulus	Hornbeam	R
Clematis vitalba	Traveller's-joy	R
Conium maculatum	Hemlock	R
Fraxinus excelsior	Ash	R
Hedera helix	Ivy	R
Heracleum sphondylium	Hogweed	R
Rubus fruticosus agg.	Bramble	R

Drawings

G9854.005A Hedgerow Location Plan



KEY

- Site boundary
- Standing water
- Native species-rich intact hedge
- Native species-rich intact hedge and ditch
- Species-poor intact hedge
- Native species-rich hedge and trees with ditch
- Species-poor hedge and trees

Note:
The locations of habitats and habitat features are indicative.

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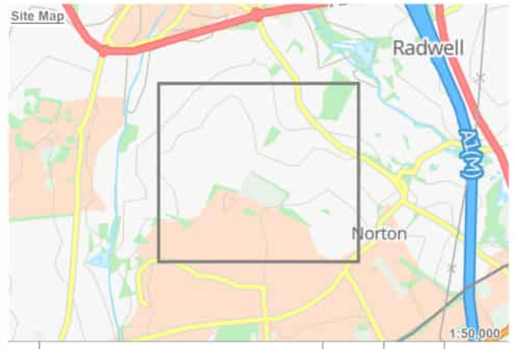
Site Map



Rev	Description	Drawn	Approved	Date
A	Phase 1 habitats and site boundary update.	MK	TW	22/08/2023

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Project
LG1 Land North of Letchworth

Title
Hedgerow Location Plan

Drawing Number
G9546.005A

Drawn	Checked	Approved	Scale	Date
SP	MK	TW	1:5,500 @ A3	22/08/2023

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Appendix I

Feasibility stage BNG report

LG1 Land North of the Grange

Letchworth, Hertfordshire

Feasibility Stage Biodiversity Net Gain (BNG) Report

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Prepared For: Letchworth Garden City Heritage Foundation

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Prepared by:	The Environment Partnership Ltd
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The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

Contents

Page

1.0 INTRODUCTION 1
Commission 1
Site Description 1
Objectives 1
Proposed Development 2
Relevant Policy and Legislation 2
National Policies 2
Local Policies 3
2.0 METHODS 4
Ecological and Survey Reference Documents 4
Survey Methods 4
Desk Study 4
Phase 1 Habitat Survey 4
UK Habitat Classification Conversion 4
Condition Assessment 5
Arboriculture Survey 5
BNG Assessment 5
Determining Strategic Significance 6
Post-Development Calculations 7
3.0 BASELINE CONDITIONS 9
Important Ecological Features 9
On-Site Baseline 9
Post Development Habitats 10
4.0 CHANGE IN ECOLOGICAL VALUE 11
Summary of Biodiversity Impact 11
Achieving Net Gain ..... **Error! Bookmark not defined.**
Access route and adjoining arable land ..... **Error! Bookmark not defined.**
Other Net gain 10% possibilities ..... **Error! Bookmark not defined.**
Off-site Mitigation Strategy ..... **Error! Bookmark not defined.**
Combined BNG Unit Net Change 12
Trading Rules Summary 12
Biodiversity Net Gain 13

5.0 IMPLEMENTATION, MANAGEMENT AND MONITORING 14

Figures

Figure 1: Headline results based on application area only 11
Figure 2: Final unit net change 12
Figure 3: BNG unit deficit to attain 10% Net gain 13

Annexes

Annex A: Biodiversity Metric 4.0 (provided as separate document)

Drawings

Drawing 1: G9546.002A: Phase 1 Habitat Survey

Drawing 2: G9546.05.003A: Baseline UK Habitats

Drawing 3: G9546.05.004A: Baseline Habitats Condition and Significance

Drawing 4: G9546.05.005A: Proposed UK habitats

Drawing 5: G9546.05.006A Proposed Habitats Condition and Significance

Drawing 6: G9546.05.007A Habitat Impact

1.0 Introduction

Commission

1.1 The Environment Partnership (TEP) were commissioned by Letchworth Garden City Heritage Foundation to undertake a Feasibility Biodiversity Net Gain (BNG) assessment of a proposed planning application for LG1 Land North of the Grange, Letchworth, Hertfordshire; hereafter referred to as the "Scheme".

1.2 The Biodiversity Metric 4.0 has been used to assess the net gain output.

Site Description

1.3 The footprint of the Scheme boundary measures 46.16ha and lies to the north of Gaunts Way of the Grange Estate in Letchworth, Hertfordshire. The approximate central grid reference of the site is TL 22131 34974.

1.4 The Scheme area is largely composed of arable fields with hedgerows delineating field boundaries, some of which are also associated with ditches and scattered trees.

1.5 The wider area comprises of mostly residential units to the south which form the northern extent of Letchworth Garden City. The rest of the area is largely rural agricultural fields with associated hedgerows and small woodlands between the villages of Radwell, Stotfold, and Fairfield Park.

Objectives

1.6 This report details the ecological surveys undertaken to establish a baseline position, and what the anticipated impacts are. Biodiversity Metric 4.0 has been used to inform the biodiversity net gain assessment.

1.7 The aims of this report are to:

- Set out the methods used to assess the habitat baseline of the Scheme.
- Set out the methods and assumptions used to assess the post development habitat scoring of the Site based on high level landscape drawings.
- Assess the BNG that is currently to be delivered as a result of the high level site design.

1.8 A Landscape Management Plan may also be required to support the planning application, unless the Local Planning Authority has indicated that this document can be conditioned.

Proposed Development

1.9 The outline masterplan is currently at an early stage. Broad-scale proposals comprise a number of residential blocks and a community block consisting of a school, a sustainable transport hub, a community centre and retail units. The existing Grange Recreation Ground, located in the south of the site, is to remain as open space and the main network of rights of way through the site to this area are proposed to be retained and enhanced as parkland links. Additional hedgerows and landscaping are proposed as buffers to the wider surrounding agricultural landscape.

Relevant Policy and Legislation

National Policies

1.10 Paragraph 174(d) of the NPPF (2023)[1] states that "Planning policies and decisions should contribute to and enhance the natural and local environment by […] minimising impacts on and providing net gains for biodiversity […]" The Government 25-year Environment Plan states that government will "[…] embed environmental net gain principle for development".

1.11 In July 2019, the government issued revised planning practice guidance[2] (NPPG) with details on how planners can implement "net environmental gain" requirements when assessing development proposals, including new advice on protecting wildlife.

1.12 Revised guidance recently published by the government[3] says that net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. Net gain is an umbrella term for both biodiversity net gain and wider environmental net gain. It states: "Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity".

1.13 In terms of measuring net gain, the guidance states that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. It

1 National Planning Policy Framework (2023). Department for Levelling Up, Housing and Communities. https://www.gov.uk/government/publications/national-planning-policy-framework--2

2 Natural environment - GOV.UK (www.gov.uk) (accessed ###)

3 Biodiversity net gain - GOV.UK (www.gov.uk) (accessed ###)

goes on to state that "[…] tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net gain outcome is expected to be achieved".

1.14 The Environment Act 2021 received Royal Assent on 9th November 2021 and includes a mandatory 10% biodiversity net gain on all Town and Country Planning Act 1990 developments. The 10% requirement will not become mandated across England until statutory instruments and regulations have been agreed and the Town and Country Planning Act 1990 has been amended. Mandatory 10% net gain is currently anticipated to become law in early 2024.

Local Policies

1.15 There are no specific references to a target requirement of biodiversity net gain within the North Hertfordshire Local Plan, so it is expected that the Mandatory 10% net gain will be adopted for this development.

2.0 Methods

Ecological and Survey Reference Documents

2.1 To support this assessment the following ecological survey reports were reviewed:

- Ecological Desk Study – TEP Ref. 9546.001 - TEP 2023
- Extended Phase 1 Habitat Survey (updated) – Inc. in the Preliminary Ecological Assessment TEP Ref 9546.002 -TEP 2023
- Tree Constraints Report – TEP Ref. 9546.06.001 - TEP 2023, and
- Hedgerow Regulations Assessment - TEP Ref 9546.005 - TEP 2023

Survey Methods

Desk Study

2.2 Information regarding planning policies, historic species records and protected sites was collated from a variety of sources. Statutorily protected sites within the National Site Network (NSN) were searched for within 10km of the Scheme. Other statutorily protected sites were searched for within 5km of the site and non-statutory designations were searched for within 2km of the Scheme.

Phase 1 Habitat Survey

2.3 The updated Phase 1 Habitat survey was undertaken by a suitably qualified and experienced TEP Ecologist (FISC Level 5) in August 2022 and in May 2023 using the standard JNCC Phase 1 habitat assessment method (2010)[4]. This method records the habitat types present in and immediately surrounding the Scheme, based on the JNCC descriptions. Plant species are identified in accordance with Stace (2010)[5] and recorded as target notes using the DAFOR scale[6].

UK Habitat Classification Conversion

2.4 Phase 1 habitat results were converted to UK Habitat classification code with reference to the UK Hab conversions provided in the 'Technical Data' button in the calculation tool

[4] JNCC (2010) Handbook for Phase 1 Habitat Survey: A technique for environmental audit. Joint Nature Conservation Committee, Peterborough.

[5] Stace, C. (2010) New Flora of the British Isles. 3rd Ed. Cambridge University Press

[6] DAFOR = Dominant, Abundant, Frequent, Occasional & Rare

of the Biodiversity Metric 4.0, the UK Habitat Classification - Habitat Definitions[7] and the UK Habitat Classification Field Key[8].

Condition Assessment

2.5 Condition assessment surveys of the area-based habitats present pre-development were undertaken by a suitably experienced ecologist (FISC Level 5) in August 2022 and in May 2023. The condition assessments were undertaken using guidance presented in the Biodiversity Metric 4.0 - Technical Supplement[9].

Arboriculture Survey

2.6 An initial arboricultural survey for the Scheme was carried out by TEP in March 2023 and subsequent report updated by TEP in August 2023. The surveys were completed by inspection from ground level in accordance with BS 5837:2012 "Trees in relation to design, demolition and construction – Recommendations (Ref 7-20)". The Standard provides a categorisation method to “identify the quality and value (in a non-fiscal sense) of the existing tree stock, to allow informed decisions to be made concerning which trees should be removed or retained in the event of development occurring”.

2.7 The method places trees and groups of trees into one of four quality categories and provides guidance on the integration and protection of trees during construction.

2.8 The presence of Tree Preservation Orders, Conservation Areas, Ancient Woodland and Veteran Trees have also been ascertained.

BNG Assessment

2.9 The Scheme was assessed in October 2023 using Biodiversity Metric 4.0 in line with the user guide[10] and technical supplement provided.

2.10 Although the condition assessments were undertaken using a previous version of the Technical Supplement it is considered that they can be transferred for use in Metric 4.0

[7] Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification - Habitat Definitions V1.1 at http://www.ukhab.org/

[8] UK Hab Field Key V2.1 September 2020

[9] STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A 2021. Biodiversity metric 3.0: Auditing and accounting for biodiversity – Technical Supplement. Natural England.

[10] Natural England (2023). The Biodiversity Metric 4.0 User Guide. Natural England Joint Publication JP039. Natural England.

without affecting the robustness of this assessment. Natural England has stated that the change from Metric 3.1 to 4.0 represents a substantial update, however the majority of changes wrought focus on user experience and are unlikely to significantly impact the range of outputs generated[11].

2.11 Biodiversity Metric 4.0 is a tool designed to enable developers to measure the change in biodiversity across their site. It determines if there will be net gain, net loss or no net loss of biodiversity following completion of their development and any subsequent management regime.

2.12 To calculate the change in biodiversity across the Scheme, a site survey is undertaken by a suitably qualified ecologist to determine the habitats present on site, their location, size, and condition. This information is then digitised, and the resulting information fed into Biodiversity Metric 4.0.

2.13 The principles of biodiversity net gain as set out in the Biodiversity Net Gain Good Practice Guidelines[12] have been considered throughout this process.

Determining Strategic Significance

2.14 Strategic significance was determined through a thorough desktop review of local planning policy and other relevant documentation. The desk-based assessment provides full details of local policy and legislation covering the site. This includes biodiversity policies and the policies map within the North Hertfordshire District Council Local Plan 2011 – 2031 (adopted November 2022).

2.15 For the purpose of the BNG Assessment particular reference has been paid to the relevant green infrastructure and other ecology specific policies including:

- SP1: Sustainable development in North Hertfordshire
- SP5: Countryside and Green Belt
- SP12: Green infrastructure, landscape and biodiversity
- SP15: Site LG1 – North of Letchworth Garden City

2.16 Consideration has also been given to the location of Local Wildlife Sites, as well as county wide and nationally designated wildlife sites, specifically where they are referenced in local policy as providing important connectivity.

[11] Natural England (2023). Summary of Changes The Biodiversity Metric Version 3.1 to 4.0. Natural England Joint Publication JP039. Natural England

[12] CIEEM, IEMA & CIRIA (2019). Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide

2.17 Strategic significance utilises published local strategies and objectives to identify local priorities for targeting biodiversity and nature improvement. Strategic significance will be high if the habitat location is identified in local plans, strategies, or policies. Medium strategic significance should be used where habitat was deemed ecologically desirable for a particular habitat type such as acting as a wildlife corridor or buffer.

2.18 When assigning high, medium, and low strategic significance to habitats in both the baseline and the post development calculations for this Scheme, the lack of proximity to high ecological value areas such as local wildlife sites, and the lack of ecologically valuable habitats ascertains that all habitats on the site were assigned low strategic significance.

Post-Development Calculations

2.19 Post-development calculations have been based on the provided High Level drawings from Letchworth Garden City Heritage Foundation; LG1-ERE-ZZ-XX-A-001-S0-P004 and 1001_Option_F2.

2.20 The most appropriate UK Habitat Classification type for each habitat parcel was assigned based on the landscape design, and a target condition was assigned for each parcel based upon the condition assessment criteria for habitats within the Biodiversity Metric 4.0 Technical Supplement. The target condition for habitat types varied depending upon their location, likely levels of use and management measures required.

Limitations

2.21 For the purpose of this assessment, it is assumed that the post-development habitats are identified as follows:

- The Development areas A-F consist of 70% Developed Land, sealed surface and 30% vegetated garden;
- Play Provision consists of 100% Developed Land, sealed surface
- Other Outdoor Play consists of 100% Modified Grassland in poor condition
- Parks and Public Gardens consists of 100% Modified Grassland in poor condition except where existing habitats of hedgerows, scrub, plantations and individual trees are present. These will be retained and enhanced where possible.
- Natural and Semi Natural consists of 100% Other Neutral grassland in moderate condition except where existing habitats of hedgerows, scrub, plantations and individual trees are present. These will be retained and enhanced where possible.
- Allotment consists of 100% Allotments in moderate condition

- Amenity Green Spaces consist of 100% Sustainable Drainage Systems (SuDS in good condition)
- Street consists of 100% Developed Land, sealed surface.
- the path network consists of 100% Developed Land, unsealed surface.

3.0 Baseline conditions

Important Ecological Features

3.1 There are no NSN sites present within 10km of the Scheme and no other statutorily protected sites present within 5km of the Scheme.

3.2 There are three statutory locally designated sites within 2km of the Scheme. Norton Common Local Nature Reserve (LNR)) is located 0.8km south the Scheme. It is designated for its woodland, grassland and running water habitats; Stotfold Mill Meadows LNR 1.0km north of the Scheme designated for its Woodland, grassland and pond habitats that support waterfowl and common amphibians; and Ivel Springs LNR 1.3km east of the Scheme designated for its woodland, grassland and running water habitats.

3.3 There are 15 non-statutory locally designated sites within 2km of the Scheme. Norton Pond, Payne's Farm Local Wildlife Site (LWS) is 0.2km southeast of the Scheme and supports important invertebrate and vertebrate species including Great Crested Newt.

3.4 Other sites are located over 0.4km from the site and comprise Traditional Orchards, species-rich grasslands, river systems, ponds and other habitats supporting important assemblages of birds, water vole, reptiles and amphibians.

On-Site Baseline

3.5 The Scheme is dominated by arable fields with some poor semi-improved grassland field boundaries with boundary hedgerows, some of which are also associated with ditches and scattered trees. Small areas of scrub, plantation broad-leaved woodland, amenity grassland, tall ruderal and bare ground are also present within the site. There are several public rights of way across and through the site while most of the field boundaries have permissible path networks. The wider area comprises of mostly residential units to the south which form the northern extent of Letchworth Garden City, while the rest of the area is largely rural agricultural fields with associated hedgerows and small woodlands between the villages of Radwell, Stotfold, and Fairfield Park.

3.6 Full details of the conversion from Phase 1 habitat to the UK Habitat Classification along with the results of the condition assessment are provided in the Assessor Comments column within the completed Biodiversity Metric 4.0 (provided under separate cover, TEP Ref. x9546.05.001). The following drawings are provided:

- Phase 1 Habitat Survey Results (G9546.002A); and
- Baseline UK Habitats (G9546.005.003A)

- Baseline Habitat Condition and Significance (G9546.05.004A).

3.7 The Phase 1 Habitat Survey drawing covers a much larger area than the application boundary due to at the time of the survey it being unknown where access routes to the development would occur. The Baseline UK Habitats drawings and subsequent drawings shows the current known expected application boundary.

Post Development Habitats

3.8 Details regarding post-development habitats are provided in the following document and drawings:

- Proposed UK habitats (G9546.05.005A).
- Proposed Habitat Condition and Significance (G9546.05.006A).
- Habitat Impact (G9546.05.007A).

3.9 Habitats to be provided within the post development proposals include:

- 8.35ha of other neutral grassland to be created;
- 1.31 ha of other broadleaved woodland to be created;
- 1.18ha of mixed scrub habitat to be created;
- 1.69ha of biodiverse Sustainable Drainage System (SuDS) ponds; and
- 0.69ha of Modified (Amenity) grasslands for outdoor play space and parkland:

3.10 The woodlands and scrub areas in southeast and southwest, most of the hedgerows and 11 mature oak trees are to be retained as part of the plans maintaining connectivity to the wider areas.

3.11 All other remaining habitats present within the Scheme boundaries, including all the arable fields, arable field boundaries, small areas of scrub and other neutral grasslands, are to be lost.

3.12 Full details of the conversion from the High level Plans to the UK Habitat classification along with the target condition are provided in the Assessor Comments within the completed Biodiversity Metric 4.0 (provided under separate cover, TEP Ref x9546.05.001).

4.0 Change in Ecological Value

4.1 A biodiversity assessment has been undertaken, using the Biodiversity Metric 4.0 calculator, to quantify the change in biodiversity units for the planning application area between the pre-development baseline and post-development retained, enhanced, and created habitats. Detailed results of the assessment are provided in the Biodiversity Metric 4.0 in Appendix A.

Summary of Biodiversity Impact

4.2 The Scheme area totals 47.01ha of which 3.88ha will be retained, the majority of which will be existing hawthorn scrub (0.79ha), mixed scrub (0.78ha), other broadleaved woodland (0.76ha).

4.3 Permanent losses account for 43.13ha and include the following habitats:

- 40.79ha - Cereal crops
- 1.57ha - Arable Field margins
- 0.57ha - Bare ground
- 0.05ha - Modified grassland
- 0.04ha - Other neutral grassland
- 0.08ha - Bramble scrub
- 0.02ha - Blackthorn scrub, and
- 0.01ha - Hawthorn scrub.

4.4 Figure 1 presents the headline results, prior to any detailed proposals and off-site assessment, taken from the metric and based on the above figures and impacts.

Figure 1: Headline results based on application area only

On-site baseline	*Habitat units*	125.43	
	Hedgerow units	30.76	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	148.08	
	Hedgerow units	36.70	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Habitat units*	22.65	18.06%
	Hedgerow units	5.95	19.34%
	Watercourse units	0.00	0.00%

4.5 Based on the Scheme footprint as it stands , the headline results indicate a Net Gain of -18.06% which equates to 22.65 Biodiversity Units (BU) for area-based habitats and a Net gain of 19.34% (5.95 BU) for linear habitats/hedgerows.

Combined BNG Unit Net Change

4.6 Figure 2 below illustrates the final headline result in unit net change combining both the application area and highlighting the Trading Rules values.

Figure 2: Final unit net change

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	22.65
	Hedgerow units	5.95
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	18.06%
	Hedgerow units	19.34%
	Watercourse units	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

4.7 The combined headline results show that there currently an overall area-based unit net gain of 22.65 BU (18.06%) and an overall linear/hedgerow net gain of 5.95 BU (19.34%).

Trading Rules Summary

4.8 Due to the loss of habitats of medium and low distinctiveness without any current sufficiently enough habitat replacement of the same distinctiveness or higher, the trading rules cannot be satisfied at this stage. However there is a desire for areas of currently proposed other neutral grassland to be finalised as calcareous grassland which is a habitat at Very High Distinctiveness and should assure that the trading rules are satisfied. The extent of calcareous grasslands that can be created has not been agreed at this stage. It is recognised though, that the creation of this calcareous grassland in place of other neutral grassland will lower the net gain score due to the complexity of its creation, but it is believed that is can be alleviated through additional native tree planting if necessary.

Biodiversity Net Gain

4.9 Both the Local Authority and Letchworth Garden City Heritage Foundation are committed to attaining a 10% net gain on all development. This target has been used to inform the assessment. Figure 4 shows the unit requirements to attain 10% net gain.

Figure 3: BNG unit requirements to attain 10% Net gain

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	125.43	137.98	0.00
Hedgerow units	10.00%	30.76	33.83	0.00
Watercourse units	10.00%	0.00	0.00	0.00

5.0 Implementation, Management and Monitoring

5.1 This BNG assessment has been undertaken in support the design of the Landscape Masterplan. These have been assessed to indicate the condition of habitats that is expected to be achieved based on current high level plans of the development.

5.2 To fully meet BNG requirements, a detailed 30-year management and monitoring plan will be necessary. It is assumed that this information can be committed to using a suitably worded condition attached to the application's decision notice.

5.3 The plan will need to include management prescriptions which aim to achieve the specific target condition for each habitat, based on the Biodiversity Metric 4.0 condition criteria. The plan will also need to include the methods and reporting processes to be used for monitoring the success of habitat enhancement and creation along with options for remedial intervention where needed if a habitat is not achieving its targeted condition. Roles and responsibilities, along with financial and legal requirements should also be included.

Annex A: Biodiversity Metric 4.0 (provided as separate document)

Drawings

Drawing 1: G9546.002.1B: Phase 1 Habitat Survey

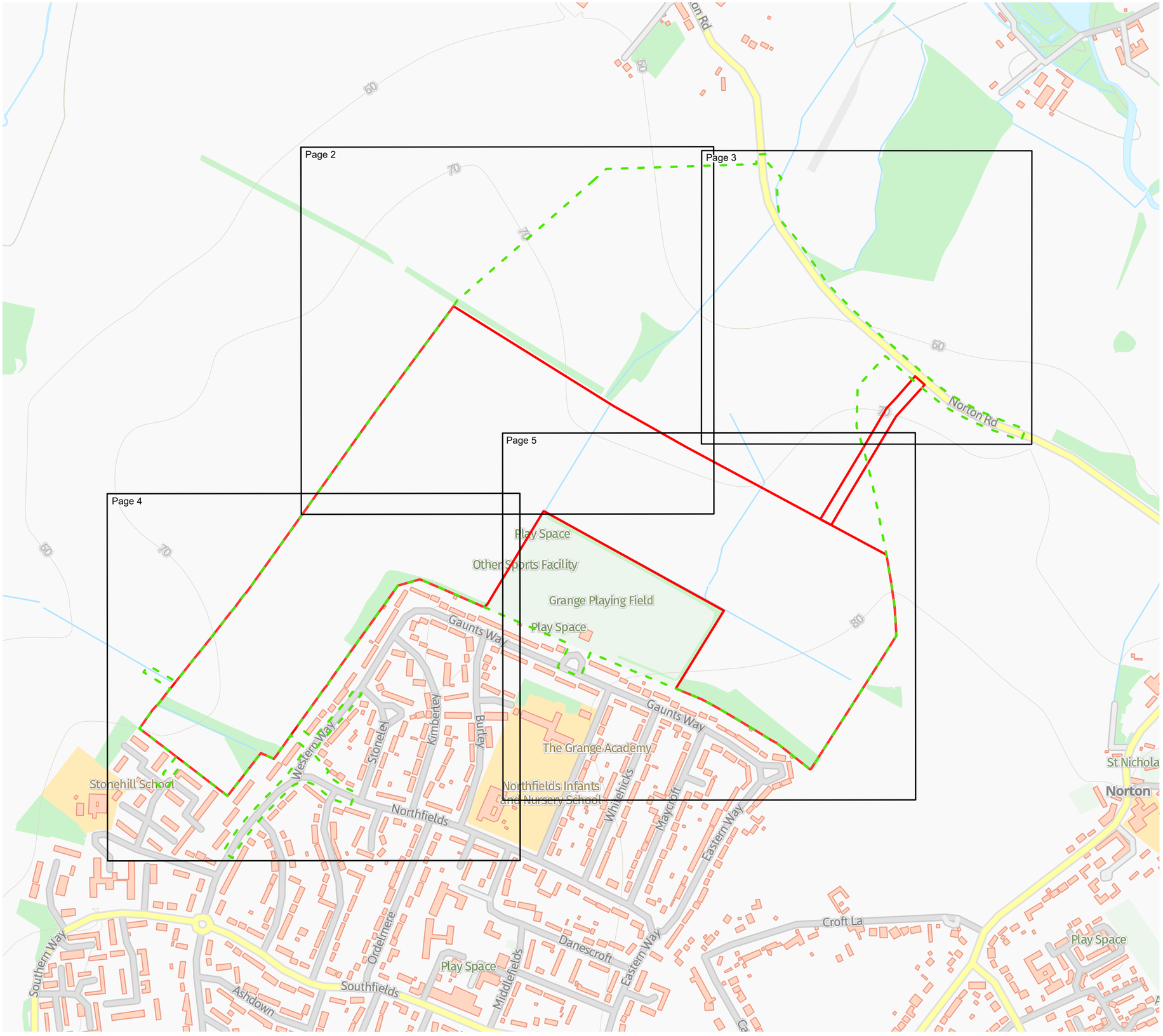
Drawing 2: G9546.05.003A: Baseline UK Habitats

Drawing 3: G9546.05.004A: Baseline Habitats Condition and Significance

Drawing 4: G9546.05.005A: Proposed UK habitats

Drawing 5: G9546.05.006A Proposed Habitats Condition and Significance

Drawing 6: G9546.05.007A Habitat Impact



KEY

- Site boundary
- Survey area boundary
- Page and page number

Metres
0 50 100 200

Note:
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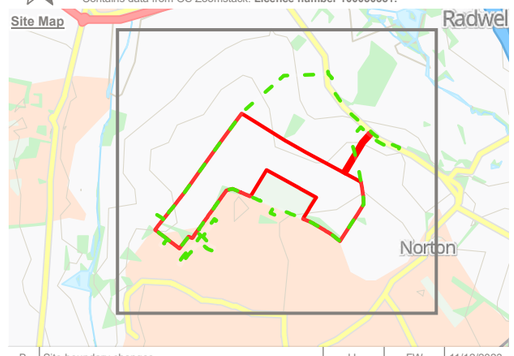

Rev	Description	Drawn	Approved	Date
B	Site boundary changes.	IJ	FW	11/12/2023
A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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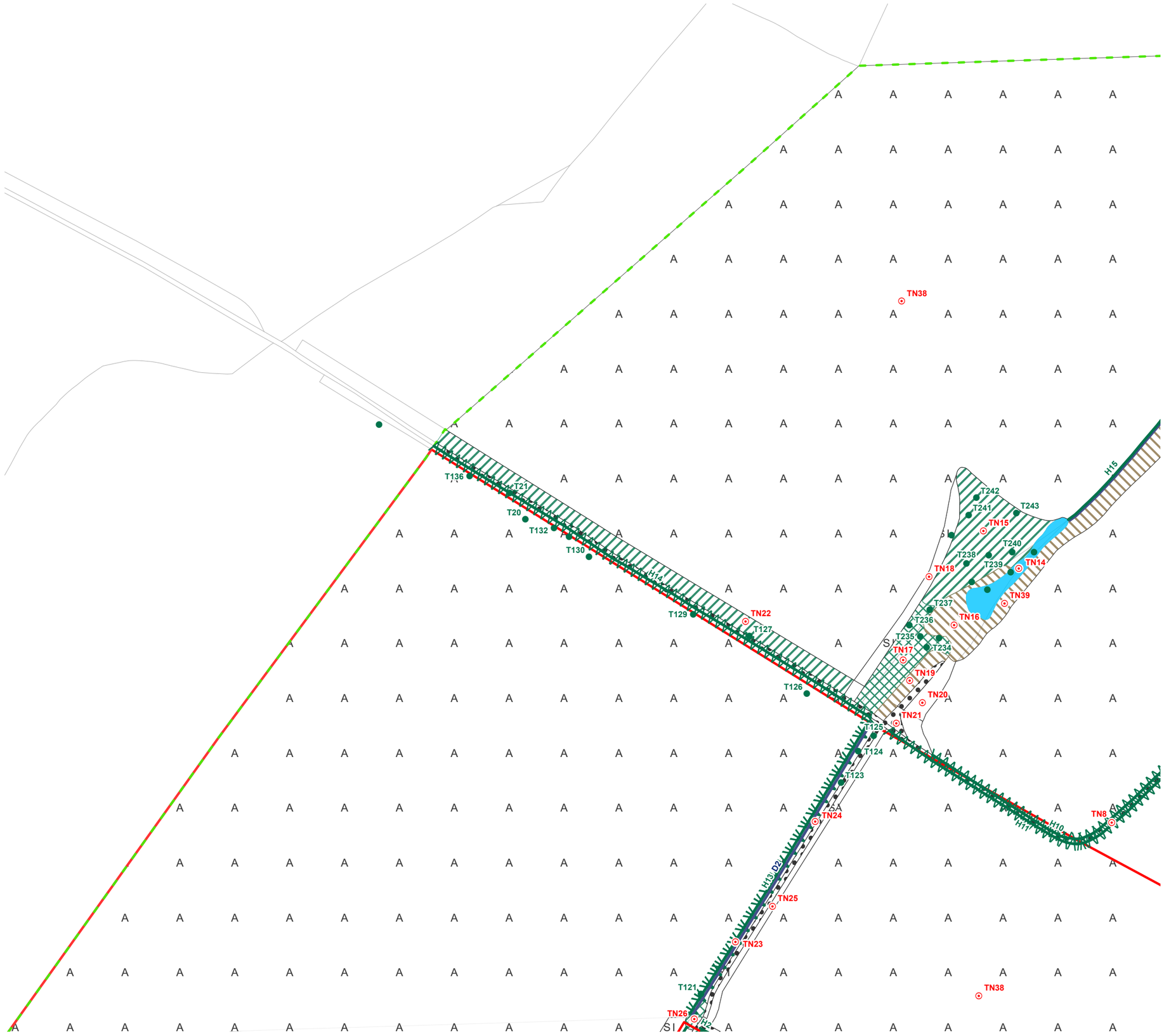
Project
LG1 Land North of Letchworth

Title
Phase 1 Habitat Survey

Drawing Number	Page 1 of 5
G9546.002.1B	

Drawn	Checked	Approved	Scale	Date
SA	MK	TW	1:7,000 @ A3	11/12/2023



KEY

- Site boundary
- Survey area boundary
- Target note
- Scattered broad-leaved tree
- Standing water
- Line of trees
- Native species-rich intact hedge
- Species-poor intact hedge
- Native species-rich hedge and trees with ditch
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Poor semi-improved grassland
- Tall ruderal
- Swamp
- Arable
- Amenity grassland
- Bare ground

Metres
0 15 30 60

Note:
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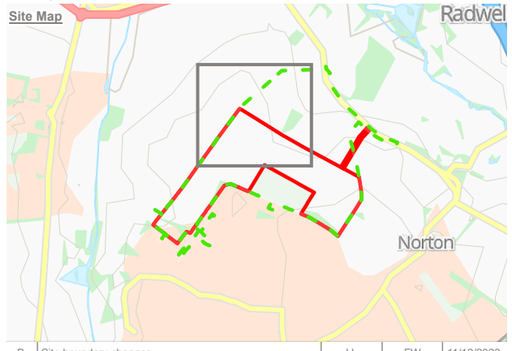

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B	Site boundary changes.	IJ	FW	11/12/2023
A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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Title
Phase 1 Habitat Survey

Drawing Number
G9546.002.2B

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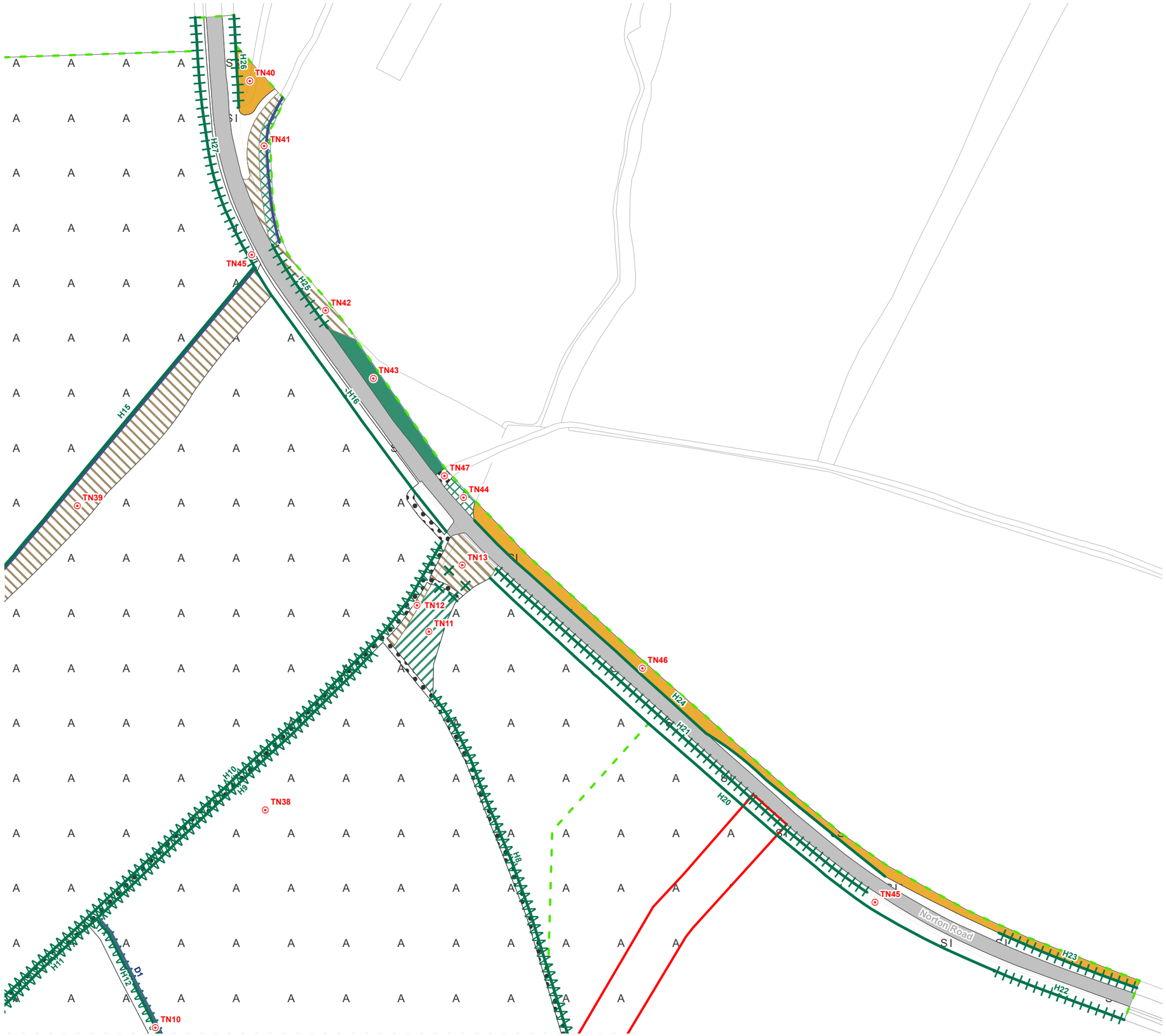
SA	MK	TW	1:2,500 @ A3	11/12/2023



KEY

- Site boundary
- Survey area boundary
- Target note
- Scattered scrub
- Standing water
- Native species-rich intact hedge
- Native species-rich intact hedge and ditch
- Species-poor intact hedge
- Species-poor hedge and trees
- Semi-natural broad-leaved woodland
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Semi-improved neutral grassland
- Poor semi-improved grassland
- Tall ruderal
- Arable
- Bare ground
- Hardstanding

Metres
0 15 30 60

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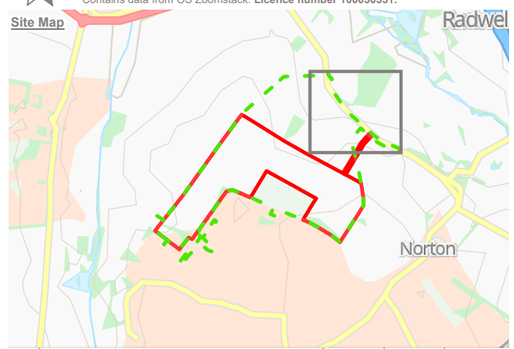

Rev	Description	Drawn	Approved	Date
B	Site boundary changes.	IJ	FW	11/12/2023
A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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Title
Phase 1 Habitat Survey

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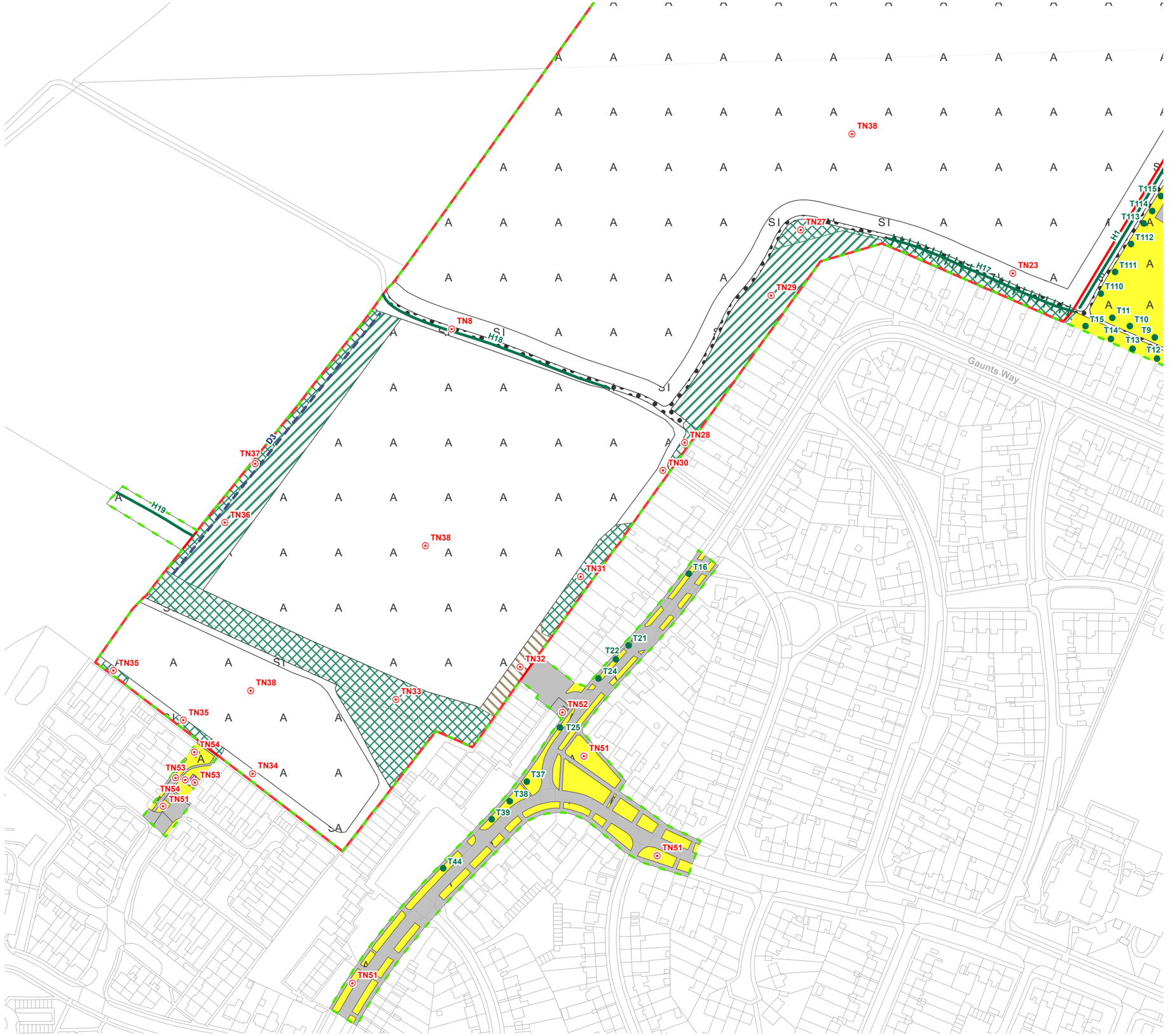

KEY

- Site boundary
- Survey area boundary
- Target note
- Scattered broad-leaved tree
- Species-poor intact hedge
- Species-poor hedge and trees
- Dry ditch
- Plantation broad-leaved woodland
- Dense/continuous scrub
- Poor semi-improved grassland
- Tall ruderal
- Arable
- Amenity grassland
- Introduced shrub
- Private garden
- Bare ground
- Hardstanding

Metres
0 15 30 60

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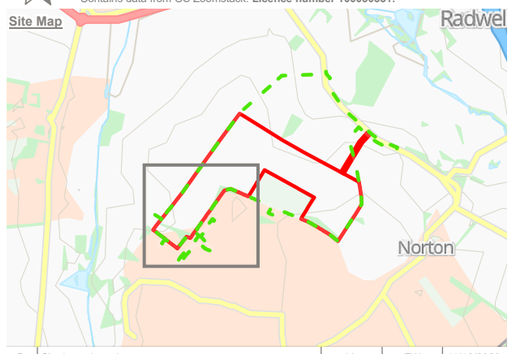

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B	Site boundary changes.	IJ	FW	11/12/2023
A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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Title
Phase 1 Habitat Survey

Drawing Number
G9546.002.4B

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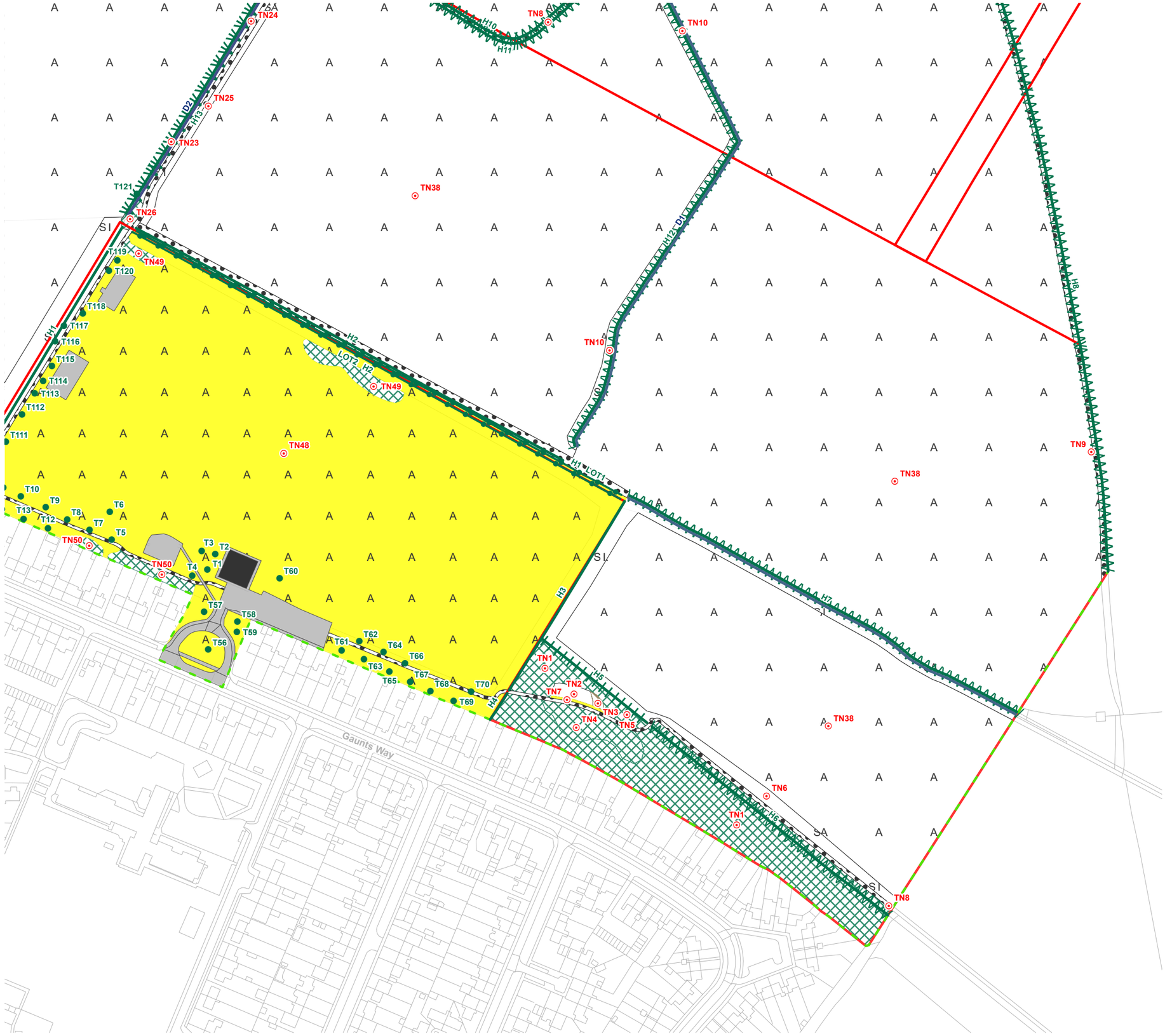

KEY

- Site boundary
- Survey area boundary
- Target note
- Scattered broad-leaved tree
- Line of trees
- Native species-rich intact hedge
- Native species-rich intact hedge and ditch
- Species-poor intact hedge
- Native species-rich hedge and trees with ditch
- Species-poor hedge and trees
- Dense/continuous scrub
- Poor semi-improved grassland
- Tall ruderal
- Arable
- Amenity grassland
- Building
- Bare ground
- Hardstanding

Metres
0 15 30 60

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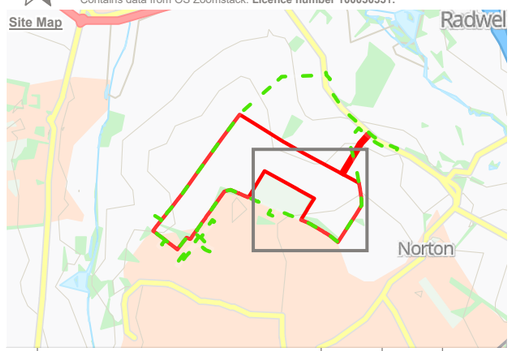

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B	Site boundary changes.	IJ	FW	11/12/2023
A	Phase 1 habitats and site boundary update.	MK	TW	04/08/2023

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Phase 1 Habitat Survey

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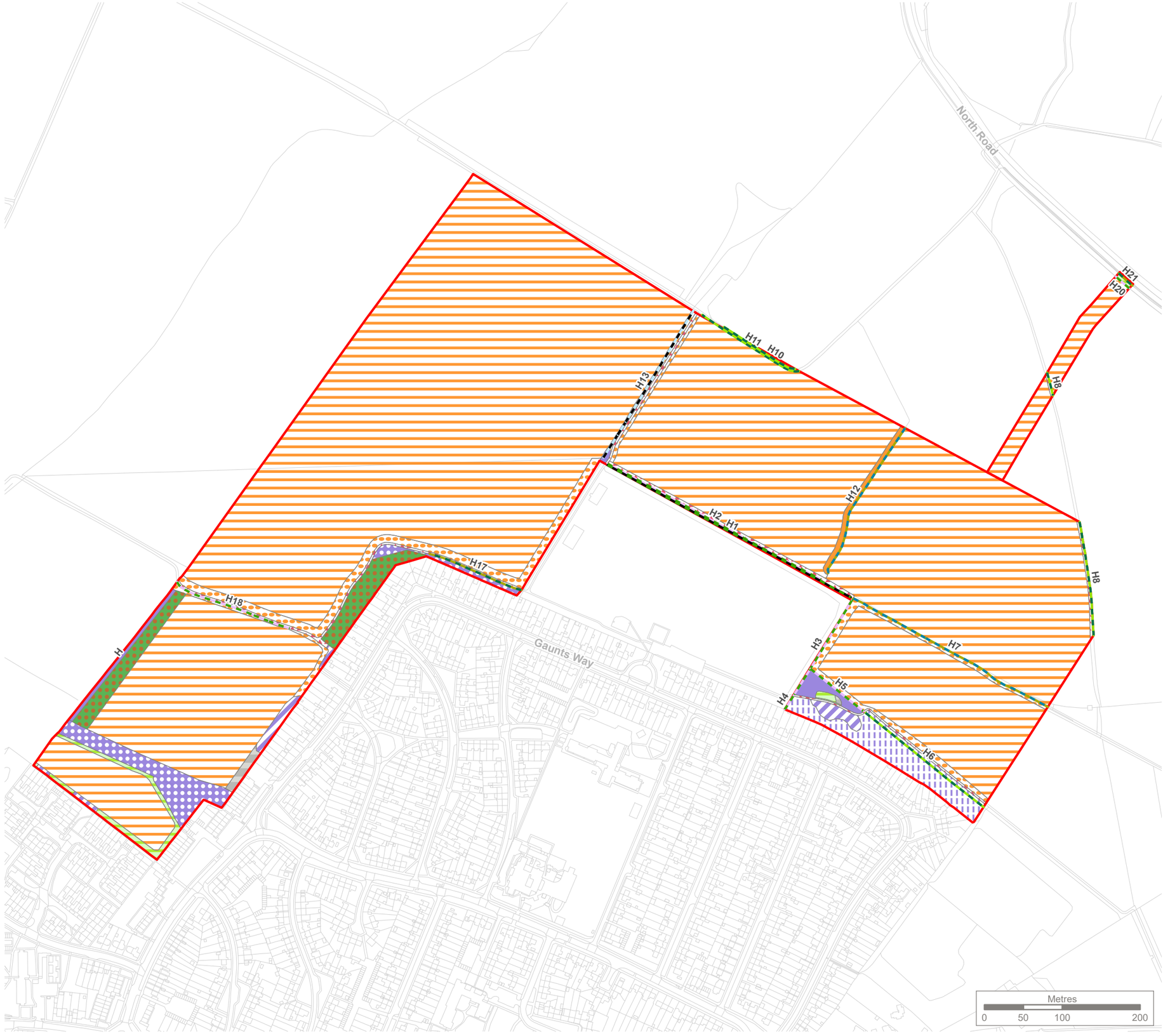

KEY

- Site boundary

Hedgerows

- Species-rich native hedgerow
- Native hedgerow
- Line of trees
- Native hedgerow with trees
- Species-rich native hedgerow - associated with bank or ditch
- Species-rich native hedgerow with trees - associated with bank or ditch

Cropland

- Arable field margins cultivated annually
- Arable field margins tussocky
- Cereal crops

Grassland

- Modified grassland
- Other neutral grassland

Heathland and Shrub

- Blackthorn scrub
- Bramble scrub
- Hawthorn scrub
- Mixed scrub

Sparsely Vegetated Land

- Tall forbs

Woodland and Forest

- Other woodland, broadleaved

Urban

- Bare ground

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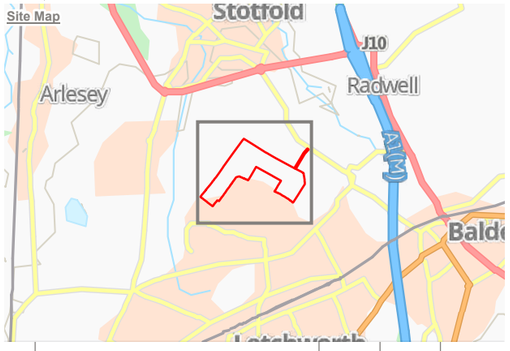

Rev	Description	Drawn	Approved	Date
A	Site boundary updates.	IJ	FW	14/12/2023

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Project
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Title
Baseline UK Habitats

Drawing Number
G9546.05.003A

Drawn	Checked	Approved	Scale	Date
MK	BJ	FW	1:5,000 @ A3	14/12/2023

KEY

Site boundary

Hedgerow Condition

- Good
- Moderate
- Poor

Habitat Condition

- Good
- Moderate
- Poor
- Condition assessment not applicable

Strategic Significance

All habitats with strategic significance value of area/ compensation not in local strategy/no local strategy

Note:
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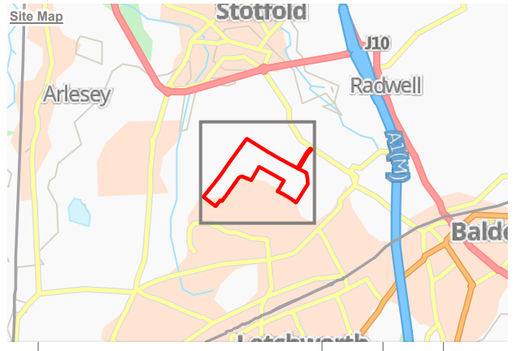

Rev	Description	Drawn	Approved	Date
A	Site boundary updates.	IJ	FW	14/12/2023

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Project
LG1 Land North of Letchworth

Title
Baseline Habitat Condition and Strategic Significance

Drawing Number
G9546.05.004A

Drawn	Checked	Approved	Scale	Date
MK	BJ	FW	1:5,000 @ A3	14/12/2023

KEY

- Site boundary

Hedgerows

- Species-rich native hedgerow
- Native hedgerow
- Line of trees
- Native hedgerow with trees
- Species-rich native hedgerow - associated with bank or ditch
- Species-rich native hedgerow with trees - associated with bank or ditch

Grassland

- Modified grassland
- Other neutral grassland

Heathland and Shrub

- Bramble scrub
- Mixed scrub

Woodland and Forest

- Other woodland, broadleaved

Urban

- Allotments
- Bare ground
- Developed land, sealed surface
- Sustainable drainage system

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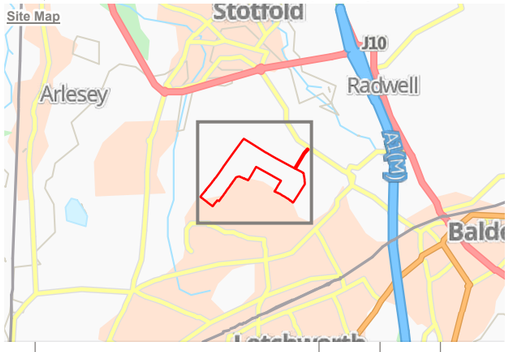

Rev	Description	Drawn	Approved	Date
A	Site boundary updates.	IJ	FW	14/12/2023

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Project
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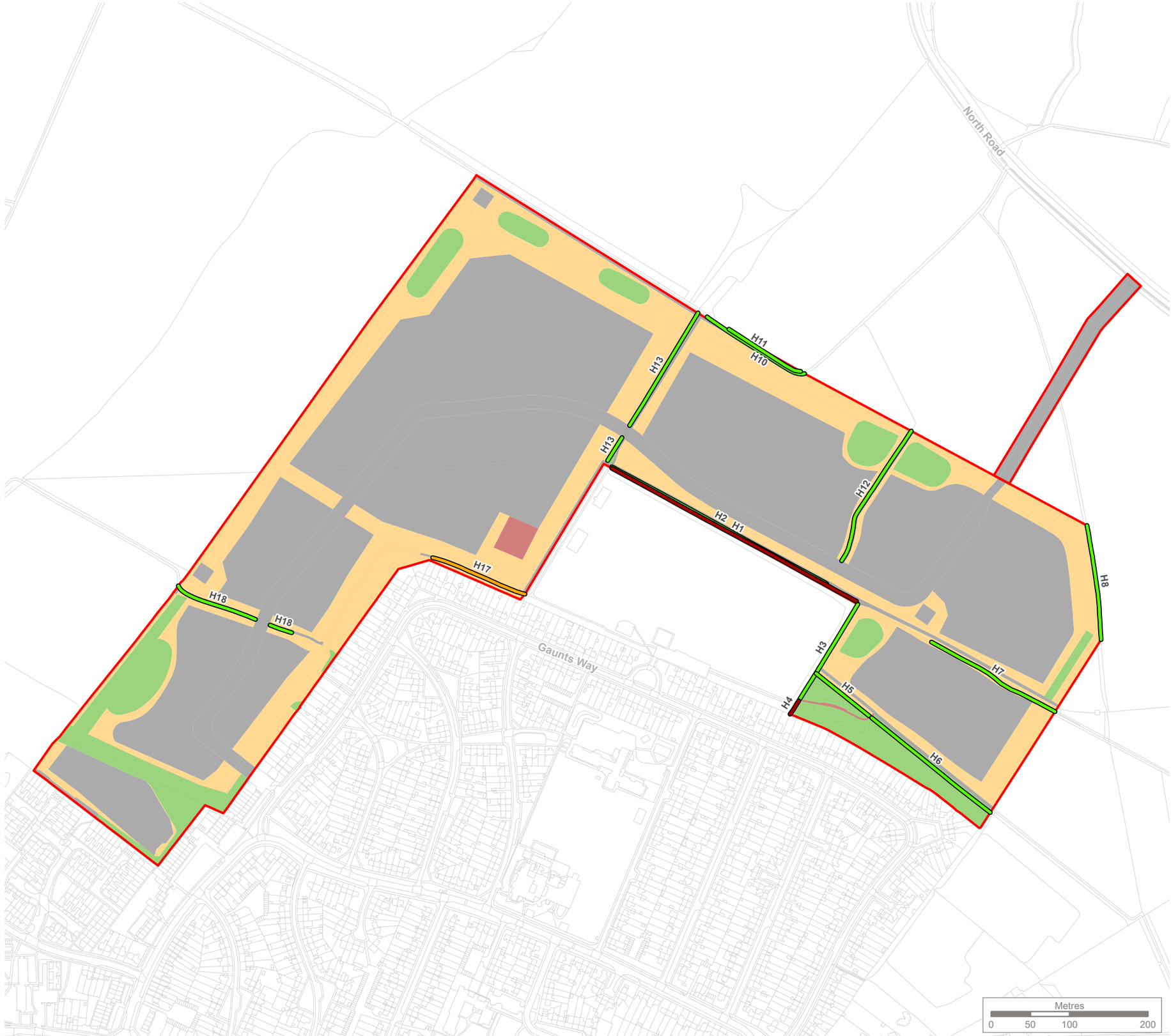
Title
Proposed UK Habitats

Drawing Number
G9546.05.005A

Drawn	Checked	Approved	Scale	Date
MK	BJ	FW	1:5,000 @ A3	21/12/2023



KEY

Site boundary

Hedgerow Condition

- Good
- Moderate
- Poor

Habitat Condition

- Good
- Moderate
- Poor
- Condition assessment not applicable

Strategic Significance

All habitats with strategic significance value of area/ compensation not in local strategy/no local strategy

Note:
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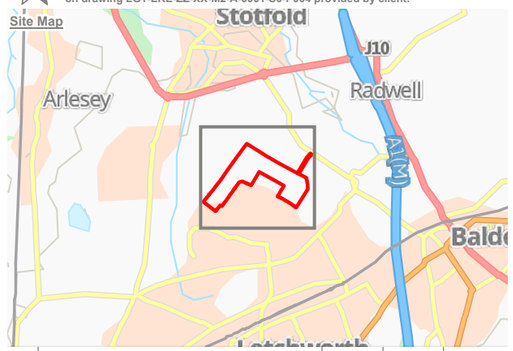

Rev	Description	Drawn	Approved	Date
A	Site boundary updates.	IJ	FW	14/12/2023

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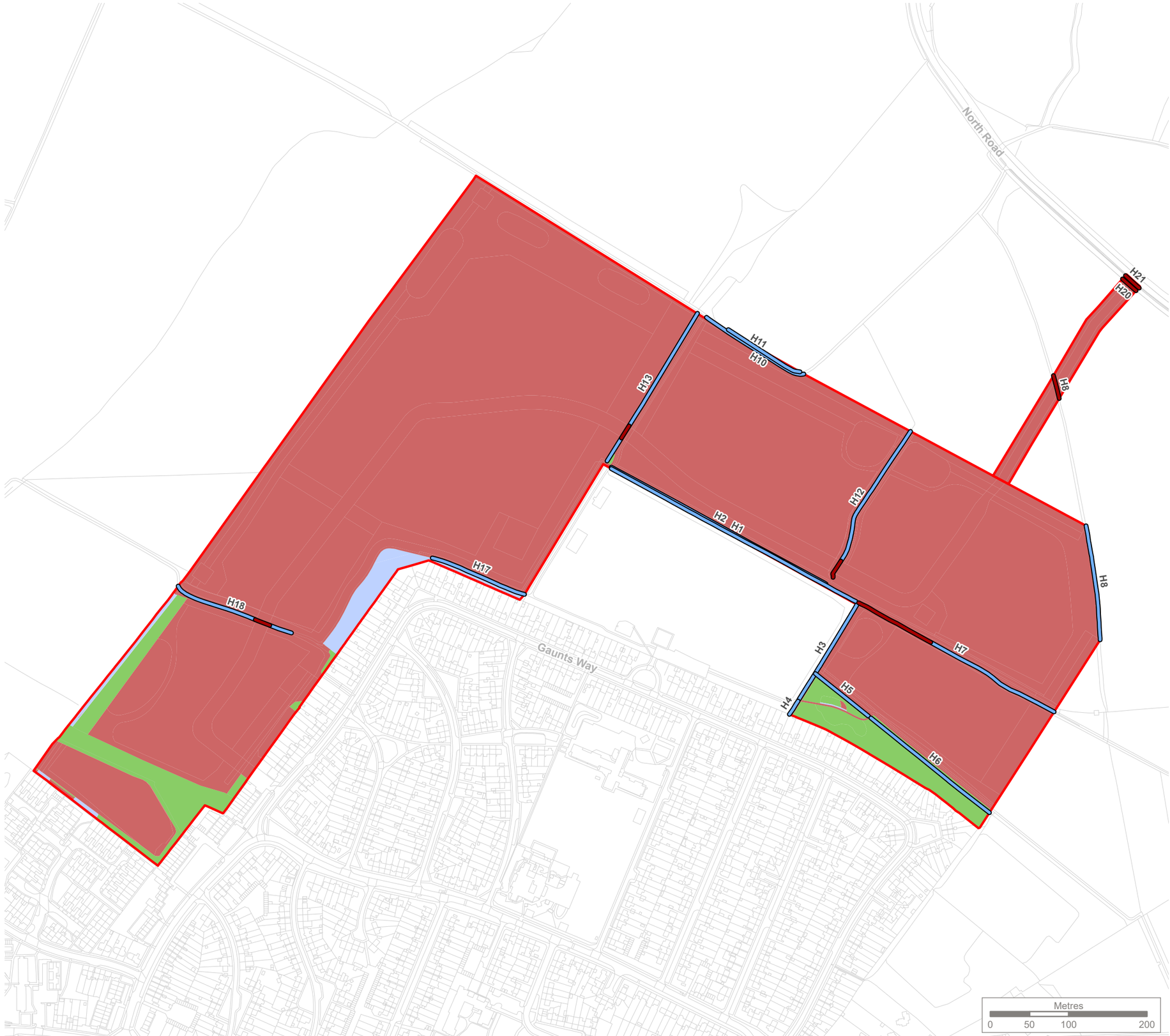
Project
LG1 Land North of Letchworth

Title
Proposed Habitat Condition and Strategic Significance

Drawing Number
G9546.05.006A

Drawn	Checked	Approved	Scale	Date
MK	BJ	FW	1:5,000 @ A3	21/12/2023



KEY

Site boundary

Hedgerow Impact

Retained

Lost

Habitat Impact

Enhanced

Retained

Lost

Note:
The locations of habitats impacts are indicative.

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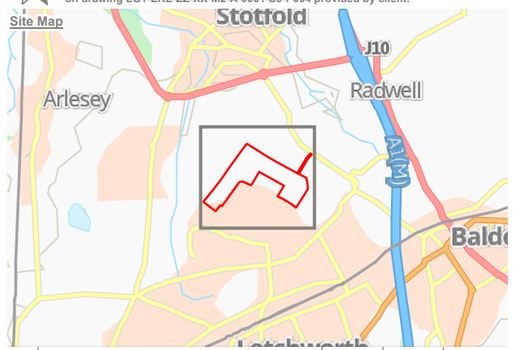
Site Map



Rev	Description	Drawn	Approved	Date
A	Site boundary updates.	IJ	FW	14/12/2023

THE ENVIRONMENT PARTNERSHIP

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LG1 Land North of Letchworth

Title
Habitat Impact

Drawing Number
G9546.05.007A

Drawn	Checked	Approved	Scale	Date
MK	BJ	FW	1:5,000 @ A3	21/12/2023

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Appendix J

Tree constraints report

THE ENVIRONMENT PARTNERSHIP

LAND NORTH OF THE GRANGE

LETCHWORTH

TREE CONSTRAINTS REPORT

AUGUST 2023

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Document Title	Tree Constraints Report
Prepared for	Letchworth Garden City Heritage Foundation
Prepared by	TEP - Warrington
Document Ref	9546.06.001

Author	Ruth Chittock
Date	August 2023
Checked	Jess Henman
Approved	Jonathan Smith

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CONTENTS PAGE

Executive Summary 1
1.0 Scope 2
2.0 Baseline 3
3.0 Development Constraints and Opportunities 15
4.0 Recommendations 17

TABLES PAGE

Table 1 Existing canopy coverage 4
Table 2 Summary of BS 5837 quality categorisation 6

FIGURES PAGE

Figure 1 Site location and approximate boundary (1:35,000) 3
Figure 2 Field boundary screening group (G13) 4
Figure 3 Weeping ash tree (T26) located along Western Road 5

APPENDICES

APPENDIX A: Arboricultural Survey Data
APPENDIX B: Survey Method
APPENDIX C: Photographs of Category A trees

DRAWINGS

Drawing 1 - Tree Constraints Plan

Executive Summary

1. TEP has been commissioned by Letchworth Garden City Heritage Foundation to conduct a survey of land at Land North of the Grange and a review of designations, policies and other instruments of relevance to arboriculture. This report presents the results and effects of proposed development.

2. 233 individual trees; 40 groups of trees; and 14 hedges were recorded within influencing distance of the application site.

3. Due to the agricultural nature of the majority of the site, the tree population is predominantly located along field boundaries, and comprises a mix of individual trees, tree groups and hedgerows. Street trees are located in verges to the south of the site along Western Road and roadside vegetation is located along Norton Road to the north.

4. The desktop review and site survey identified no Tree Preservation Orders; no trees within a Conservation Area; no ancient woodland; no veteran trees; no trees within a Community Forest; and 16 instances of *Hedgerow* Habitat of Principal Importance (including 3 linear group features).

5. An Arboricultural Impact Assessment (AIA) will be required in support of a reserved matter/detailed planning application. This will identify, evaluate and possibly mitigate the impacts of developing land on the existing tree resource.

6. Replacement tree planting is likely to be required in the event that trees are lost as a result of development. This is most commonly secured by the provision of a planting scheme submitted in support of a planning or reserved matters application. The requirement for replacement planting and its extent should be assessed as part of the AIA process.

1.0 Scope

1.1 TEP has been commissioned by Letchworth Garden City Heritage Foundation to conduct an arboricultural survey of land at Land North of the Grange and to make an assessment in accordance with BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations. This report describes the findings of field and desktop surveys.

Survey

1.2 The survey was undertaken in February and March 2023 in accordance with BS 5837 by a team of qualified arboriculturists. The survey method is included at Appendix B.

1.3 A topographical survey was used to record the position of trees and vegetation (drawing reference: 27100_T_REV1). Where trees were not shown on the topographical survey, their locations were estimated[1].

1.4 Trees on private land outside the application boundary, and at inaccessible locations[2] were surveyed insofar as was practicable. Whilst reasonable effort has been made to ensure the accuracy and comprehensiveness of such records, it cannot be guaranteed.

[1] Estimated feature locations are marked on Drawing 1
[2] Limitations to the survey are described at Appendix A

2.0 Baseline

The Site

2.1 The site is located along the northern edge of Letchworth Garden City and is accessed off Gaunts Way to the south and Norton Road to the north. The A1(M) road is located approximately 1.5 km to the north-east and Letchworth Garden City railway station is approximately 2.0km to the south.

Figure 1 Site location and approximate boundary (1:35,000)

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Contains data from OS Zoomstack

2.2 The survey area is generally level with some existing field boundary ditches. The site is bounded by Norton Road to the north, existing residential development to the south, and arable field parcels to the east and west.

2.3 At the time of the survey, the site was predominantly in use as arable fields, however, Grange Recreation Ground with sports pavilion and pitches is also present on the southern boundary. Two public footpath routes run through the site.

Tree Survey

2.4 233 individual trees; 40 groups of trees; and 14 hedges were recorded within influencing distance of the application site.

2.5 Feature locations, their quality categories, canopy spreads and root protection areas are shown on Drawing 1. The following table provides the total canopy area for mapped trees and the total length of mapped hedgerow on Drawing 1. In some cases this may be more than the absolute area of cover due to canopy overlap between adjacent features.

Table 1 Existing canopy coverage

Trees	Groups	Woodland	Hedgerow
1.0575ha	4.9186ha	0ha	3925m

2.6 All arboricultural information recorded during the survey is presented at Appendix A.

Overview

2.7 Due to the agricultural nature of the majority of the site, the tree population is predominantly located along field boundaries, and comprises a mix of individual trees, tree groups and hedgerows. Street trees are located in verges to the south of the site along Western Road and roadside vegetation is located along Norton Road to the north.

Figure 2 Field boundary screening group (G13)

2.8 A number of individual scattered trees (T1-T11; T60-T70; T110-T120) are located to the southern and eastern edges of the Grange Recreation Ground. These trees are predominantly middle age and in fair to good condition. Species include maple, oak, ash, hornbeam, lime, horse chestnut and Lombardy poplar. The primary function of these trees is the provision of visual amenity.

2.9 Along the northern edge of the recreation ground there is a dense avenue of trees (T137-T230), which creates a striking landscape feature and provides effective screening of the field to the north. Species present in the avenue include Scots pine, Austrian pine, oak, sycamore and Norway maple.

2.10 A number of tree groups (G6-G18) are located along field boundaries to the south-west of the site. These groups comprise a mix of species and many provide effective screening from adjacent residential development and adjoining field parcels, as well as acting as shelter belts between fields.

2.11 To the south of the site there are a number of street trees (T16-T64) located in grass verges along Western Road. These predominantly comprise maple, cherry and sorbus species. Most street trees are in fair to good condition, with one tree (T25) in poor condition due to stem failure and decay development. A weeping ash (T26) and two blue Atlas cedar (T27, T28) create an attractive feature in a small area of open space to the edge of the road. There is also one stand out street tree (T42) which has an impressive stem girth for a roadside cherry tree and an attractive crown spread.

Figure 3 Weeping ash tree (T26) located along Western Road

2.12 To the north of the site, along Norton Road, there are a number of roadside tree groups (G33-G40), hedgerows (H4-H6; H13) and emergent trees (T74-T106). Roadside trees predominantly include horse chestnut, field maple and ash in fair to good condition. Tree groups provide dense cover and screening and comprise a mix of species including field maple, hawthorn, ash and oak. Hedgerows consist of native species such as hawthorn, blackthorn and elm and are mostly in management.

2.13 To the north-west of the site there are a number of larger open grown oaks (T121-T126; T129-T130; T133-T134) along field boundaries, some of which are mature (T121, T126, T129, T133). These are high quality oak trees in a condition commensurate with their age. Whilst some of the trees were found to have some features of biodiversity interest, these are not of a size or in the quantity required to qualify them as veterans in accordance with national planning policy.

Tree Quality

2.14 Under BS 5837 trees are objectively assigned one of four categories to describe their quality. The table below includes a description of each category and the amount of trees within it. This information is presented by canopy area to allow comparison between features of varying size and maturity. Hedgerows have not be categorised.

Table 2 Summary of BS 5837 quality categorisation[3]

Category	Description	Total existing
A	Trees of high quality, typically with a long remaining life expectancy; and with clear and identified merit as specimens, visually, culturally or for conservation.	0.1630ha
B	Trees of moderate quality, typically with at least a medium remaining life expectancy; with remediable defects only; or low quality but with collective merit.	4.4482ha
C	Trees of low quality, typically with at least a short remaining lift expectancy; unremarkable trees; young or small trees that could be replaced.	1.3448ha
U	Trees that cannot realistically be retained in the current land use for 10 years; with serious and irremediable defects, pathogens or decline.	0.0201ha

2.15 The tree population predominantly comprises moderate quality (Category B) trees and tree groups, including dense field boundary groups, scattered individual trees, avenue trees and street trees. These trees provide important visual amenity, screening, and habitat potential.

2.16 Low quality trees (Category C) make up around 20% of the total tree population and have been categorised as such due to their age, size, and current condition. These trees provide some limited amenity value. High quality trees (Category A) only make up around 3% of the total tree population but provide important amenity and habitat value.

2.17 Trees that cannot be realistically retained (Category U) make up the smallest proportion of the total tree population, with only 8 trees and 1 tree group categorised as such.

[3] Refer to Appendix B for the full table

Root Protection Areas

2.18 Using the results of the field survey a Root Protection Area (RPA) has been calculated in accordance with BS 5837 using each tree's stem diameter at 1.5 metres[4]. The RPA represents the minimum area around each tree that must be left undisturbed to ensure its survival.

2.19 On this site influences on root morphology are considered to be roads and pavements. However, due to the difficulty of predicting street tree root morphology where trees are located in small grass verges with hard surfacing on all sides, RPAs have not been adjusted or offset[5].

Policy, designations and protection

Planning Policy

2.20 All trees are a material consideration in the planning process. Effects on trees will therefore be considered by the consenting authority. Adverse effects that cannot be mitigated and which are not acceptable on balance against other benefits may weigh against the granting of planning permission.

2.21 There should be a common sense ambition to limit tree loss to that which is strictly required to facilitate the proposal, and to achieve a good design. Trees which are retained should not be harmed and the proposal should present a reasonable account of the prospects for tree retention in accordance with BS 5837.

National Planning Policy Framework

2.22 The National Planning Policy Framework (NPPF) has an overarching environmental objective. This embeds protection and enhancement of the natural environment and biodiversity in decision making[6].

2.23 Planning policies and decision making should recognise the wider benefits from natural capital and ecosystem services, including those provided by trees and woodland, and minimise impacts on and provide net gains for biodiversity[7].

2.24 Opportunities should be taken to incorporate trees into developments, ensure appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. New streets should be tree-lined unless there are clear, justifiable and compelling reasons why this would be inappropriate[8].

2.25 Where significant harm to biodiversity cannot be avoided, mitigated, or compensation provided, planning permission should be refused[9]. Loss or fragmentation of trees and woodland may constitute or give rise to significant harm to biodiversity.

[4] Refer to Appendix A for RPA area calculations
[5] See Drawing 1 for RPA shapes
[6] NPPF paragraph 8 (c)
[7] NPPF paragraph 174 (b) (d)
[8] NPPF paragraph 131
[9] NPPF paragraph 180 (a)

2.26 There is a strong policy presumption against loss or deterioration of irreplaceable habitats such as ancient woodland and ancient or veteran trees. Development resulting in the loss of either should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists[10].

Local Planning Policy

2.27 North Herts Council has an adopted Local Plan that contains policies of relevance to trees. In particular, policies SP12, NE1, and NE2, which are included in full below:

Policy SP12: Green infrastructure, landscape and biodiversity

We will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhanced. We will:

a) Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;

b) Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;

c) Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:

• Internationally designated sites

• Nationally designated sites

• Locally designated sites;

• Non-designated sites that include important habitats and species

d) Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity; and

e) Protect other open spaces and support provision of new and improved open space.

Policy NE1: Strategic green infrastructure

Planning permission will be granted provided that development:

a) Protects, conserves and where possible enhances the strategic green infrastructure network;

b) Avoids the loss, fragmentation, severance or negative impact on the function of the strategic green infrastructure network;

c) Creates new strategic green infrastructure where appropriate and is accompanied by a plan for its long-term maintenance and management; and

[10] NPPF paragraph 180 (c)

d) Has suitable mitigation measures or appropriate replacement to satisfactorily address adverse impacts on the strategic green infrastructure network.

Policy NE2: Landscape

Planning permission will be granted for development proposals that:

a) Respect the sensitivities of the relevant landscape character area and have regard to the guidelines identified for built development and landscape management;

b) Do not cause unacceptable harm to the character and appearance of the surrounding area or the landscape character area in which the site is located, taking account of any suitable mitigation measures necessary to achieve this;

c) Are designed and located to ensure the health and future retention of important landscape features; and

d) Have considered the long-term management and maintenance of any existing and proposed landscaping.

2.28 In addition, the council has allocated the site as a strategic housing site and provides development design guidance through Policy SP15 which is included in full below:

Policy SP15: Site LG1 – North of Letchworth Garden City

Land to the north of Letchworth Garden City, as shown on the Policies Map, is allocated as a Strategic Housing Site for a new neighbourhood of approximately 900 homes.

A comprehensive and deliverable Strategic Masterplan for the entire allocation is to be prepared and agreed between the landowner/developer and the Council. This should follow and implement Garden City principles.

Where applications have already been submitted to the Council a Strategic Masterplan should be agreed prior to the or as part of the grant of planning permission.

Any application on part of the site will be assessed against its contribution to the Strategic Masterplan and must not prejudice the implementation of the site as a whole.

Development proposals should provide the following planning and masterplanning requirements:

a) The most appropriate points of vehicular access considering landscape and traffic impacts;

b) Comprehensive integration into the existing pedestrian and cycle, public transport and road networks;

c) An appropriate education solution which delivers a new 2FE primary school on-site;

d) Measures required to address nearby heritage assets including the Scheduled Ancient Monument at Radwell Lodge and the Croft Lane and Norton Conservation Areas;

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained and any hedgerow losses kept to a minimum;

f) Neighbourhood-level retail and community facilities providing around 900m2 (net) of retail and food and beverage floorspace and a GP surgery;

g) At least 9 serviced plots for self-build development;

h) Provision of an appropriate site for a care home for older people in Use Class C2 in accordance with the locational criteria in Policy HS4 subject to up-to-date assessment of likely future needs and existing supply;

i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach;

j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east;

k) Diversion and / or re-provision of the Letchworth Greenway to provide a revised route around the new urban edge; and

l) Undertake a detailed odour assessment to demonstrate no adverse impact on future residents and occupants of non residential buildings.

Tree Preservation Orders

2.29 A check with the local authority was undertaken on the 17th February 2023. Technical Support Officer Diane Joseph confirmed that no trees within or adjacent to the site are protected by Tree Preservation Order.

2.30 Works to TPO trees must only be undertaken with the written consent of the Local Authority, given in the form of a planning permission (other than an outline planning permission), discharge of reserved matters, or via a TPO application.

2.31 In the context of a planning application, the presence of a TPO is material but it does not necessitate the retention of protected trees within proposed development. Equally, the lack of a TPO does not mean that removal of any particular tree would be without significant impact. The existence of a TPO may indicate the local authority's view regarding priorities for tree retention and amenity value. BS 5837 recommends that TPOs should be considered in the design process.

Conservation Areas

2.32 A check with the local authority was undertaken on the 17th February 2023. Technical Support Officer Diane Joseph confirmed that no trees within or adjacent to the site are within a Conservation Area.

2.33 Anyone proposing to remove, uproot or destroy any tree within a Conservation Area is required by Section 211 of The Town and Country Planning Act 1990 to give the local planning authority six weeks' notice. During this period the Council may make a Tree Preservation Order.

2.34 Exceptions from the requirement to give notice are set out in The Town and Country Planning (Tree Preservation) (England) Regulations 2012 including, amongst other reasons, work that is necessary to implement a planning permission (other than an outline planning permission).

Ancient Woodland

2.35 Ancient Woodland is defined in England as any area that has been wooded continuously since at least 1600 AD; it is regarded as 'irreplaceable'[11]. The distribution of Ancient Woodland has been assessed on the basis of Natural England's Ancient Woodland Inventory (Provisional) for England via www.magic.defra.gov.uk.

2.36 There is no ancient woodland within or adjacent to the site.

Veteran Trees

2.37 NPPF defines veteran trees are those which, because of age, size and condition, are of exceptional biodiversity, cultural or heritage value[12]. All ancient trees are veteran trees. Not all veteran trees are ancient, though they tend to be relatively old for the species. Ancient and veteran trees are regarded as 'irreplaceable'.

2.38 There is no comprehensive national register of veteran trees. The Woodland Trust maintains an inventory of significant trees which includes some ancient and veteran individuals[13]. At the time of writing it contained no records of relevance to the site.

2.39 An assessment of each tree was made by a qualified arboriculturist as part of the tree survey. There are no veteran trees within or adjacent to the site.

2.40 Not all mature trees or those of high habitat interest are veterans. Trees with individual or simple assemblages of features typically associated with veteran trees were also noted[14]. Such trees may become veterans but should not be treated as such for the purposes of impact assessment.

Community Forests

2.41 Online mapping[15] confirmed that the site is not within a Community Forest.

[11] NPPF Annex 2: Glossary (p.67)
[12] NPPF Annex 2: Glossary (p. 64)
[13] https://ati.woodlandtrust.org.uk/
[14] See Appendix A
[15] https://magic.defra.gov.uk/

Habitats of Principal Importance

2.42 A list[16] of habitats which are of principal importance for the purpose of conserving biodiversity is maintained by the Secretary of State[17]. The list includes habitat types that are defined by woody vegetation, which are listed below. The geographical extent and location of these habitats (excluding hedgerow) is mapped by Natural England on the Priority Habitat Inventory[18]. Observations were also made to corroborate the mapping during the site survey.

2.43 All public authorities, including local planning authorities and statutory undertakers have a duty to have regard to the purpose of conserving biodiversity[19]. Habitats of Principal Importance provide a means of evaluating effects on biodiversity, and thereby a metric to demonstrate the discharge of this duty. In the context of planning, adverse effects on Habitats of Principal Importance that cannot be mitigated are material to decision making.

Deciduous Woodland

2.44 Six distinct types of woodland[20] are amalgamated in the Inventory under the habitat type 'Deciduous Woodland'.

2.45 The Inventory has no records of Deciduous Woodland at the site.

Wood Pasture and Parkland[21]

2.46 Wood-pasture and parkland are mosaic habitats valued for their trees, especially veteran and ancient trees, and the plants and animals that they support. They are exclusively associated with some species of insects, lichens and fungi which depend on dead and decaying wood. Grazing animals and continuity of management are fundamental to the existence of the habitat and it can be a type of ancient woodland.

2.47 The Inventory has no records of Wood Pasture and Parkland at the site.

Traditional Orchards[22]

2.48 Traditional orchards are defined, for priority habitat purposes, as groups of fruit and nut trees planted on vigorous rootstocks at low densities in permanent grassland; and managed in a low intensity way. Habitat structure rather than vegetation type, topography or soils, is the defining feature of the habitat.

2.49 The Inventory has no records of Traditional Orchards at the site.

[16] http://jncc.defra.gov.uk/page-5706
[17] Natural Environment and Rural Communities Act 2006, 41 (1)
[18] https://magic.defra.gov.uk/MagicMap.aspx
[19] Natural Environment and Rural Communities Act 2006, 40 (1)
[20] Upland Oakwood; Lowland Beech and Yew Woodland; Upland Mixed Ashwoods; Wet Woodland; Lowland Mixed Deciduous Woodland; Upland Birchwoods
[21] http://jncc.defra.gov.uk/docs/UKBAP_BAPHabitats-65-WoodPastureParkland2011.doc
[22] http://jncc.defra.gov.uk/Docs/UKBAP_BAPHabitats-56-TraditionalOrchards.doc

Hedgerow[23]

2.50 Hedgerow is any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps are less than 20m wide. It may include banks, walls, ditches, herbaceous vegetation, climbing plants or trees within 2m of the centre line. All hedgerows which comprises at least 80% woody native species are included.

2.51 The survey identified 14 hedgerows[24]. Of these, all except H1 meet the description of the Habitat of Principal Importance. In addition, tree groups G7, G33 and G36 are linear boundary features that should be regarded as also meeting this description.

Protected Species

2.52 No assessment of the presence of protected species has been made during the production of this report. Features of possible interest that were observed incidentally during the tree survey are recorded in Appendix A.

2.53 Works to and around trees have the capacity to affect protected species where present, particularly including birds, bats, great crested newts, badgers, dormice, otters and water voles. Contractors should be familiar with the locations and sensitivities of any protected species that are present and take reasonable avoidance measures or comply with the requirements of any licence agreement in accordance with the advice of an ecologist.

Birds

2.54 Intentional harm to a wild bird, egg, or a nest that is in use or being built is an offence[25]. Disturbance of certain wild birds that are building a nest, or are in, on or near a nest containing eggs or young, or disturbance of dependent young is also an offence[26].

2.55 All trees are a potential habitat for nesting birds so tree work should ideally, but not essentially, be undertaken outside the bird nesting season. Between March and August, a detailed inspection of each tree should be undertaken by a qualified ecologist to confirm the absence of nesting birds immediately prior to works.

2.56 Some birds nest outside the core nesting season. If an active nest is found at any time of year, work likely to affect the nest must be halted until the nest becomes inactive. This will vary depending on the species of bird but is typically up to six weeks. The advice of an ecologist regarding the duration and size of a protection buffer around the nest should be sought.

[23] http://jncc.defra.gov.uk/Docs/UKBAP_BAPHabitats-17-Hedgerows.doc
[24] See Appendix A
[25] Wildlife and Countryside Act 1981, 1 (1)
[26] Wildlife and Countryside Act 1981, 1 (5)

Bats

2.57 It is an offence to damage, destroy or obstruct access to any structure or place which is used for shelter or protection[27], or breeding or resting[28] by a bat. Mature trees often contain cavities, splits and ivy, which may be attractive to bats.

2.58 A Preliminary Ecological Appraisal produced by TEP (reference: 9546.002) identified a total of 20 trees on and adjacent to the site as having a potential to support bat roosts.

2.59 The PRA was undertaken at a sub optimal time when leaf foliage present on the trees obscured visibility, so the survey does not constitute a comprehensive ground-based tree assessment for bat roosts. If the presence of a bat, or a roost or resting site is suspected whilst undertaking works on any trees, operations must be halted and the advice of appropriately licensed ecologist should be sought.

[27] Wildlife and Countryside Act 1981, 9 (4)
[28] The Conservation of Habitats and Species Regulations 2017, 43 (1)

3.0 Development Constraints and Opportunities

General Considerations

3.1 The tree categorisation method identifies the quality and value of the existing tree stock but is not meant to be interpreted rigidly and is presented in order to allow an informed judgement on tree retention and removal. In some instances, the removal of high or moderate value trees can be justified based on other development priorities and their weighting in the planning balance.

3.2 Foremost consideration should be given to the retention of Category A and Category B trees and groups during development design. These are largely irreplaceable in the short to mid-term and their incorporation into future development will serve to provide an immediate sense of increased amenity. The requirement to remove Category A and Category B trees must be justified by sound design rationale and may result in the requirement for an increased level of mitigation compared to the removal of lower value trees.

3.3 Category C trees and groups are considered to be of low value by virtue of either their young age, limited visual prominence or compromised condition. Typically, their presence should not unduly constrain development design, but where possible they should be incorporated. Young, low value trees have the potential to develop into higher value trees as they mature and may represent the next generation of mature trees. Their wholescale or ill-considered removal could result in a significant set-back in generational succession.

3.4 Using the results of the field survey a Root Protection Area (RPA) has been calculated in accordance with BS 5837 using each tree's stem diameter at 1.5 metres. The RPA represents the minimum area around each tree that must be left undisturbed to ensure its survival. The RPA is not sacrosanct, but any proposed activity within it must be carefully controlled and may necessitate non-conventional working methods. The advice of a qualified Arboricultural Consultant should be sought if the conditions with an existing RPA would be altered by proposed development.

3.5 A rise or reduction in soil level can have major implications on the longevity and health of the trees. Minor changes (up to 100mm) can be tolerated in some cases but is heavily dependent on tree species, condition and growing environment. Existing ground levels within the rooting area of retained trees should be respected as far as is reasonably practicable. The advice of a qualified Arboricultural Consultant should be sought if level changes are required.

3.6 Drainage and storm water run-off requires due consideration and construction requirements (e.g. permeable surfacing) to prevent excessive and/or polluted run-off into the rooting area of trees to be retained.

3.7 Due to their linear nature, underground utilities and service runs can be particularly damaging to trees and their roots. The alignment of new services is influenced by the buildings they serve and therefore it is the duty of the architect to consider how they are likely to interact with existing trees. Although full utility plans are not usually available until later in the design process, common sense assumptions must be made early to avoid the likelihood of future conflicts between trees and service installation and maintenance.

3.8 Where the installation of services within the rooting area of retained trees is unavoidable, appropriate work methods will be required to ensure the safe long-term survival of those trees. This process will require additional consultation with a qualified Arboricultural Consultant and is likely to be more expensive than conventional trench installation.

Site Specific Considerations

3.9 The oak trees located to the north-west of the site are large middle age to mature specimens. Photographs of these trees are provided at Appendix C. Whilst these trees have not yet achieved veteran status, they have the potential to do so, and as such their retention should be an important part of the scheme. Due consideration should be given to the natural aging process of these trees which can lead to an increased risk of failure, especially branch shedding, therefore an appropriate layout design should allow this process to happen without the need for intensive management intervention.

3.10 The avenue of trees along the northern edge of the Grange Recreation Ground creates an attractive landscape feature which should be integrated into future development proposals as it provides excellent screening of the wider site to the north. There are also a number of other field boundary groups across the site which could be retained as effective screening features.

3.11 Some of the larger scattered individual trees across the site provide attractive visual features. Stand out specimens should be retained within the proposed development layout to maintain visual amenity.

3.12 A minimum stand-off will be required between proposed structures and retained trees. The function of such a development standoff is to ensure adequate space is afforded for root protection, future growth, ultimate height and crown spread, and to minimise interference with future land use.

4.0 Recommendations

Arboricultural Impact Assessment

4.1 An Arboricultural Impact Assessment (AIA) will be required in support of a reserved matter/detailed planning application. This will identify, evaluate and possibly mitigate the impacts of developing land on the existing tree resource.

4.2 One function of the AIA process will be the consideration of trees alongside other project disciplines (layout, drainage, utilities etc.) in order to minimise future conflict and avoid uncalculated expense or undesirable tree loss.

4.3 The AIA should include a detailed Tree Removal Plan outlining the proposed schedule of tree works. It must also include details of any tree protection and mitigation measures that would be required during the construction phase and in accordance with local planning policy.

Mitigation Planting and Landscaping

4.4 Replacement tree planting is likely to be required in the event that trees are lost as a result of development. This is most commonly secured by the provision of a planting scheme submitted in support of a planning or reserved matters application. The requirement for replacement planting and its extent should be assessed as part of the AIA process.

4.5 The advice of a qualified Arboricultural Consultant should be sought during planting plan preparation to ensure species and placement suitability. Any new planting should not be viewed principally as an exercise in landscape architecture and aesthetic design but should be strongly informed by conservation and habitat objectives.

Post Development Management

4.6 Trees within areas of the site that will be open to public access should be surveyed regularly for developing hazards. Trees are dynamic living organisms whose structure is constantly changing; even those in good condition can suffer from damage or stress. There is no set approach or period for tree inspection and the best approach should be determined when the future usage, management and ownership of the site has been determined.

APPENDIX A: Arboricultural Survey Data

APPENDIX A: Arboricultural Survey Data Sheets

Surveyor Ruth Chittock and Jess Henman
Survey Date 14.02.23, 15.02.23, 01.03.23
Site Land North of the Grange, Letchworth
Drawing Ref D9546.06.001

Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
Trees																	
T1	Maple species	8.0	3.0	310	1	4.5	4.5	4.5	4.5	2.5	S	Middle Age	Fair	Located in grass to edge of pavilion. Unoccluded pruning wounds. Some bark damage to stem. Fusing stems in crown.		B ,1, 2	Long
T2	Maple species	6.0	3.0	210	1	3.0	3.0	3.0	3.0	2.0	S	Middle Age	Fair	Located in grass to edge of pavilion. Occluding wounds to stems in crown. Strimmer damage at base.		C ,2	Long
T3	Maple species	57.0	3.5	170	1	3.0	3.0	3.0	3.0	3.0	W	Middle Age	Fair	Located in grass to edge of pavilion. Occluding wound on upper stem. Strimmer damage at base.		C ,2	Long
T4	Maple species	7.0	3.0	190	1	3.0	3.0	3.0	3.0	2.5	S	Middle Age	Good	Located in grass to edge of pavilion. No major defects noted.		C ,2	Long
T5	Common ash	8.0	3.0	270	1	4.5	4.5	4.5	4.5	3.0	S	Middle Age	Good	Located in grass to edge of path. Appears in good condition. Strimmer damage to base.	Re-survey when in leaf to assess for symptoms of Chalara ash dieback disease.	B ,1, 2	Medium
T6	Pedunculate oak	7.0	3.0	250	1	5.0	5.0	4.5	5.0	2.5	E	Middle Age	Good	Located in grass to edge of path. Small decaying stub to east. Snapped and hanging branch in lower crown to west.	Remove snapped branch.	B ,1, 2	Long
T7	Maple species	9.0	3.5	310	1	4.5	4.5	4.5	4.5	3.0	W	Middle Age	Good	Located in grass to edge of path. Minor deadwood stubs in crown. Unoccluded pruning wounds.		B ,1, 2	Long
T8	Maple species	5.0	3.0	190	1	3.0	3.5	3.0	3.0	2.0	E	Middle Age	Good	Located in grass to edge of path. Minor epicormic growth at pruning points.		C ,1, 2	Long
T9	Lombardy poplar	15.0	3.0	820	1	3.5	3.5	4.0	3.5	1.0	S	Mature	Good	Located in grass to edge of path. Minor deadwood in crown. Vigorous epicormic growth at base. Unoccluded pruning wounds. Large root exposed to east with minor damage.		B ,1, 2	Long
T10	Maple species	8.0	3.0	380	1	6.0	6.0	6.0	5.5	3.0	E	Middle Age	Good	Located in grass to edge of path. Some root exposure to east with unoccluded wounds. Included bark at branch junction in lower crown to south.		B ,1, 2	Long
T11	Lombardy poplar	15.0	4.0	680	1	3.0	3.0	3.5	3.0	1.5	W	Middle Age	Good	Located in grass to edge of path. Minor deadwood in crown. Vigorous epicormic growth at base. Unoccluded pruning wounds. Large roots exposed to north and south with unoccluded wounds.		B ,1, 2	Long
T12	Maple species	9.0	3.0	360	1	5.5	5.0	*4.0*	*4.0*	2.0	SE	Middle Age	Fair	Located to edge of footpath. Canopy impeded slightly to east and west by adjacent trees. Large unoccluded wound on stem to south with signs of decay.		B ,1, 2	Long
T13	Sorbus species	3.0	3.0	*350*	1	0.5	*3.0*	3.0	*5.0*	2.5	W	Middle Age	Poor	Located in dense boundary group. Stem snapped at 3m with decay present. Large Ganoderma bracket at stem base.		U	Short
T14	Walnut species	10.0	2.0	578	3	7.0	6.5	6.0	6.5	3.0	E	Middle Age	Fair	Located in group to edge of path. Trifurcate at 0.5m with bark inclusion at unions. Snapped branch stub over path to west.		B ,1, 2	Long
T15	Sumac species	5.0	2.0	*193*	5	3.5	3.5	3.5	3.5	1.5	N	Middle Age	Good	Located along field edge adjacent to private boundary fence. Vigorous growth.		C ,1	Long
T16	Maple species	5.0	3.0	90	1	2.0	2.0	2.0	2.0	3.0	E	Middle Age	Fair	Small roadside tree located in grass verge. Strimmer damage at base. Occluding pruning wounds.		C ,2	Long
T17	Maple species	5.0	3.0	110	1	2.0	2.0	2.0	2.0	3.0	E	Middle Age	Fair	Small roadside tree located in grass verge. Strimmer damage at base. Occluding pruning wounds.		C ,2	Long
T18	Cherry species	5.0	3.0	80	1	2.0	0.5	2.0	1.5	2.5	W	Middle Age	Fair	Small roadside tree located in grass verge. Asymmetrical crown formation.		C ,2	Long
T19	Cherry species	6.0	3.0	100	1	2.0	0.5	2.0	2.0	3.0	N	Middle Age	Fair	Small roadside tree located in grass verge. Asymmetrical crown formation. Epicormic growth at pruning points.		C ,2	Long
T20	Cherry species	6.0	3.0	80	1	2.0	1.5	1.5	1.5	2.5	S	Middle Age	Fair	Small roadside tree located in grass verge. Occluding pruning wounds.		C ,2	Long
T21	Cherry species	5.0	2.5	75	1	1.0	1.0	1.0	1.0	2.0	E	Middle Age	Fair	Small roadside tree located in grass verge. Occluding pruning wounds.		C ,2	Long
T22	Maple species	8.0	3.0	270	1	5.0	4.0	4.0	4.0	3.0	N	Middle Age	Fair	Roadside tree located in grass verge. Growing at angle to north. Epicormic basal growth. Deadwood stubs in lower crown. Damage to bark in mainstem. Fungal fruiting body in grass adjacent to tree - potentially armillaria.		C ,1, 2	Long
T23	Maple species	8.0	4.0	300	1	4.5	4.0	4.0	4.0	3.0	E	Middle Age	Fair	Roadside tree located in grass verge. Growing at angle to north. Poorly occluding pruning wounds. Deadwood in lower crown. Damage to stem base to east.		C ,1, 2	Long
T24	Cherry species	6.0	3.0	410	1	5.0	5.0	4.0	4.0	3.0	N	Middle Age	Fair	Roadside tree located in grass verge. Bulbous upper stem. Poorly occluding pruning wounds. Exposed roots with unoccluded wounds. Busy branch habit.		C ,1, 2	Long

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Drawing Ref D9546.06.001

Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T25	Hawthorn species	5.0	3.0	240	1	4.0	1.5	3.0	2.5	2.0	N	Middle Age	Poor	Roadside tree located in grass verge. Growing at angle to north. Stem failure in inner crown leaving open wound. Fungal fruiting bodies to main stem and branches throughout crown. Poorly occluded pruning wounds.		U	Short
T26	Weeping ash	8.0	2.5	520	1	6.0	6.5	6.0	6.0	3.0	W	Middle Age	Fair	Located in grass area to edge of footpath. Weeping form. Crown raised to 2.5m. Some poorly occluding pruning wounds. Crossing and fusing branches in crown.		A ,1, 2	Long
T27	Blue Atlas cedar	9.0	2.0	250	1	3.5	3.5	3.5	3.5	1.8	N	Middle Age	Good	Located in grass area to edge of footpath. Good form and vigour.		B ,1, 2	Long
T28	Blue Atlas cedar	9.0	2.0	230	1	3.5	3.5	3.5	3.5	1.8	NW	Middle Age	Good	Located in grass area to edge of footpath. Good form and vigour.		B ,1, 2	Long
T29	Cherry plum	9.0	3.0	540	1	6.0	5.5	5.5	5.5	2.5	NE	Middle Age	Fair	Located in grass area to edge of footpath. Poorly occluding pruning wounds. Fungal fruiting bodies on pruning stub in lower crown to west. Crossing and fusing stems in crown. Some bark inclusion at unions.		B ,1, 2	Long
T30	Cherry plum	7.0	2.5	330	1	5.0	4.5	5.0	4.5	2.5	NW	Middle Age	Fair	Located in grass area to edge of footpath. Growing at angle to north east. Fungal fruiting bodies on branches in lower crown.		B ,1, 2	Long
T31	Cherry plum	7.0	3.0	360	1	5.0	4.5	5.0	4.5	3.0	E	Middle Age	Fair	Located in grass area to edge of footpath. Growing at angle to north east. Crossing and fusing branches in crown.		B ,1, 2	Long
T32	Cherry species	5.0	3.0	500	1	5.0	5.0	6.0	4.0	3.0	E	Middle Age	Fair	Located in grass area to edge of footpath. Growing at angle to east. Exposed root to south with unoccluded wound. Ganoderma fruiting body on stem base to north.		B ,1, 2	Long
T33	Cherry species	5.0	3.0	320	1	5.5	5.0	5.5	3.0	3.0	NE	Middle Age	Fair	Located in grass area to edge of footpath. Asymmetrical canopy form. Poorly occluded wounds on stem to east with signs of decay. Exposed roots with unoccluded wounds. Compaction around base to west where car has driven over grass.		B ,1, 2	Long
T34	Alder species	12.0	2.5	280	1	4.5	3.5	4.5	4.5	3.0	S	Middle Age	Good	Located in grass verge to edge of footpath. Good form and vigour.		B ,1, 2	Long
T35	Cherry plum	9.0	3.0	540	1	5.0	5.0	4.5	5.0	3.0	E	Middle Age	Fair	Located in grass area to edge of footpath. Large limb failure to east. Poorly occluded pruning wounds with signs of decay. Crossing and fusing branches in crown.		B ,1, 2	Long
T36	Cherry plum	7.0	3.0	490	1	5.0	5.0	5.0	5.0	2.5	S	Middle Age	Fair	Located in grass area to edge of footpath. Large limb failure to east. Fungal fruiting bodies on branches in lower crown. Crossing and fusing branches in crown.		B ,1, 2	Long
T37	Cherry plum	7.0	3.0	390	1	4.5	5.0	4.5	5.0	2.5	W	Middle Age	Fair	Located in grass area to edge of footpath. Fungal fruiting bodies on branches in lower crown. Poorly occluded pruning wound with decay to north.		B ,1, 2	Long
T38	Sorbus species	6.0	3.0	80	1	1.5	1.0	1.5	1.5	2.5	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		C ,2	Long
T39	Sorbus species	6.0	3.0	120	1	3.0	3.0	3.0	3.0	2.5	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		C ,2	Long
T40	Hawthorn species	9.0	3.0	420	1	6.5	3.0	4.5	4.5	3.5	NW	Mature	Fair	Roadside tree located in grass verge. Growing at angle to north. Busy branch habit with crossing fusing branches throughout crown.		B ,1, 2	Long
T41	Cherry species	8.0	3.0	410	1	5.0	5.0	5.0	5.0	2.5	E	Middle Age	Fair	Roadside tree located in grass verge. Unoccluded pruning wounds. Generally good form and vigour.		B ,1, 2	Long
T42	Cherry species	9.0	3.0	760	1	7.5	6.5	6.0	6.0	3.0	N	Mature	Good	Roadside tree located in grass verge. Central leader topped with some signs of decay. Poorly occluded wound in branch in lower crown to north.		A ,1, 2	Long
T43	Maple species	6.0	3.0	140	1	2.5	2.5	2.5	2.5	3.0	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		B ,2	Long
T44	Sorbus species	7.0	3.0	140	1	3.0	3.0	3.0	3.0	3.0	SE	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		B ,2	Long
T45	Hornbeam	6.0	3.0	100	1	1.5	1.5	1.5	1.0	2.5	E	Middle Age	Good	Roadside tree located in grass verge. Occluding wound on lower stem to west.		C ,2	Long
T46	Sorbus species	6.0	3.0	140	1	3.0	3.0	3.0	3.0	3.0	N	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		B ,2	Long
T47	Cherry species	7.0	3.0	400	1	5.0	4.0	5.0	5.0	3.0	NE	Middle Age	Good	Roadside tree located in grass verge. Minor epicormic growth to stem. Unoccluded pruning wounds.		B ,1, 2	Long
T48	Sorbus species	5.0	3.0	110	1	2.5	2.5	2.5	2.5	3.0	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		B ,2	Long
T49	Sorbus species	5.0	3.0	140	1	3.0	3.0	3.0	3.0	3.0	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		B ,2	Long
T50	Hornbeam	5.0	3.0	80	1	1.5	1.5	1.5	1.5	3.0	S	Middle Age	Good	Roadside tree located in grass verge. Strimmer damage to stem base.		C ,2	Long

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		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T51	Cherry species	8.0	4.0	480	1	6.0	6.0	5.0	5.5	3.5	S	Middle Age	Good	Roadside tree located in grass verge. Occluding pruning wounds. Bark inclusion at unions in lower crown.		B ,1, 2	Long
T52	Sorbus species	5.0	3.0	90	1	2.0	2.0	2.0	2.0	2.5	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour. Occluding wound on stem to south.		B ,2	Long
T53	Sorbus species	6.0	3.0	80	1	1.5	1.5	1.5	1.5	2.5	S	Middle Age	Good	Roadside tree located in grass verge. Good form and vigour.		C ,2	Long
T54	Cherry species	6.0	3.0	410	1	5.5	4.0	5.0	5.0	2.5	N	Middle Age	Fair	Roadside tree located in grass verge. strimmer damage to stem base. some decaying pruning stubs in crown.		B ,1, 2	Long
T55	Lime species	12.0	3.0	460	1	7.0	5.5	6.5	6.0	3.0	SW	Middle Age	Good	Roadside tree located in grass verge. Poorly occluded pruning wounds. Branch drop in surrounding landscape.		B ,1, 2	Long
T56	Lime species	12.0	2.0	380	1	5.0	5.0	5.0	5.0	3.5	NE	Middle Age	Good	Located in grass verge at entrance to park. Bifurcate at 5m with bark inclusion at union. Occluding pruning wounds on main stem. Minor root girdling visible.		B ,1, 2	Long
T57	Maple species	10.0	3.0	400	1	5.5	5.5	5.5	5.5	2.0	SE	Middle Age	Good	Located in grass verge at entrance to park. Multi-stem at 2m. Occluding pruning wounds in lower crown. Some roots visible with unoccluded wounds. Occluding wound on stem to north.		B ,1, 2	Long
T58	Maple species	5.0	2.5	230	1	3.5	3.5	3.5	3.5	2.0	NW	Middle Age	Fair	Located in grass verge at entrance to park. Key retention. Epicormic basal growth.		B ,1, 2	Long
T59	Maple species	7.0	2.5	280	1	5.0	5.0	5.0	5.0	2.0	SE	Middle Age	Fair	Located in grass verge at entrance to park. Multi-stem at 2m. Pruning stub with decay in lower crown to east. Minor deadwood in crown.		B ,1, 2	Long
T60	Norway maple	6.0	2.5	210	1	4.0	4.0	4.0	4.0	2.0	N	Middle Age	Good	Located to edge of grass sports pitch. Bifurcate at 2m with minor bark inclusion at union. Strimmer damage to stem base.		C ,1	Long
T61	Aspen	10.0	2.0	380	1	7.0	6.0	7.0	6.0	2.0	N	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group.		B ,1	Long
T62	Horse chestnut	10.0	2.0	390	1	7.0	6.0	5.0	6.0	2.5	E	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group. Basal stem damage from old mowing to the south.		B ,1	Long
T63	Aspen	9.0	2.0	360	1	6.0	6.0	5.0	6.0	2.0	E	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group. Has been crown raised.		B ,1	Long
T64	Horse chestnut	9.0	3.5	390	1	6.0	6.0	6.0	6.0	2.5	E	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group. Previously crown raised.		B ,1	Long
T65	Poplar species	7.0	3.0	180	1	1.5	2.0	1.0	1.5	1.5	N	Middle Age	Good	Planted into the linear feature, small amount of stem damage. Growing in grassed area.	Tree ties and stakes need removing	C ,1	Long
T66	Horse chestnut	7.0	4.0	380	1	6.0	5.0	5.0	5.0	2.0	E	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group. Previously crown raised.		B ,1	Long
T67	Poplar species	8.0	3.0	220	1	2.0	2.0	2.0	2.0	2.0	N	Middle Age	Good	Planted into the linear feature, small amount of stem damage. Growing in grassed area.	Tree stakes need removing	C ,1	Long
T68	Aspen	10.0	1.5	350	1	7.0	7.0	6.0	6.0	2.0	N	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group. Previously crown raised. Overhangs 3rd part garden by around 2m		B ,1	Long
T69	Poplar species	8.0	1.5	160	1	1.0	1.0	1.0	1.0	1.5	NE	Middle Age	Good	Planted into the linear feature, small amount of stem damage. Growing in grassed area.	Tree stakes and ties need removing	C ,1	Long
T70	Horse chestnut	8.0	3.0	380	1	6.0	5.0	6.0	5.0	2.5	E	Middle Age	Good	Growing at the park edge in grass, part of a long spread linear group. Previously crown raised. Old mower damage to the base.		B ,1	Long
T71	Field maple	9.0	0.5	517	2	8.0	2.0	6.0	5.0	0.5	N	Mature	Fair	Tree leans to the north with root movement from the south. Bifurcate at 0.5m. Has been pruned with poor pruning cuts. Minor deadwood in the upper crown.	Move to short? Or leave at medium?	B ,1	Medium
T72	Elm species	5.0	2.0	140	1	2.0	2.0	2.0	2.0	1.5	N	Middle Age	Dead	3rd party. Other side of hedge to site. Dead tree		U	Very Short
T73	Elm species	5.0	2.0	160	1	1.0	2.0	2.0	2.0	1.5	N	Middle Age	Dead	growing in the hedge. Dead tree due to Dutch Elms Disease..		U	Very Short
T74	Horse chestnut	6.0	3.0	330	1	5.0	4.0	4.5	4.5	2.0	N	Middle Age	Good	Growing on the side of the road. Small amount of deadwood in the upper crown.		B ,1	Long
T75	Horse chestnut	5.0	2.0	200	1	2.5	2.5	3.0	3.0	2.0	E	Middle Age	Good	Growing on the roadside on a grassed area. Small stem damage at the base.		C ,1	Long
T76	Horse chestnut	6.0	2.0	250	1	2.0	2.0	3.0	2.0	2.0	E	Middle Age	Good	Growing on the road side in a grassed area.		C ,1	Long
T77	Horse chestnut	6.0	2.0	270	1	3.0	2.5	3.0	3.0	2.0	S	Middle Age	Good	Growing on a grassed area on the side of the road.		C ,1	Long
T78	Horse chestnut	7.0	2.5	320	1	4.0	3.0	4.0	3.0	2.0	NE	Middle Age	Good	Growing on a grassed area near the roadside. Bifurcate at around 2m with included union.		B ,1	Long
T79	Horse chestnut	6.0	2.0	290	1	3.0	3.5	3.0	4.0	2.5	S	Middle Age	Good	Ivy clad stem. Growing on a grassed area near the road. Compression unions in the crown.		B ,1	Long
T80	Horse chestnut	6.0	3.0	290	1	3.5	3.0	2.5	4.0	2.5	NE	Middle Age	Good	Ivy clad stem. Growing in the hedge near the roadside.		B ,1	Long

APPENDIX A: Arboricultural Survey Data Sheets

Surveyor Ruth Chittock and Jess Henman
Survey Date 14.02.23, 15.02.23, 01.03.23
Site Land North of the Grange, Letchworth
Drawing Ref D9546.06.001

Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T81	Horse chestnut	7.0	3.0	340	1	5.0	4.5	5.0	5.0	3.0	S	Middle Age	Good	Road side tree growing on a grass verge. Trifurcation at 3m with included union.		B ,1	Long
T82	Field maple	6.0	2.0	352	2	3.0	3.5	5.0	5.0	1.5	N	Middle Age	Good	Bifurcate at 0.5m. Dense canopy. Growing on a slight slip on the road side.		B ,1	Long
T83	Field maple	8.0	2.0	330	2	5.0	5.0	6.0	5.0	2.0	S	Middle Age	Good	Growing in the hedgeline near a road. Very dense crown.		B ,1	Long
T84	Field maple	8.0	3.0	417	2	5.0	5.0	4.0	5.0	2.5	NE	Middle Age	Good	Bifurcate at 0.5m. Growing on a grassed area next to the road.		B ,1	Long
T85	Wild cherry	6.0	1.5	340	1	4.0	3.0	5.0	5.0	1.5	S	Middle Age	Good	Growing at the edge of the hedgeline in a grassed area next to a road. Very dense crown.		B ,1	Long
T86	Common ash	7.0	2.5	300	1	5.0	3.0	4.0	4.0	2.0	NE	Middle Age	Good	Bifurcate at 1.5m. Growing in the group on a slight slope. Ash Dieback Disease 1. Minor deadwood in the upper crown.		B ,2	Long
T87	Common hawthorn	6.0	1.5	280	1	6.0	1.0	4.0	4.0	1.5	N	Middle Age	Fair	Really bad lean to the north. Growing on a slope next to a path and road.	Fell	C ,2	Short
T88	Common ash	6.0	3.5	477	4	3.0	3.0	3.0	3.0	2.5	NW	Middle Age	Fair	Multistemmed at the base. Growing on a slope next to a path and road. Ash Dieback Disease 1 Minor deadwood to the upper crown.		B ,2	Medium
T89	Common ash	8.0	2.5	463	3	3.5	3.5	5.0	4.0	1.5	N	Middle Age	Good	Growing on the verge next to a main road. Included unions at the lower stem.		B ,2	Long
T90	Common ash	10.0	3.5	430	1	6.0	4.0	5.0	5.0	2.0	S	Middle Age	Fair	Growing on a slope next to a field and path and road. Asymmetrical crown. Ash Dieback Disease 1 with some deadwood in the upper crown.		B ,2	Medium
T91	Elder	6.0	1.5	369	4	4.0	1.5	2.0	2.0	1.0	S	Middle Age	Poor	Multistemmed at the base. Growing on a slight slope next to a path and road. Tree is very nearly dead with large amounts of deadwood and previous failures on the ground.	Fell.	U	Very Short
T92	Wild cherry	6.0	2.0	300	1	5.0	3.0	3.0	2.5	1.5	N	Middle Age	Poor	Growing on a slight slope next to a path and road. Tree has large amounts of deadwood and is in a state of decline.	Fell.	U	Very Short
T93	Field maple	8.0	3.0	446	2	4.0	4.0	5.0	5.0	2.0	E	Middle Age	Good	Growing in a grassed area next to a road. Bifurcate at the base with an included union. Good form.		B ,1	Long
T94	Wild cherry	7.0	2.5	280	1	3.0	4.0	3.0	4.0	0.5	NW	Middle Age	Good	Growing in part of a wider group. No major defects.		B ,1	Long
T95	Common ash	9.0	3.0	360	1	5.0	4.0	4.0	3.0	2.5	S	Middle Age	Good	Growing in a flat grassed verge next to a path and road. Couple of old wounds in the lower crown.		B ,1	Long
T96	Common ash	9.0	4.0	340	1	4.0	4.0	4.0	4.0	3.5	S	Middle Age	Good	Growing on a flat grasses area next to a path and road. Small crown for the stem size. Previously raised.		B ,1	Long
T97	Common ash	9.0	3.5	300	1	4.0	4.0	6.0	5.0	2.0	SE	Middle Age	Good	Growing on a grassed area next to a road. Previously crown raised. No signs of Ash Dieback Disease at time of survey		B ,1	Long
T98	Common ash	9.0	3.0	330	1	5.5	4.0	5.0	4.0	1.5	S	Middle Age	Fair	Growing in a grassed area next to a path and road. Ash Dieback Disease 1. Small amount of deadwood in the upper crown.		B ,1	Medium
T99	Small-leaved lime	9.0	3.0	410	1	5.5	5.0	4.0	5.0	1.5	S	Middle Age	Good	Growing in a grassed area next to a path and road. Some included unions which is typical of species. Small amounts of deadwood in the crown. Dense crown.		B ,1	Long
T100	Silver birch	10.0	3.0	300	1	3.0	3.0	2.5	2.5	2.5	E	Middle Age	Good	Ivy clad stem. Growing behind some vegetation near a road on a slight slope. Good form.		B ,1	Long
T101	Norway maple	10.0	3.0	300	1	3.0	3.0	3.0	4.0	2.5	E	Middle Age	Good	Ivy clad stem and primary branches. Growing on a slight slope behind some vegetation.		B ,1	Long
T102	Sycamore	12.0	3.0	486	3	4.0	4.0	4.0	4.0	2.0	N	Middle Age	Good	Trifurcation at the base with compression union. Ivy started to grow up the stem.		B ,1	Medium
T103	Small-leaved lime	11.0	3.5	410	1	6.0	5.0	5.0	5.0	3.5	N	Middle Age	Good	Ivy clad stem. Growing in a grassed area near a path and road. good form.		A ,1	Long
T104	Field maple	8.0	3.5	330	1	5.0	4.0	4.0	4.0	3.0	E	Middle Age	Good	Ivy clad stem and primary branches.		B ,1	Long
T105	Hornbeam	7.0	3.5	340	1	6.0	4.0	4.0	5.0	1.5	W	Middle Age	Good	Growing in the hedgeline near a path and road. Slight asymmetrical crown. Included unions at branch break.		B ,1	Long
T106	Field maple	7.0	3.0	320	1	4.0	5.0	4.0	4.0	1.5	S	Middle Age	Good	Growing in a small drainage ditch near a path and road. Very dense crown at branch break.		B ,1	Long
T107	Common hawthorn	6.0	1.5	230	1	2.0	3.0	3.0	2.5	1.0	E	Middle Age	Good	Growing in the hedgeline on a field boundary.		C ,1	Long
T108	Common ash	5.0	2.0	180	1	2.0	2.5	2.0	2.0	1.5	N	Middle Age	Fair	Growing in the hedgeline. Minor deadwood in the lower crown.		C ,1	Medium
T109	Common ash	7.0	2.0	283	2	3.0	3.0	2.5	3.5	2.0	NE	Middle Age	Good	Bifurcate at the base with a compression union. Growing in the hedgeline.		B ,1	Long
T110	Common ash	7.0	3.0	310	1	2.5	3.5	3.0	4.0	2.5	E	Middle Age	Good	Growing in a grassed area near a pedestrian track. Previously crown raised.		B ,1	Long
T111	Common ash	8.0	3.0	290	1	4.0	4.0	5.5	5.0	3.0	E	Middle Age	Good	Growing in a grassed area. Good form. No major defects.		B ,1	Long

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Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T112	Common lime	8.0	3.5	300	1	4.0	4.0	5.0	5.0	3.0	E	Middle Age	Good	Growing in a flat grassed area near a track. Some crossing branches in the upper crown.		B ,1	Long
T113	Common lime	7.0	3.5	300	1	4.0	4.0	4.5	3.5	3.0	W	Middle Age	Good	Growing in a grassed area near a track. No major defects.		B ,1	Long
T114	Common lime	9.0	4.0	320	1	4.0	4.0	4.0	4.0	3.5	E	Middle Age	Good	Growing in a grasses area near a track. Previously crown raised.		B ,1	Long
T115	Hornbeam	7.0	3.0	240	1	3.0	3.0	4.0	3.0	2.5	E	Middle Age	Good	Growing in a grassed area near a track. Previously crown raised.		B ,1	Long
T116	Lombardy poplar	12.0	2.0	340	1	3.0	3.0	3.0	3.0	0.5	N	Middle Age	Good	Growing in the hedgeline. Included unions at branches which is typical of species		B ,1	Long
T117	Lombardy poplar	8.0	2.0	290	1	2.0	2.0	2.5	2.0	1.0	S	Middle Age	Good	Growing in the hedgeline. Included unions.		B ,1	Long
T118	Common ash	7.0	3.5	280	1	3.0	3.0	3.5	3.5	3.0	W	Middle Age	Good	Growing in a grasses area. Old stem wound at 0.5m east. Small amount of deadwood in the upper crown. Ash dieback 1.		B ,1	Long
T119	Common ash	7.0	3.0	290	1	4.5	4.0	5.0	4.0	3.0	E	Middle Age	Good	Growing in a grassed area. No major defects		B ,1	Long
T120	Hornbeam	6.0	3.0	230	1	3.0	3.0	4.0	3.0	3.0	E	Middle Age	Good	Growing in a grassed area. Old stem wound to the east.		C ,1	Long
T121	Pedunculate oak	22.0	3.5	1020	1	9.0	9.0	9.0	8.0	3.5	NE	Mature	Good	Large tree growing in the hedgeline. A small branch wound at around 4m. Good form.		A ,1	Long
T122	Field maple	5.0	2.0	160	1	2.0	2.0	2.5	2.0	1.5	E	Middle Age	Good	Growing on the top of a large field drainage ditch. Growing in the hedgeline in a gap.		C ,2	Long
T123	Pedunculate oak	20.0	5.0	880	1	6.0	6.0	9.0	8.0	4.0	S	Middle Age	Good	Growing in a hedgeline on top of a small drainage ditch. Slight asymmetric crown. Small decay wound in the stem at around 6m. Unable to see the amount of decay.		A ,1	Long
T124	Pedunculate oak	15.0	4.0	730	1	6.0	5.0	8.0	7.0	2.5	NE	Middle Age	Good	Growing on the top of a small drainage ditch. Small amounts of deadwood in the lower crown. Not typical form for an oak.		A ,1	Long
T125	Pedunculate oak	11.0	2.5	790	1	6.0	6.0	5.0	5.0	2.5	NE	Middle Age	Fair	Growing in an open area next to a farm track. Large dead branch at the top of the canopy with some decay. Bat potential.		A ,1, 3	Long
T126	Pedunculate oak	24.0	5.0	1010	1	7.0	8.0	7.0	8.0	4.0	SW	Mature	Good	Growing in a spaced out linear feature next to an access track. Couple of old stem wounds from previous crown raise.		A ,1, 3	Long
T127	Pedunculate oak	13.0	4.0	690	1	6.0	5.0	6.0	5.0	3.0	W	Middle Age	Fair	Growing in the hedgeline. Couple of wounds in the upper crown on the secondary branches.		B ,1	Long
T128	Pedunculate oak	7.0	3.0	270	1	2.0	4.0	5.0	4.0	3.0	W	Middle Age	Good	Growing in the hedgeline. Asymmetric crown due to another tree.		B ,2	Long
T129	Pedunculate oak	22.0	4.0	1300	1	9.0	9.0	9.0	8.0	3.0	W	Mature	Good	Growing on the top of a small drainage ditch. Previously crown raised with minor pruning wounds.		A ,1, 3	Long
T130	Pedunculate oak	16.0	5.0	700	1	6.0	5.0	7.0	7.0	5.0	W	Middle Age	Good	Growing in the hedgeline just above a drainage ditch. Previously crown raised.		A ,1	Long
T131	Pedunculate oak	13.0	3.5	450	1	6.0	6.0	5.0	5.0	3.0	W	Middle Age	Good	Growing on the edge of a field. No major defects. Slightly poor form for species.		B ,1	Long
T132	Swedish whitebeam	8.0	2.0	230	1	3.0	3.0	3.0	3.0	1.5	N	Middle Age	Good	Growing in the hedgeline. No major defects.		C ,1	Long
T133	Pedunculate oak	22.0	4.0	1200	1	7.0	8.0	7.0	7.0	4.0	SW	Mature	Good	Large open grown good form. Growing in the hedgeline next to an access track. Small amount of deadwood in the upper crown.		A ,1, 3	Long
T134	Pedunculate oak	15.0	3.0	675	1	6.0	4.0	5.0	7.0	3.0	W	Middle Age	Good	Growing on top of a small drainage ditch.		A ,1	Long
T135	Swedish whitebeam	6.0	2.0	240	1	3.0	2.0	3.5	3.0	2.0	W	Middle Age	Good	Growing along the access track. Minor deadwood in the lower crown.		C ,1	Long
T136	Pedunculate oak	10.0	2.5	460	1	6.0	5.0	6.0	5.0	2.0	W	Middle Age	Good	Growing in the hedgeline. Minor deadwood in the lower crown. Previously crown raised.		B ,1, 2	Long
T137	Field maple	7.0	2.5	290	1	2.5	3.0	1.5	5.5	2.5	W	Middle Age	Good	Dense vegetation covering most of the stem. Asymmetrical stem.		B ,2	Long
T138	Austrian pine	9.0	3.5	320	1	3.0	3.0	2.0	4.0	3.0	E	Middle Age	Good	Part of a large, linear feature. Dense vegetation under the tree. Minor deadwood in the upper crown.		B ,1, 2	Long
T139	Austrian pine	9.0	4.0	330	1	4.0	4.0	4.0	4.0	3.5	N	Middle Age	Good	Part of a large linear feature. Minor deadwood in the lower crown.		B ,2	Long
T140	Austrian pine	7.0	3.0	300	1	3.0	3.0	4.0	2.0	2.0	W	Middle Age	Fair	Part of a large linear feature. The top of the tree is dead. Poor vigour.		C ,2	Medium
T141	Sycamore	7.0	3.0	300	1	3.5	3.0	2.5	3.0	2.5	N	Middle Age	Fair	Ivy clad stem. Part of a large linear feature. Poor form.		B ,2	Long
T142	Sycamore	8.0	3.0	300	1	3.0	1.5	3.5	3.5	1.5	NE	Middle Age	Fair	Part of a large linear feature. Growing in the hedgeline. Previously crown raised.		B ,2	Long
T143	Austrian pine	9.0	3.5	340	1	4.0	4.0	4.5	4.0	3.0	E	Middle Age	Good	Part of a large linear feature. Slight lean to the east.		B ,1, 2	Long

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T144	Scots pine	7.0	4.0	320	1	2.0	2.0	2.0	2.0	4.0	NW	Middle Age	Fair	Part of a large linear feature. Deadwood in the lower crown. Vigour is less than expected.		B ,2	Long
T145	Austrian pine	10.0	4.0	340	1	4.0	4.0	4.0	4.0	3.5	W	Middle Age	Good	Part of a large linear feature. Good form.		B ,2	Long
T146	Sycamore	6.0	2.5	280	1	2.0	2.5	4.5	3.0	2.0	E	Middle Age	Good	Part of a large linear feature. Asymmetrical crown. Growing in the hedge.		C ,2	Long
T147	Austrian pine	10.0	4.0	330	1	4.0	4.0	4.0	3.5	3.5	E	Middle Age	Good	Growing in a linear feature. Minor deadwood in the lower crown.		B ,2	Long
T148	Scots pine	7.0	4.0	300	1	2.0	3.0	3.0	3.0	3.5	N	Middle Age	Fair	Growing in a linear feature. Low vigour.		C ,2	Long
T149	Austrian pine	9.0	3.5	340	1	4.0	4.0	4.5	3.5	3.0	SE	Middle Age	Good	Growing in a long linear feature. Good vigour and form.		B ,1, 2	Long
T150	Scots pine	7.0	4.0	270	1	3.0	3.0	3.0	2.5	3.5	NW	Middle Age	Good	Growing in a along linear feature. Minor deadwood in the upper crown.		B ,2	Long
T151	Austrian pine	8.0	3.5	300	1	2.0	3.0	3.0	1.0	3.5	E	Middle Age	Dead	Dead. In a linear feature.		U	Very Short
T152	Sycamore	8.0	3.0	290	1	4.0	3.5	3.0	4.0	2.5	W	Middle Age	Good	Growing in a linear feature. Old pruning wound on the stem.		B ,2	Long
T153	Scots pine	8.0	4.5	310	1	2.5	2.5	3.0	2.5	4.5	E	Middle Age	Good	Growing in a linear feature. Minor deadwood in the lower crown.		B ,2	Long
T154	Sycamore	8.0	3.0	310	1	2.0	2.5	3.5	3.5	3.0	N	Middle Age	Good	Growing in a linear feature Poor form due to previous top snap out.		B ,2	Long
T155	Scots pine	11.0	3.0	320	1	2.0	3.0	3.0	3.0	3.0	SE	Middle Age	Good	Growing in a linear feature. Good form.		B ,2	Long
T156	Scots pine	5.0	1.5	290	1	1.0	5.5	2.5	2.5	1.5	S	Middle Age	Fair	Major asymmetric crown. Previous main leader wound leading to current form.		C ,2	Long
T157	Sycamore	8.0	3.5	320	1	4.0	3.5	3.0	4.5	3.5	W	Middle Age	Good	Growing in a linear feature. Small old wound at the base from mower damage.		B ,2	Long
T158	Scots pine	7.0	3.0	290	1	3.0	3.0	0.0	3.0	3.0	E	Middle Age	Good	Growing in a grassed area in a long linear feature. No major defects.		B ,2	Long
T159	Scots pine	9.0	6.0	300	1	2.0	2.0	2.0	2.5	5.0	S	Middle Age	Good	Growing in a long linear feature. Sparse crown.		B ,2	Long
T160	Scots pine	8.0	3.0	383	2	2.0	3.5	4.0	2.0	1.0	E	Middle Age	Good	Bifurcate at 1m with included union. Previously crown raised.		B ,2	Long
T161	Sycamore	8.0	3.0	310	1	4.0	4.0	4.0	4.0	3.0	N	Middle Age	Good	Growing in a linear feature. Stem damage at the base to the south.		B ,	Long
T162	Scots pine	8.0	3.0	290	1	3.0	3.0	3.0	3.0	3.0	S	Middle Age	Fair	In decline. Growing in a linear feature.		C ,2	Medium
T163	Sycamore	7.0	3.5	300	1	4.0	3.0	4.0	3.0	2.5	E	Middle Age	Good	Part of a long linear feature. Couple of old poor pruning wounds.		B ,2	Long
T164	Scots pine	8.0	5.0	300	1	2.5	2.5	3.5	2.5	4.0	N	Middle Age	Good	Part of a linear feature. Small crown for size of tree.		B ,2	Long
T165	Sycamore	8.0	3.0	290	1	4.0	4.0	3.0	4.0	2.0	W	Middle Age	Good	Part of a long linear feature. Some old pruning wounds		B ,2	Long
T166	Scots pine	9.0	4.0	340	1	4.0	4.0	4.5	4.0	3.5	E	Middle Age	Good	Part of a linear feature. Small stem wound at the base of the tree to the south.		B ,2	Long
T167	Scots pine	7.0	3.5	250	1	2.0	2.5	3.0	3.0	3.5	E	Middle Age	Good	Growing in a large linear feature. Tree is In decline with poor vigour.		C ,2	Short
T168	Norway maple	9.0	3.0	310	1	4.0	3.0	4.0	4.0	3.0	N	Middle Age	Good	Part of a linear feature. Growing in the hedgeline.		B ,2	Long
T169	Scots pine	8.0	4.0	300	1	2.5	2.5	3.0	2.5	4.0	N	Middle Age	Good	Growing in a long linear feature. Small crown for size of tree. Small amount of deadwood in the lower crown.		B ,2	Long
T170	Scots pine	11.0	4.0	340	1	3.0	3.0	4.5	3.0	4.0	E	Middle Age	Good	Growing in a long linear feature. Couple of old branch stubs from old deadwood.		B ,2	Long
T171	Scots pine	8.0	5.0	290	1	2.5	2.5	3.0	2.0	5.0	E	Middle Age	Good	Growing in a long linear feature. Slight asymmetric crown.		B ,2	Long
T172	Norway maple	9.0	3.5	310	1	3.0	4.5	4.0	4.0	3.0	E	Middle Age	Good	Stem damage at the base from old mower damage. Growing in part of a long linear feature.		B ,2	Long
T173	Scots pine	10.0	4.0	340	1	2.5	3.0	4.0	2.0	4.0	SE	Middle Age	Good	Growing in a long linear feature. Slight asymmetric crown.		B ,2	Long
T174	Sycamore	7.0	3.0	340	1	3.0	3.0	4.0	2.0	2.5	E	Middle Age	Good	Growing in a long linear feature. Couple of old pruning wounds.		B ,2	Long
T175	Scots pine	9.0	4.0	340	1	4.0	3.0	4.5	4.0	4.0	N	Middle Age	Good	Growing in a long linear feature. Couple of dead branches in the lower crown.		B ,2	Long
T176	Sycamore	8.0	2.0	320	1	3.5	3.5	4.5	4.0	2.0	E	Middle Age	Good	Growing in part of a long linear feature. Included unions in the upper crown.		B ,2	Long
T177	Sycamore	8.0	2.0	330	1	2.0	3.0	4.0	4.0	2.0	E	Middle Age	Good	Growing in a linear feature. Good form.		B ,2	Long
T178	Scots pine	8.0	3.5	320	1	4.0	4.5	5.0	5.0	3.5	W	Middle Age	Good	Growing in a linear feature. Small amount of deadwood in the lower crown. Dense crown.		B ,2	Long
T179	Sycamore	7.0	2.5	300	1	2.0	3.0	3.5	3.0	2.0	NE	Middle Age	Good	Growing in the hedgeline. Old pruning wounds from previous crown raise.		B ,2	Long
T180	Sycamore	8.0	3.0	310	1	3.0	3.0	4.0	4.0	3.0	NW	Middle Age	Fair	Growing in a long linear feature. Stem damage from 0.2 to around 1m south. Good form.		B ,2	Long
T181	Sycamore	9.0	3.0	320	1	4.0	3.5	4.5	3.0	2.0	E	Middle Age	Dead	Dead tree with most primary and secondary branches.		U	Very Short
T182	Sycamore	8.0	3.0	290	1	3.0	2.0	4.0	2.0	2.5	E	Middle Age	Fair	Poor form. Growing in the hedgeline. Previously topped with poor pruning wound.		C ,2	Long

APPENDIX A: Arboricultural Survey Data Sheets

Surveyor Ruth Chittock and Jess Henman
Survey Date 14.02.23, 15.02.23, 01.03.23
Site Land North of the Grange, Letchworth
Drawing Ref D9546.06.001

Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T183	Sycamore	7.0	3.5	300	1	3.0	3.0	3.0	3.0	2.0	E	Middle Age	Fair	Growing in the hedgeline. Birds are at around 2m. Part of the large linear feature b		B ,2	Long
T184	Norway maple	6.0	3.0	230	1	2.0	3.0	2.0	3.0	2.0	NE	Middle Age	Good	Unable to easily access due to dense vegetation. Growing in the hedgeline as part of the linear feature no major defects.		C ,2	Long
T185	Norway maple	6.0	2.5	250	1	3.0	3.0	3.5	3.0	2.0	NE	Middle Age	Good	Growing in the hedgeline. No major defects.		C ,2	Long
T186	Common lime	8.0	3.0	320	1	4.0	4.5	4.5	4.0	2.5	N	Middle Age	Good	Growing in the linear feature. Slight bottle but at the base.		B ,2	Long
T187	Sycamore	8.0	4.0	280	1	4.0	1.5	3.0	3.0	3.0	E	Middle Age	Fair	Poor form. Previous topped. Growing in the hedgeline as part of the linear feature.		C ,2	Long
T188	Austrian pine	10.0	4.0	340	1	4.0	3.0	5.0	4.0	3.0	NE	Middle Age	Good	Growing in a linear feature. No major defects.		B ,2	Long
T189	Norway maple	9.0	4.0	320	1	4.5	4.0	5.0	4.5	4.0	E	Middle Age	Good	Growing near the hedgeline in the linear feature. Couple of branches with abrupt bends in the lower crown.		B ,2	Long
T190	Norway maple	10.0	4.0	300	1	2.0	2.0	3.0	2.0	3.0	E	Middle Age	Good	Very narrow crown for species. Growing in the hedgeline.		B ,2	Long
T191	Austrian pine	10.0	3.0	320	1	2.0	4.5	4.5	3.5	3.5	N	Middle Age	Good	Dense vegetation under the tree. Growing in the linear feature. Couple of pegs from old branch failures.		B ,2	Long
T192	Austrian pine	10.0	4.0	330	1	4.0	4.0	5.0	4.0	3.0	NE	Middle Age	Good	Growing in a linear feature. No major defects.		B ,2	Long
T193	Sycamore	10.0	3.5	310	1	4.0	1.5	3.0	3.0	3.0	W	Middle Age	Fair	Previously roped. Very narrow crown for species. Growing in the large linear feature.		C ,2	Long
T194	Austrian pine	10.0	4.0	330	1	4.5	5.0	5.0	4.5	3.0	NE	Middle Age	Good	Growing in a linear feature. No major defects. Dense vegetation under the tree.		B ,2	Long
T195	Austrian pine	10.0	4.0	300	1	3.0	3.5	3.0	3.0	4.0	NE	Middle Age	Good	Growing in a linear feature. No major defects. Dense vegetation under the tree.		B ,2	Long
T196	Austrian pine	11.0	4.0	410	2	4.5	4.0	4.0	4.0	1.5	W	Middle Age	Good	Bifurcate at around 1.5m with compression union. Growing in the linear feature.		B ,2	Long
T197	Sycamore	10.0	3.5	290	1	2.0	1.5	2.0	2.0	3.0	W	Middle Age	Fair	Previously topped. Very narrow crown for species. Growing in the large linear feature.		C ,2	Long
T198	Sycamore	10.0	3.5	280	1	2.5	2.0	2.5	2.0	3.0	W	Middle Age	Fair	Previously topped. narrow crown for species. Growing in the large linear feature.		C ,2	Long
T199	Sycamore	9.0	3.5	320	1	2.5	2.0	2.0	2.0	2.0	S	Middle Age	Fair	Previously topped. Narrow crown for species. Growing in the large linear feature. Small amount of deadwood in lower crown.		C ,2	Long
T200	Sycamore	10.0	3.5	330	1	2.0	2.0	2.5	2.0	3.0	W	Middle Age	Fair	Previously topped. narrow crown for species. Growing in the large linear feature.		C ,2	Long
T201	Austrian pine	10.0	4.0	300	1	4.0	3.5	4.0	3.5	3.0	NE	Middle Age	Good	Growing in a linear feature. No major defects.		B ,2	Long
T202	Austrian pine	11.0	3.0	404	2	4.0	4.0	4.0	3.0	1.5	NW	Middle Age	Good	Bifurcate at 1.5m with compression union.		B ,2	Long
T203	Austrian pine	11.0	5.0	340	2	4.0	4.0	4.5	4.0	4.0	NW	Middle Age	Good	Growing in the linear feature. Small amount of deadwood in the lower crown.		B ,2	Long
T204	Sycamore	7.0	2.5	270	1	3.0	3.5	3.5	3.0	2.0	W	Middle Age	Good	Growing in the hedgeline. No major defects		C ,2	Long
T205	Austrian pine	11.0	5.0	340	2	4.0	4.5	4.0	4.0	1.5	S	Middle Age	Good	Growing in the linear feature. Couple of larger branches are with slight bend in the lower crown.		B ,2	Long
T206	Norway maple	7.0	3.0	280	1	3.0	3.5	3.5	3.0	2.0	NW	Middle Age	Good	Growing near the hedgeline. Narrow crown for species.		B ,2	Long
T207	Norway maple	7.0	3.0	280	1	3.0	3.5	3.5	3.0	2.0	NW	Middle Age	Good	Growing near the hedgeline. Narrow crown for species.		B ,2	Long
T208	Norway maple	7.0	3.0	280	1	3.0	3.0	3.5	3.0	2.0	NW	Middle Age	Good	Growing near the hedgeline. Part of the long linear feature.		B ,2	Long
T209	Austrian pine	11.0	4.0	330	1	3.0	4.0	3.5	4.0	3.5	W	Middle Age	Good	Part of the long linear feature. Couple of old stem wounds in the lower crown.		B ,2	Long
T210	Austrian pine	11.0	4.0	330	1	3.0	4.0	4.0	4.0	3.5	E	Middle Age	Good	Part of the long linear feature. Couple of old stem wounds in the lower crown.		B ,2	Long
T211	Norway maple	7.0	3.0	280	1	4.0	2.5	3.5	3.0	2.0	NW	Middle Age	Good	Growing near the hedgeline. Part of the long linear feature. No major defects.		B ,2	Long
T212	Norway maple	7.0	3.0	300	1	4.0	3.5	4.5	3.5	2.0	E	Middle Age	Good	Growing near the hedgeline. Part of the long linear feature. No major defects.		B ,2	Long
T213	Norway maple	6.0	3.0	290	1	4.0	3.0	3.0	3.0	2.0	E	Middle Age	Good	Growing near the hedgeline. Part of the long linear feature. Couple of crossing branches in upper crown.		B ,2	Long
T214	Austrian pine	11.0	4.0	432	2	3.0	3.0	3.0	3.0	1.0	E	Middle Age	Good	Part of the long linear feature. Bifurcate at 1m with compression union. Narrow form.		B ,2	Long
T215	Austrian pine	11.0	4.0	350	2	3.5	4.0	5.0	5.0	3.5	E	Middle Age	Good	Part of the long linear feature. no major defects.		B ,2	Long
T216	Austrian pine	10.0	4.0	290	2	3.5	3.0	3.0	3.0	3.5	E	Middle Age	Good	Part of the long linear feature. no major defects. Narrow form.		B ,2	Long
T217	Norway maple	6.0	3.0	290	1	4.0	3.0	3.0	3.0	2.0	E	Middle Age	Good	Growing near the hedgeline. Part of the long linear feature. Couple of crossing branches in upper crown.		B ,2	Long
T218	Austrian pine	8.0	4.0	290	2	3.0	3.0	3.0	3.0	3.5	E	Middle Age	Fair	Part of the long linear feature. Low vigour.		C ,2	Long
T219	Austrian pine	11.0	4.0	320	2	3.5	4.0	3.0	3.0	3.5	E	Middle Age	Good	Part of the long linear feature. No major defects.		B ,2	Long

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Drawing Ref D9546.06.001

Italicised Feature Ref: Inspection of this feature was restricted
Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
T220	Austrian pine	9.0	3.5	300	2	3.5	3.0	3.0	3.0	3.0	E	Middle Age	Good	Part of the long linear feature. Small amount of deadwood in the lower crown.		B ,2	Long
T221	Austrian pine	11.0	4.0	320	2	3.5	4.0	3.0	3.5	3.5	E	Middle Age	Good	Part of the long linear feature. No major defects.		B ,2	Long
T222	Austrian pine	8.0	4.0	260	2	3.5	3.0	3.0	3.0	4.0	E	Middle Age	Good	Part of the long linear feature. Slight lean to the east.		B ,2	Long
T223	Norway maple	6.0	3.0	260	2	3.0	2.5	3.0	3.0	2.5	E	Middle Age	Good	Part of the long linear feature. Growing in the hedgeline.		B ,2	Long
T224	Austrian pine	8.0	3.0	260	2	3.0	4.0	3.0	3.0	2.5	E	Middle Age	Good	Part of the long linear feature. Previously crown raised.		B ,2	Long
T225	Austrian pine	10.0	3.0	310	2	4.0	4.0	3.0	4.0	2.5	E	Middle Age	Good	Part of the long linear feature. Previously crown raised.		B ,2	Long
T226	Norway maple	8.0	3.0	310	2	3.5	3.5	3.0	4.0	2.5	E	Middle Age	Good	Part of the long linear feature. Couple of snapped branches.		B ,2	Long
T227	Norway maple	9.0	3.0	310	2	3.5	4.0	4.0	3.5	2.5	E	Middle Age	Good	Part of the long linear feature. Previously crown raised.		B ,2	Long
T228	Austrian pine	9.0	3.0	310	2	3.5	4.0	4.0	4.0	2.5	E	Middle Age	Good	Part of the long linear feature. Previously crown raised.		B ,2	Long
T229	Austrian pine	10.0	3.0	330	2	4.5	4.0	4.0	4.0	2.5	E	Middle Age	Good	Part of the long linear feature. Previously crown raised. No major defects.		B ,2	Long
T230	Austrian pine	10.0	3.0	290	2	3.5	4.0	4.0	3.0	2.5	E	Middle Age	Good	Part of the long linear feature. Previously crown raised. No major defects.		B ,2	Long
T231	Common ash	6.0	2.5	208	6	3.0	5.0	3.5	2.5	1.5	N	Young	Fair	Multi-stemmed tree growing from hedge. Twiggy dieback in lower crown.		C ,1	Medium
T232	Crab apple	4.0	1.5	158	2	2.0	2.0	2.0	2.0	1.5	NE	Middle Age	Fair	Emerging hedgerow tree with typical rounded shrubby form.		C ,1	Long
T233	Pedunculate oak	4.0	1.5	90	1	1.0	1.0	1.0	-2.0	1.5	S	Young	Good	Vigorous young tree emerging from hedgerow.		C ,1	Long
Groups																	
G1	Cherry species	3 to 8	1.0	*25 to 280*	*30*							Middle Age	Good	Self-set multi-stem trees located along private boundary fence. Good vigour. Busy branch habit.		C ,2	Long
G2	Maple species, Elder	3 to 4	1.0	*15 to 90*	*20*							Middle Age	Fair	Self-set multi-stem trees located along private boundary fence. Dead stem in central crown. Busy branch habit.		C ,2	Long
G3	Maple species	3 to 5	1.0	*15 to 150*	*35*							Middle Age	Fair	Located along private boundary fence. Dense bramble growth around trees.		C ,2	Long
G4	Maple species, Elder	3 to 5	1.0	*15 to 150*	*15*							Middle Age	Fair	Located in grass to edge of path. Busy branch habit. Bramble growth in crowns.		C ,2	Long
G5	Hawthorn species	2 to 6	0.5	*15 to 200*	*50*							Middle Age to Mature	Fair	Located to edge of path. Scrubby by hawthorn with vigorous blackthorn regeneration. Some mature hawthorn stems.		B ,2	Long
G6	Maple species, Birch species, Common hazel	3 to 9	0.5	*25 to 300*	*250*							Middle Age	Good	Dense boundary group located to edge of footpath. Predominantly multi-stem hazel. Some larger maple.		B ,2	Long
G7	Blackthorn	3 to 5	0.0	*15 to 25*	*200*							Middle Age	Good	Dense blackthorn regeneration to edge of footpath.		C ,2	Long
G8	Maple species, Birch species, Common hazel, Common hawthorn, Common ash, Cherry species, Elder	3 to 12	0.5	*25 to 300*	*250*							Middle Age	Fair	Located to edge of path and along garden boundaries. Dumped garden waste. Escaped garden shrubs.		B ,2	Long
G9	Field maple, Crab apple	4 to 5	0.5	*25 to 150*	*10*							Middle Age	Fair	Scrubby field maples located to edge of footpath. Some flail damage. Crab apple located to northern end.		C ,2	Long
G10	Hawthorn species, Common ash, Blackthorn	3 to 4	0.0	*25 to 150*	*250*							Middle Age	Fair	Field boundary group to edge of footpath. Areas of dense blackthorn. Some bramble growth to western end.		C ,2	Long
G11	Poplar species, Blackthorn	3 to 6	0.0	*25 to 100*	*25*							Middle Age	Fair	Small group of poplar located to western end of group. Blackthorn understorey.		B ,2	Long
G12	Blackthorn	3 to 5	0.0	*25 to 80*	*75*							Middle Age	Fair	Dense blackthorn growth part of wider field boundary group. Located next to footpath.		C ,2	Long
G13	Field maple, Birch species, Common hawthorn, Common ash, Blackthorn, Pedunculate oak	2 to 12	0.5	*25 to 250*	*300*							Middle Age	Good	Mixed deciduous field boundary shelter belt. Some regen. Blackthorn developing to southern end.		B ,2	Long
G14	Common hazel, Blackthorn	3 to 4	0.0	*25 to 120*	*100*							Middle Age	Fair	Part of wider field boundary group. Outgrown hedgerow.		C ,2	Long
G15	Maple species	10 to 12	3.5	*120 to 380*	12							Middle Age	Fair	Group of maple located along boundary adjacent to wire mesh fence. Vigorous regen patches. Minor deadwood throughout crowns. Growing atop a small bank.		B ,2	Long
G16	Maple species	4 to 7	0.5	*15 to 180*	*40*							Middle Age	Fair	Scrubby maple regen along field boundary.		C ,2	Long
G17	Maple species, Elder	3 to 5	0.5	*15 to 80*	*20*							Middle Age	Fair	Scrubby regen along site boundary. Piles of dumped garden waste.		C ,2	Long
G18	Field maple, Birch species, Common hawthorn, Common ash, Pine species, Cherry species, Oak species, Elder	3 to 10	0.5	*25 to 250*	*500*							Middle Age	Fair	Mixed planted field boundary group. Fenced off. Some regen. Good screening.		B ,2	Long

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		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
G19	Maple species	10 to 11	5.0	*300 to 450*	2							Middle Age	Fair	Located to field edge adjacent to private boundary garden fence. Crowns lifted to approx. 5m. Epicormic growth at pruning points. Dead pruning stub with decay on stem to south.		B ,1, 2	Long
G20	Common hawthorn, Cherry species	3 to 5	0.5	*25 to 80*	*50*							Middle Age	Fair	Cherry regen and scrubby hawthorn growth to field edge along private garden boundaries.		C ,2	Long
G21	Maple species	10 to 11	3.0	270 to 410	3							Middle Age	Good	Located in grass area. Three trees growing in line and forming continuous canopy. Minor deadwood in crowns. Minor girdling roots visible aroung tree to east.		B ,1, 2	Long
G22	Common hawthorn, Elder	4 to 6	0.0	80 to 200	*150*							Middle Age	Good	Old outgrown hedge creating a boundary feature to end the park. Mostly multistemmed with some old stem damage.		B ,2	Long
G23	Common hawthorn, Elder	5 to 6	0.0	100 to 150	3							Middle Age	Good	Small trees growing in dense overgrown bramble around 1.5m high. Unable to access trees.		C ,1	Long
G24	Common hawthorn, Blackthorn, Elder	3 to 6	0.0	50 to 200	*200*							Middle Age	Good	Ivy clad stems. denser to the east. Mainly an old outgrown hedge.		B ,2	Long
G25	Norway maple	9 to 11	2.0	350 to 400	2							Middle Age	Good	Hidden behind the group, two trees create one canopy. Not easily accessible due to dense vegetation.		B ,2	Long
G26	Common hawthorn, Blackthorn, Elder	3 to 6	0.0	50 to 200	*350*							Middle Age	Good	Ivy clad stems. denser to the east. an old outgrown hedge.		B ,2	Long
G27	Common hazel, Common hawthorn, Blackthorn, Elder	1 to 6	0.0	50 to 150	*500*							Middle Age	Good	Mostly dense group with some gaps. Some ivy clad, many multistemmed with self sets. Growing on flat open ground. Hard to access due to dense.		C ,2	Long
G28	Norway maple, Common hazel, Common hawthorn, Common ash, Sessile oak, Elder	4 to 11	0.0	100 to 340	*50*							Middle Age	Good	Mostly out of the site, larger trees with under storey. Ash has ash 1, only a couple of ash.		B ,2	Long
G29	Common ash	8 to 10	3.0	140 to 300	6							Middle Age	Fair	2 multistemmed ash growing in hedgeline. Adb 1. Growing on top of a small drainage ditch. Previously cut back from the field.		B ,2	Medium
G30	Common ash	7 to 9	2.5	130 to 260	13							Middle Age	Fair	2 multistemmed ash growing in hedgeline. Adb 1. Growing on top of a small drainage ditch. Previously cut back from the field. Deadwood in the crowns.		B ,2	Medium
G31	Field maple, Sycamore, Common hawthorn	2 to 4	0.5	100 to 150	20							Young to Middle Age	Good	Growing on the top of a large drainage ditch. Mostly self set multistemmed. Bramble covers the group.		C ,2	Long
G32	Field maple, Norway maple, Common hazel, Common hawthorn, Blackthorn, Goat willow	2 to 7	1.0	70 to 250	*200*							Middle Age	Good	Group with multiple gaps. Many multi stems. Growing to create a field boundary.		C ,2	Long
G33	Field maple, Common hawthorn, Blackthorn	3 to 8	1.0	100 to 300	*75*							Middle Age	Good	Screens the road from the site. Growing on a slight slope. Couple of gaps in the group but mostly hawthorn with a few larger trees.		B ,2	Long
G34	Common hawthorn	3 to 5	1.0	100 to 150	8							Middle Age	Good	Small group growing on a slope. Group covered in vegetation.		C ,2	Long
G35	Elm species	5 to 7	2.0	150 to 220	8							Middle Age	Dead	Dead trees growing in the larger group. Dutch elm disease.	Remove	U	Very Short
G36	Field maple, Common hawthorn, Common ash, Elm species	3 to 8	1.5	80 to 240	50							Middle Age	Fair	Growing on a slope between a field and path. Couple of dead branches. A few gaps within the group.		B ,2	Long
G37	Field maple, Common hawthorn, Common ash	3 to 8	1.0	50 to 250	*500*							Middle Age	Good	Dense group with ash mainly in the middle. Ash have ash dieback 1. Has been pruned back from access track with some wounds on the branches.		B ,2	Long
G38	Field maple, Common ash, Pedunculate oak	6 to 12	3.0	150 to 300	30							Middle Age	Good	Dense group creating good screening. Couple of dead branches.		B ,2	Long
G39	Alder species, Common hawthorn, Hybrid black poplar	5 to 13	3.0	200 to 350	25							Middle Age	Good	Group with a good amount of space between the trees in order to mature. Couple of smaller hawthorn.		B ,2	Long
G40	Field maple, Common ash, Pedunculate oak, Elm species	4 to 14	2.0	150 to 360	50							Middle Age	Good	Dense group growing on flat ground. Good variety of species.		B ,2	Long
Hedges																	
H1	Privet species, Firethorn	1.5 to 2		*n/a*	*n/a*							Middle Age	Fair	Dense, clipped ornamental hedges.		n/a	n/a
H2	Field maple, Common hawthorn, Blackthorn	3 to 3		n/a	*n/a*							Middle Age	Good	Very dense well maintained hedge growing on a slight slope of a drainage ditch.		n/a	n/a
H3	Common hawthorn, Blackthorn	3 to 4		n/a	*n/a*							Middle Age	Good	Hedge growing on the top of a drainage ditch. Electric power line runs above. Very dense with no gaps.		n/a	n/a
H4	Common hawthorn	3 to 5		n/a	*n/a*							Middle Age	Good	Hedge growing on a slope. Some areas covered in bramble.		n/a	n/a
H5	Common hawthorn	3 to 5		n/a	*n/a*							Middle Age	Good	Hedge growing on a slope. Some areas covered in bramble.		n/a	n/a

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Italicised Values: Feature value was estimated

Ref	Species	Height	Canopy Ground Clearance	Stem Diameter (or range)	No. of stems/ individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Lowest Branch Height	Lowest Branch Direction	Maturity	Condition	Comments on form, condition, health and significant defects	Management recommendations in current context	BS 5837 Quality Category	Estimated Remaining Contribution
		(m)	(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	(N,S,E,W)	Young, Middle Age, Mature	Good, Fair, Poor, Veteran			A,B,C,U (1,2,3)	Long, Medium, Short, Very Short
H6	Common hawthorn, Blackthorn, Elm species	0.5 to 1.5		n/a	n/a							Middle Age	Good	Hedge laid hedge. Very well maintained. Growing on the field boundary.		n/a	n/a
H7	Field maple, Common hawthorn, Blackthorn	2 to 5		n/a	*n/a*							Middle Age	Good	Mostly dense hedge with a couple of small gaps. Well maintained.		n/a	n/a
H8	Field maple, Common hawthorn, Blackthorn	2 to 6		n/a	*n/a*							Middle Age	Good	growing on top of a drainage ditch. Mostly hedge with a couple of slightly larger tree popping up but still part of the hedge.		n/a	n/a
H9	Field maple, Common hawthorn, Blackthorn	1.5 to 3		n/a	*n/a*							Middle Age	Good	Couple of small gaps. Well maintained.		n/a	n/a
H10	Common hawthorn, Blackthorn	2 to 2.5		n/a	*n/a*							Middle Age	Good	Well maintained field boundary.		n/a	n/a
H11	Common hawthorn	2 to 2.5		n/a	*n/a*							Middle Age	Good	Well maintained. Follows the access track. very dense.		n/a	n/a
H12	Common hawthorn	2 to 3		n/a	n/a							Middle Age	Good	Dense well maintained hedge.		n/a	n/a
H13	Field maple, Common hawthorn, Blackthorn	2 to 4		n/a	*n/a*							Middle Age	Good	Dense well maintained hedge with some gaps.		n/a	n/a
H14	Common hawthorn, Blackthorn	2 to 6		n/a	*n/a*							Middle Age	Good	Good condition. Not maintained.		n/a	n/a

APPENDIX B: Survey Method

Limitation

Trees are dynamic living organisms with a constantly changing structure; even healthy trees can change or decline. Survey information is presented as being correct at the time of survey. Limitations to the reliability of the survey data are noted within Appendix A and the main report text.

Scope

All woody vegetation with a stem diameter exceeding 75mm is recorded. Below this threshold, vegetation may also be recorded at the discretion of the surveyor. The survey includes woody vegetation within a defined boundary, and on adjacent land where the characteristics, location or context of the tree mean that activity within the boundary could affect the tree, or be influenced by it. This is typically up to 15m outside the boundary.

Resolution

Vegetation is recorded as either an individual *Tree*, *Group* of trees, *Woodland*, or *Hedgerow*. This is done at the discretion of the surveyor to provide a useful resolution to the survey data, to differentiate between features with varying attributes and group those with common attributes, and collective value or function.

Typically, *Trees* are recorded where they are arranged separately; different from adjacent trees; or where the assessment would benefit from greater detail. *Groups* are coherent arboricultural features comprising trees with a collective form, function, history or management opportunities. *Woodland* is recorded where areas of tree cover have the qualities of a woodland habitat, including age and species structure, natural regeneration, and associated non-arboreal features. *Hedgerow* describes linear features largely comprising woody vegetation that are under, or could be returned to, regular hedgerow management. It should be noted that these terms are also used in other assessment types, sometimes with different definitions.

Tree locations

The location of trees is based on stem locations and canopy spreads taken from a topographical survey, where available. Where this information is not available, this is noted in Appendix A and locations should be regarded as approximate. Approximate locations are based on one or more of: GPS data captured during the survey; aerial photographs; and measurement from known points of reference. Approximate stem locations are typically accurate to within a few metres. Stem locations are shown for all *Trees*.

Groups, *Woodland* and *Hedges* are principally described in terms of their canopy outline, although stem locations may also be shown. Individual tree canopy outlines are projected on Drawings based on measurements taken as described below (see Crown Spread). *Groups*, *Woodland* and *Hedges* canopy outlines are projected based on the same hierarchy of source data as stem locations.

Tree survey

The survey is conducted from ground level by an arboriculturist, taking account of the tree, and its context. The nature of the soil is not assessed. Non-invasive assessment tools may be used as appropriate, including hypsometer, measuring tape, probe and nylon mallet.

The following attributes are recorded for each feature (see Arboricultural Survey Data Sheets at Appendix A):

Reference Number	A unique code per feature, typically but not necessarily a chronological sequence, in the form T*n* for *Trees*; G*n* for *Groups*; W*n* for *Woodlands*; and H*n* for *Hedgerows*
Species	The common name is given. All species are listed for *Groups*, *Woodland* and *Hedgerows*. The Latin name may also be given if further clarification is required.
Height	Top height recorded in metres, or the range for *Groups*, *Woodland* and *Hedgerows*
Canopy Ground Clearance	The height of the canopy above ground level in metres
Stem Diameter	A measurement taken at 1.5 metres above ground level, or the nearest representative point below, in millimetres. For multi-stemmed trees a single figure is calculated according to BS5837 4.6. For *Groups*, *Woodland* and *Hedgerows,* the range of diameters

No. of Stems / Individuals	The number of stems arising below a height of 1.5 metres, or for *Groups*, *Woodland* and *Hedgerows* an estimate or count of the number of trees
Crown Spread	Radial branch spread in metres at cardinal points (N, S, E, W) from the location of the *Tree* stem at ground level (for *Groups*, *Woodland* and *Hedgerows*, see *Tree Locations*)
Lowest Branch Height	The height of the first significant branch at the point of attachment (*Trees* only)
Lowest Branch Direction	The direction of growth of the first significant branch from the point of attachment (*Trees* only)
Maturity	Classification describing age relative to the species, and size and growth potential, in order to inform management decisions • ***Young*** means small and/or recently planted and could be relocated, or replaced on a like for like basis • ***Middle Age*** means established and independent, within the growth stage of life, and with potential to continue increasing in height and/or spread • ***Mature*** means having reached ultimate height and/or spread, given the location and surroundings; further increases will be slow or limited • ***Mixed Age*** (*Groups*, *Woodland* and *Hedgerows* only) means comprising all three maturity classes
Condition	An overall assessment of a feature's physiological and structural state, informing longevity and quality categorisation, and supported by *Comments* • ***Good*** condition means with vitality and resilience commensurate with species and age, and without significant defects or pathogens • ***Fair*** condition means with tolerable reduction of vitality and resilience, and/or remediable or tolerable defects and/or pathogens • ***Poor*** condition means with declining or significant loss of vitality and resilience, and/or significant and irremediable defects and/or pathogens • ***Dead*** condition means without photosynthetic or metabolic capacity, or moribund and in imminent terminal decline • ***Mixed*** (*Groups* and *Woodland*) means comprising more than one condition class • ***Veteran*** means trees of exceptional value, meeting recognised criteria including age, size and characteristics. Classification is partly informed by the sustained presence of structural defects, physiological decline, and pathogens, and their contribution to biodiversity. Undesirable characteristics in ordinary trees may be desirable in veteran trees, therefore *Veteran* can be understood as a superlative *Condition* that supersedes other categories (excluding *Dead*).
Comments	A description of all significant characteristics of the feature and its context that are not described by other attribute fields; including observations to support the classification of *Condition*, *Quality Category* and *Estimated Remaining Contribution* as appropriate
Management Recommendations	Recommendations for arboricultural works based on the current land use, in the interests of good arboricultural practice. These are incidental to the primary survey purpose, and not a comprehensive schedule in pursuit of any particular objective.
BS 5837 Quality Category	Tree quality assessment based on Table 1 of BS 5837:2012 (see below) comprising quality categories **A**, **B**, **C** and **U** and sub-categories **1**, **2** and **3**
Estimated Remaining Contribution	A forecast of the durability of the feature in its current form and context, and therefore the reliance that can be placed on any benefits or functions it provides. This is influenced by *Species* and *Condition*, and is not necessarily a forecast of life expectancy. • **Long** means more than 40 years • **Medium** means 20 to 40 years • **Short** means 10 to 20 years • **Very Short** means less than 10 years

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Table 1: Extract from **British Standards Institution (2012)** *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*, page 9

Note on Root Protection Areas:

Data is captured during the survey to inform the design of Root Protection Areas (RPA). These are a design tool, representing the area around a tree in which restrictions to some activities may be required to avoid significant harm, particularly to roots and soil. The RPA is a function of *Stem Diameter*, and additional considerations including management history, barriers to root growth, topography, ground conditions and tree characteristics. These factors are combined by an arboriculturist to produce a buffer zone for each feature from which the exclusion of construction activities would ensure the continued reliability of the survey data at Appendix A, including *Condition*, BS 5837 *Quality Category* and *Estimated Remaining Contribution*.

For *Trees*, RPA is defined as a circle with a radius 12 times the *Stem Diameter*, which may be modified to reflect the considerations above.

For *Groups* and *Woodland* RPA is based on the size and location of peripheral constituent trees, and presented as an offset from the canopy edge giving equivalent or greater protection to all trees of any size, or modified to reflect significant variation in constituent tree sizes and/or the considerations above.

For Hedgerow, no RPA is shown. Typically, hedgerow requires a smaller stand-off than trees due to reduced crown dimensions. Any stand-off should include sufficient space for access and ongoing management and should therefore normally be based on the canopy spread rather than root spread.

APPENDIX C: Photographs of Category A trees

Tree T26 - Weeping ash

Tree T42 Wild Cherry

Tree T103 - Small-leaved lime

Tree T121 - Pedunculate oak

Tree T123 - Pedunculate oak

Tree T124 - Pedunculate oak

Tree T125 - Pedunculate oak

Tree T126 - Pedunculate oak

Tree T129 - Pedunculate oak

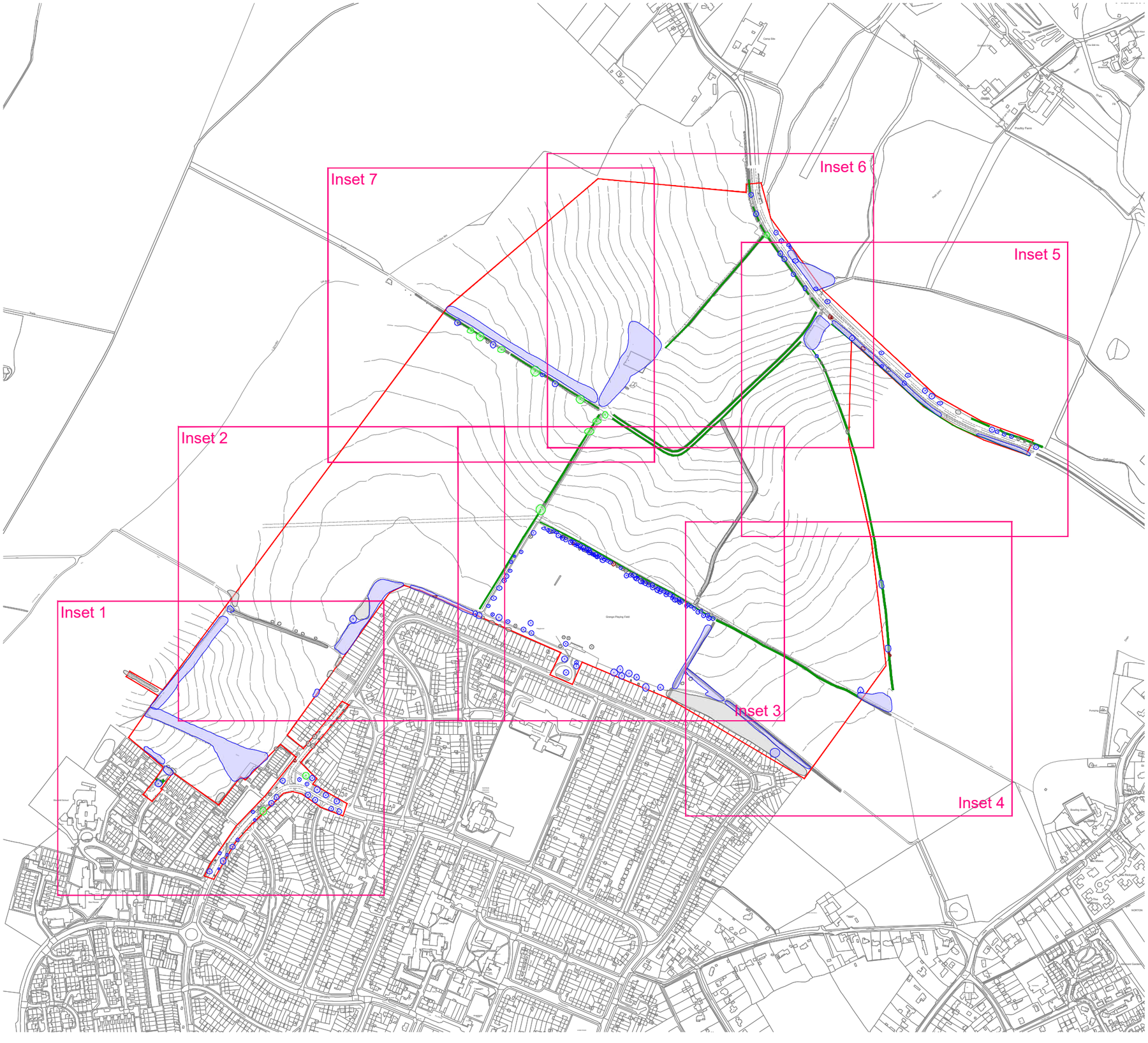
Tree T130 - Pedunculate oak

Tree T133 - Pedunculate oak

Tree T134 - Pedunculate oak

DRAWINGS

Drawing 1 - Tree Constraints Plan



KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Survey Boundary

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)
- Hedgerow (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Additional tree survey data (Insets 5 and 6)	HEE	JGS	03.08.2023

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Project
Land North of the Grange, Letchworth

Title
Site Overview

Drawing Number
D9546.06.100

Drawn	Checked	Approved	Scale	Date
REC	JAH	JGS	1:2,000 @ A3	08/03/02023

KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)
- Hedgerow (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Updated key	HEE	JGS	03.08.2023

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Project
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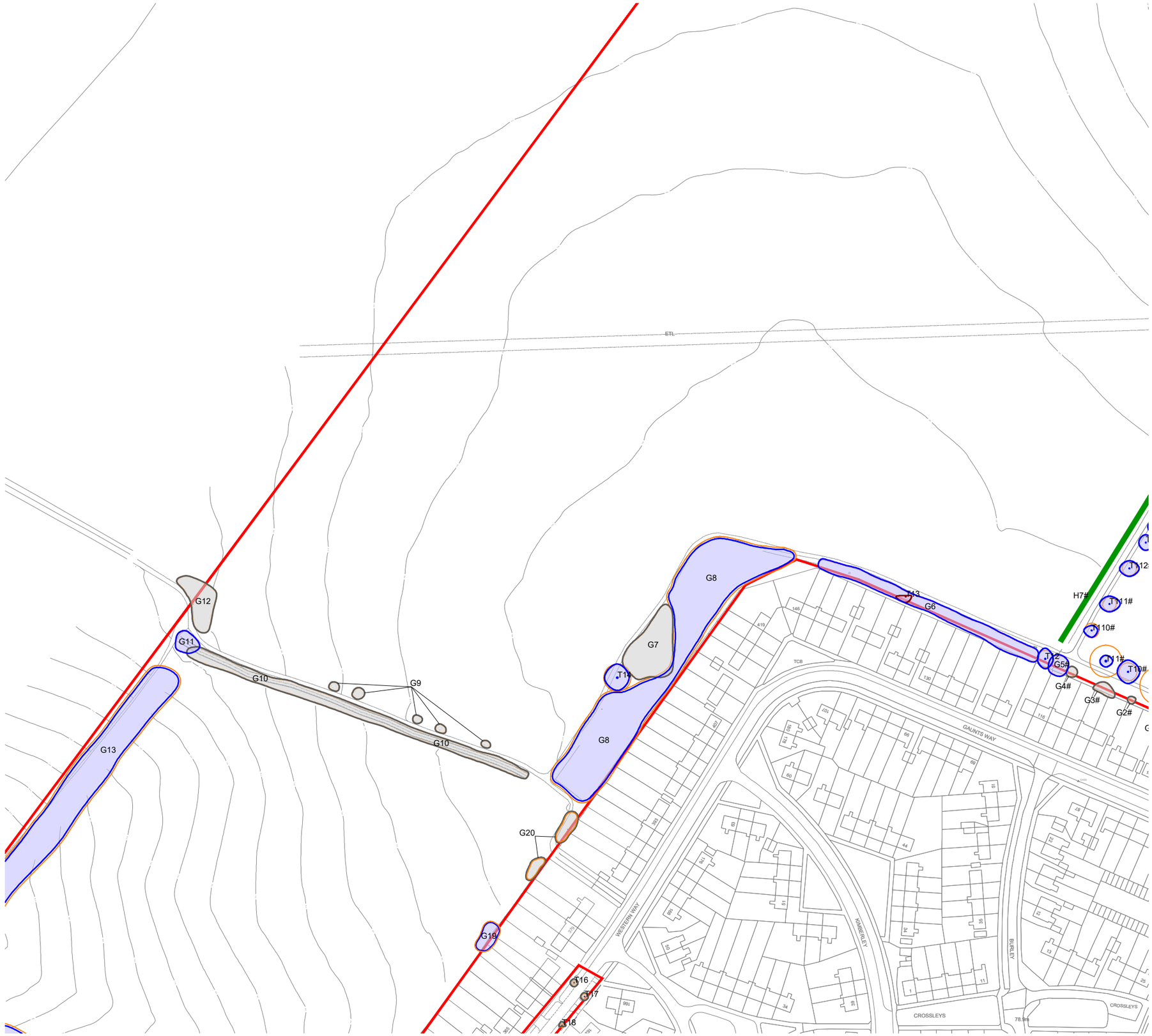
Title
Drawing 1: Tree Constraints Plan [BASELINE] - Inset 1 of 7

Drawing Number
D9546.06.001

Drawn	Checked	Approved	Scale	Date
REC	JAH	JGS	1:2,000 @ A3	08/03/02023



KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location
  (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

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- Category A
  (High quality)
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- Category C
  (Low quality)
- Category U
  (Unsuitable for retention)
- Hedgerow
  (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Updated key	HEE	JGS	03.08.2023

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Title
Drawing 1: Tree Constraints Plan [BASELINE] - Inset 2 of 7

Drawing Number
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Drawn	Checked	Approved	Scale	Date
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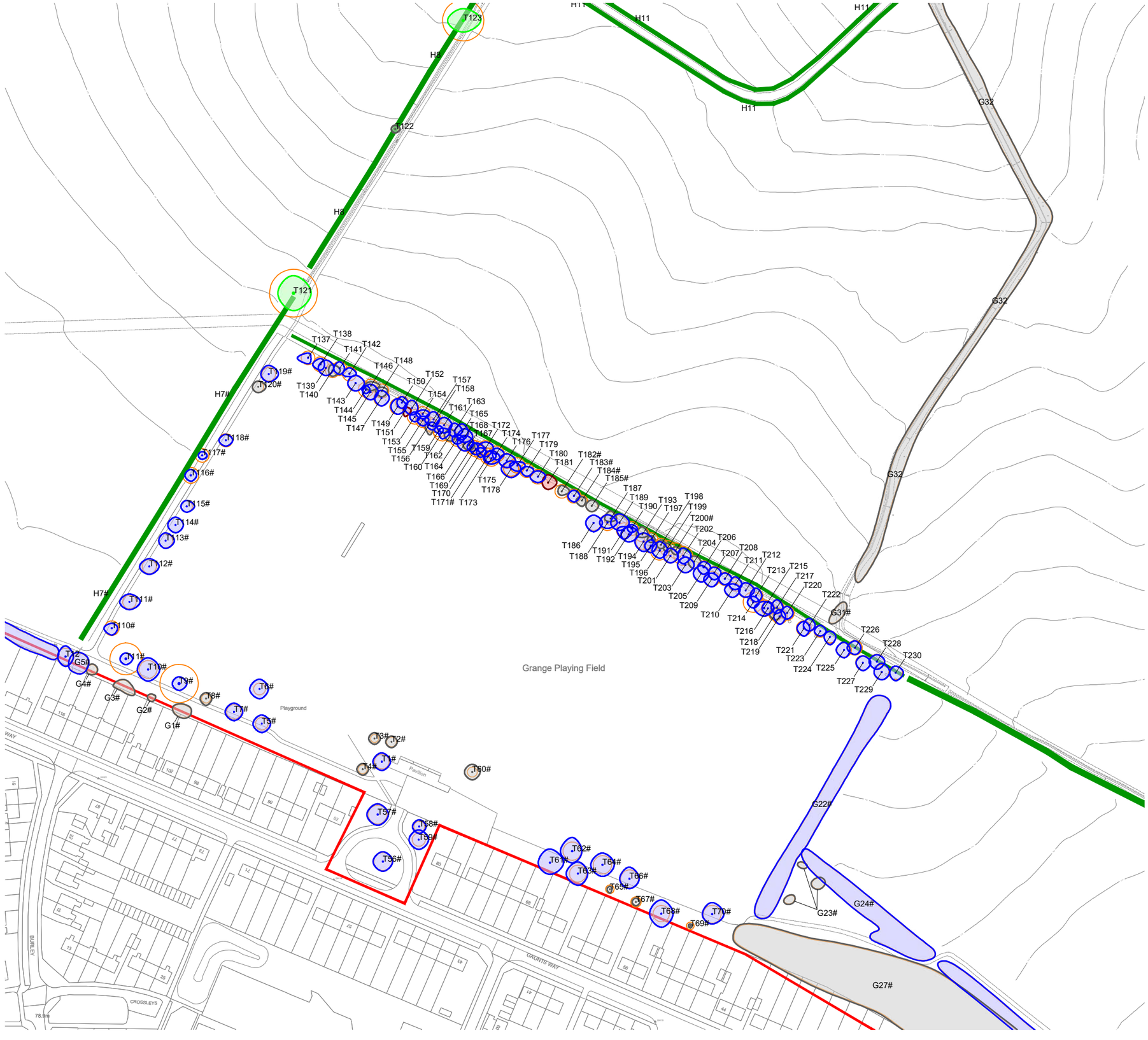

KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)
- Hedgerow (Not categorised)

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Rev	Description	Drawn	Approved	Date
A	Updated key	HEE	JGS	03.08.2023

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Title
Drawing 1: Tree Constraints Plan [BASELINE] - Inset 3 of 7

Drawing Number
D9546.06.003

Drawn	Checked	Approved	Scale	Date
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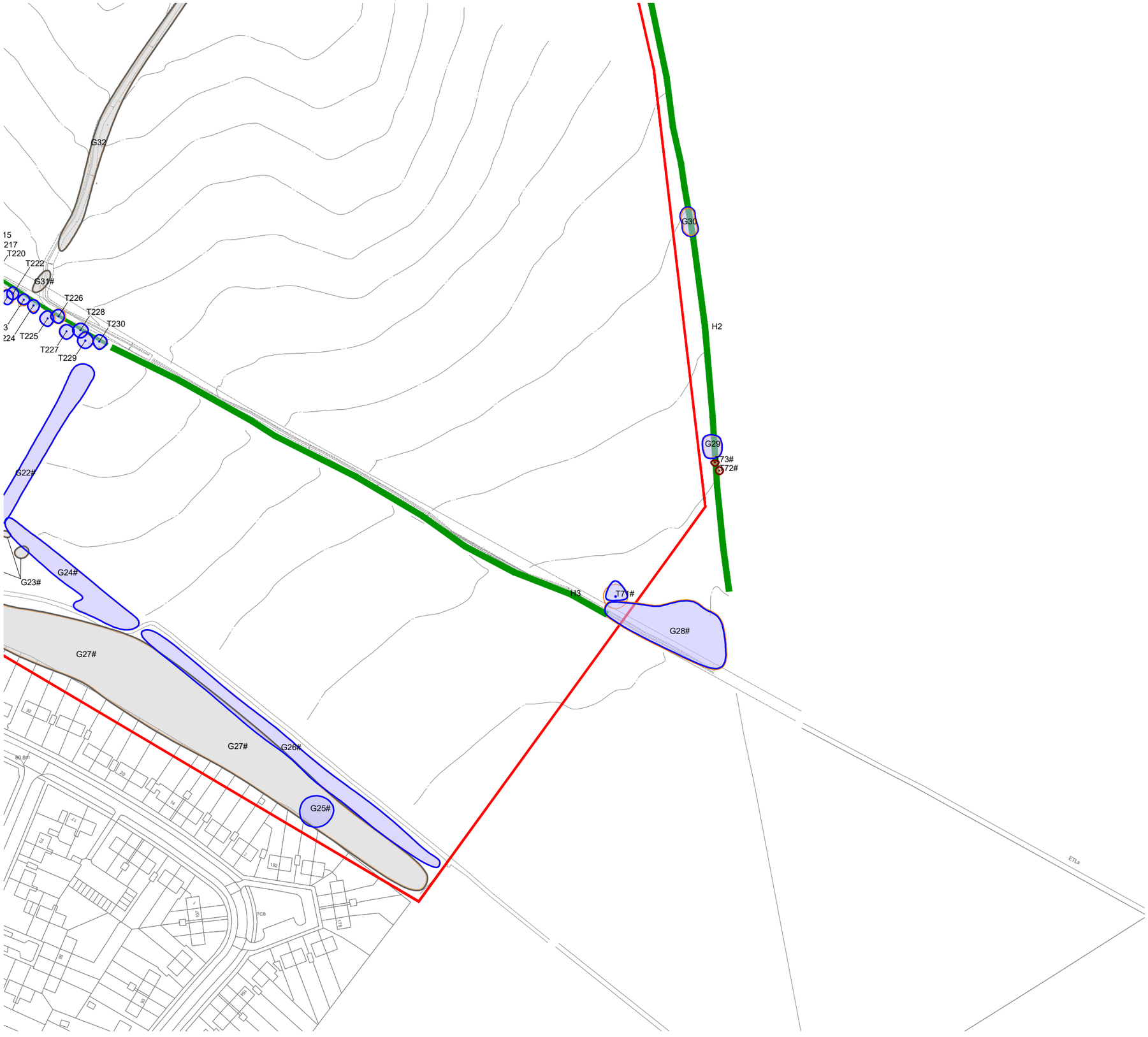

KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

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- Category C (Low quality)
- Category U (Unsuitable for retention)
- Hedgerow (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Updated key	HEE	JGS	03.08.2023

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Project
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Title
Drawing 1: Tree Constraints Plan [BASELINE] - Inset 4 of 7

Drawing Number
D9546.06.004

Drawn	Checked	Approved	Scale	Date
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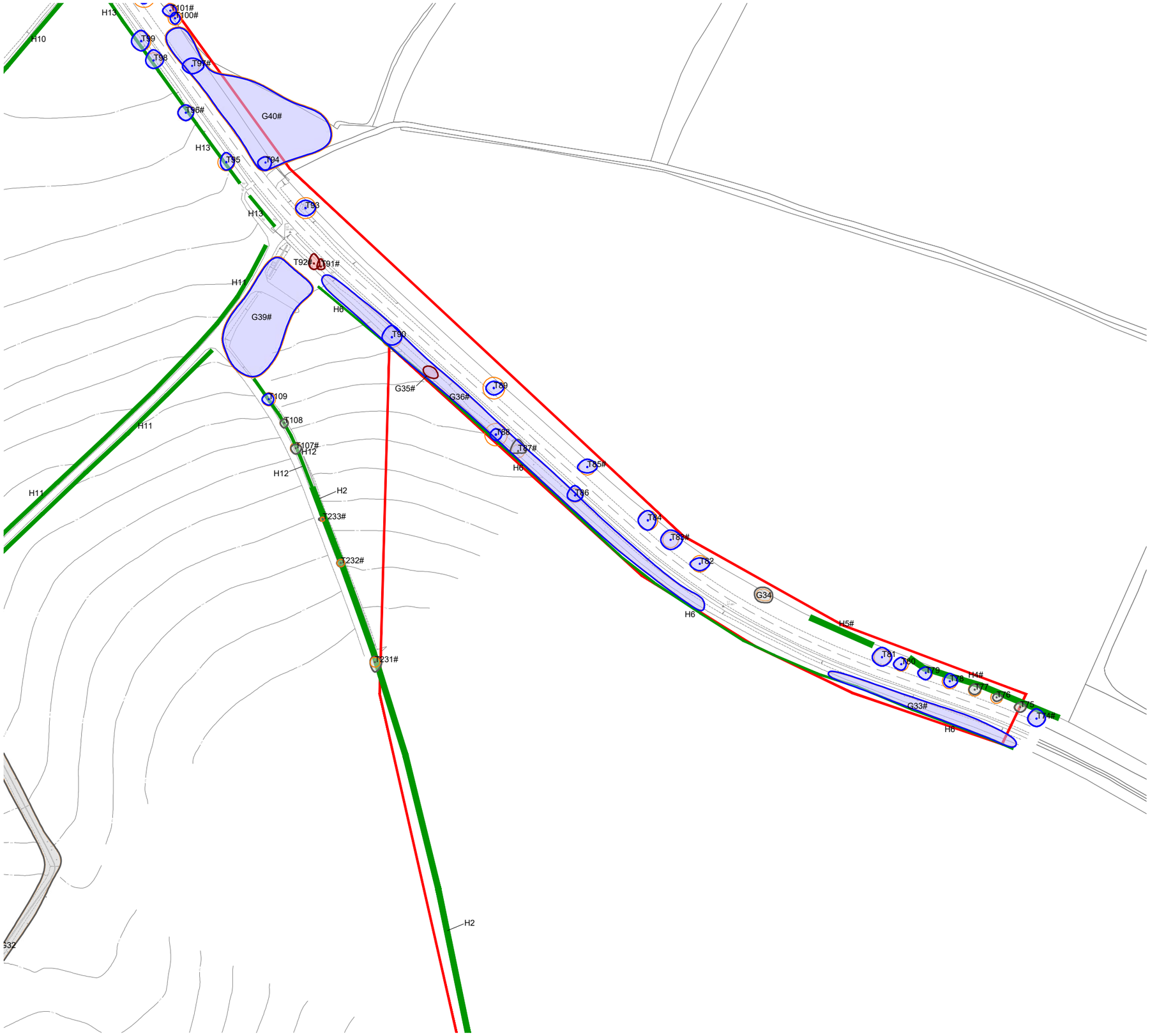

KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

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- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)
- Hedgerow (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Additional tree survey data (T231, T232, T233, H2); key	HEE	JGS	03.08.2023

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Project
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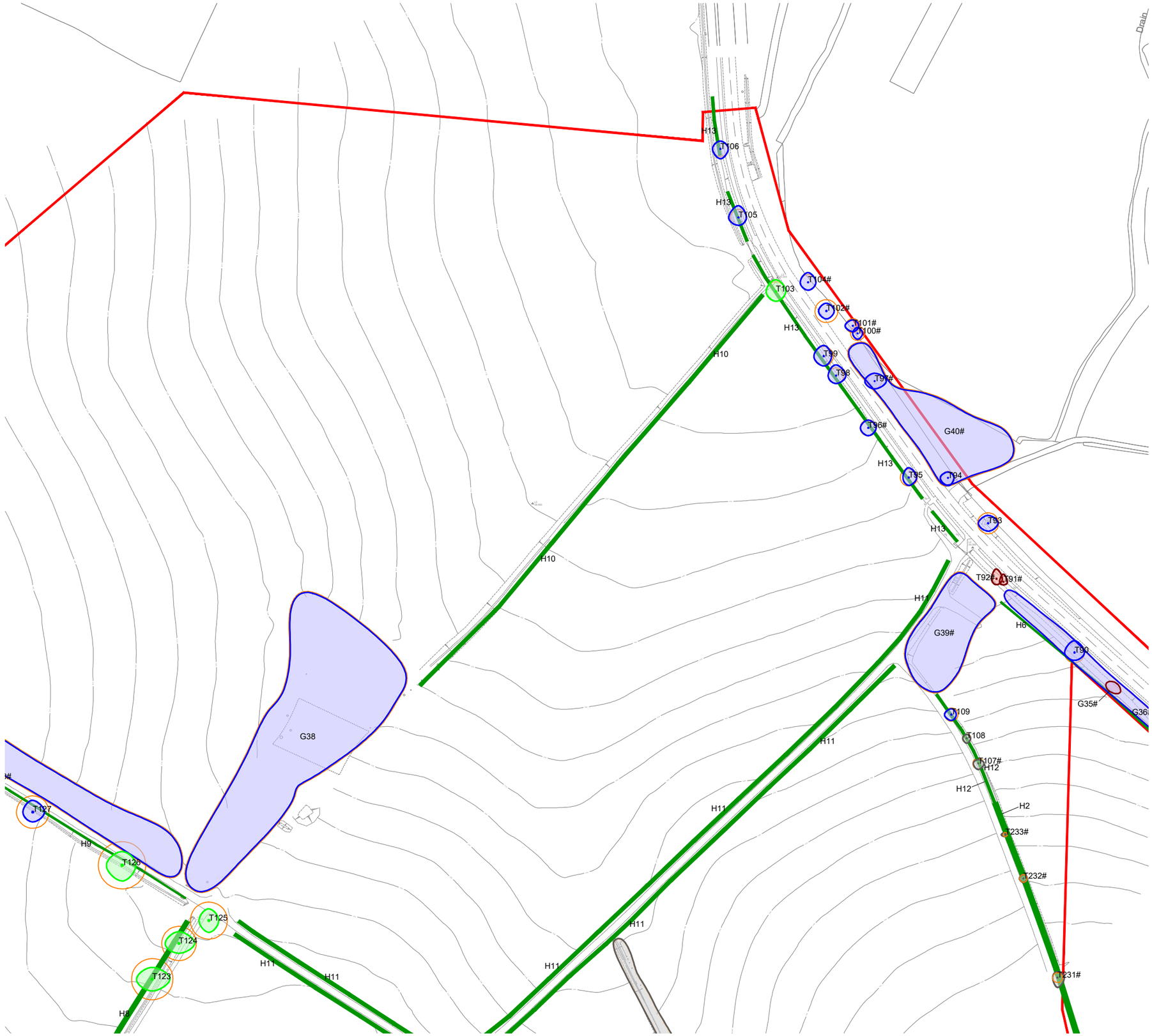
Title
Drawing 1: Tree Constraints Plan [BASELINE] - Inset 5 of 7

Drawing Number
D9546.06.005

Drawn	Checked	Approved	Scale	Date
REC	JAH	JGS	1:2,000 @ A3	08/03/02023



KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

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- Category C (Low quality)
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- Hedgerow (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Additional tree survey data (T231, T232, T233, H2); key	HEE	JGS	03.08.2023

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Project: Land North of the Grange, Letchworth

Title: Drawing 1: Tree Constraints Plan [BASELINE] - Inset 6 of 7

Drawing Number: D9546.06.006

Drawn	Checked	Approved	Scale	Date
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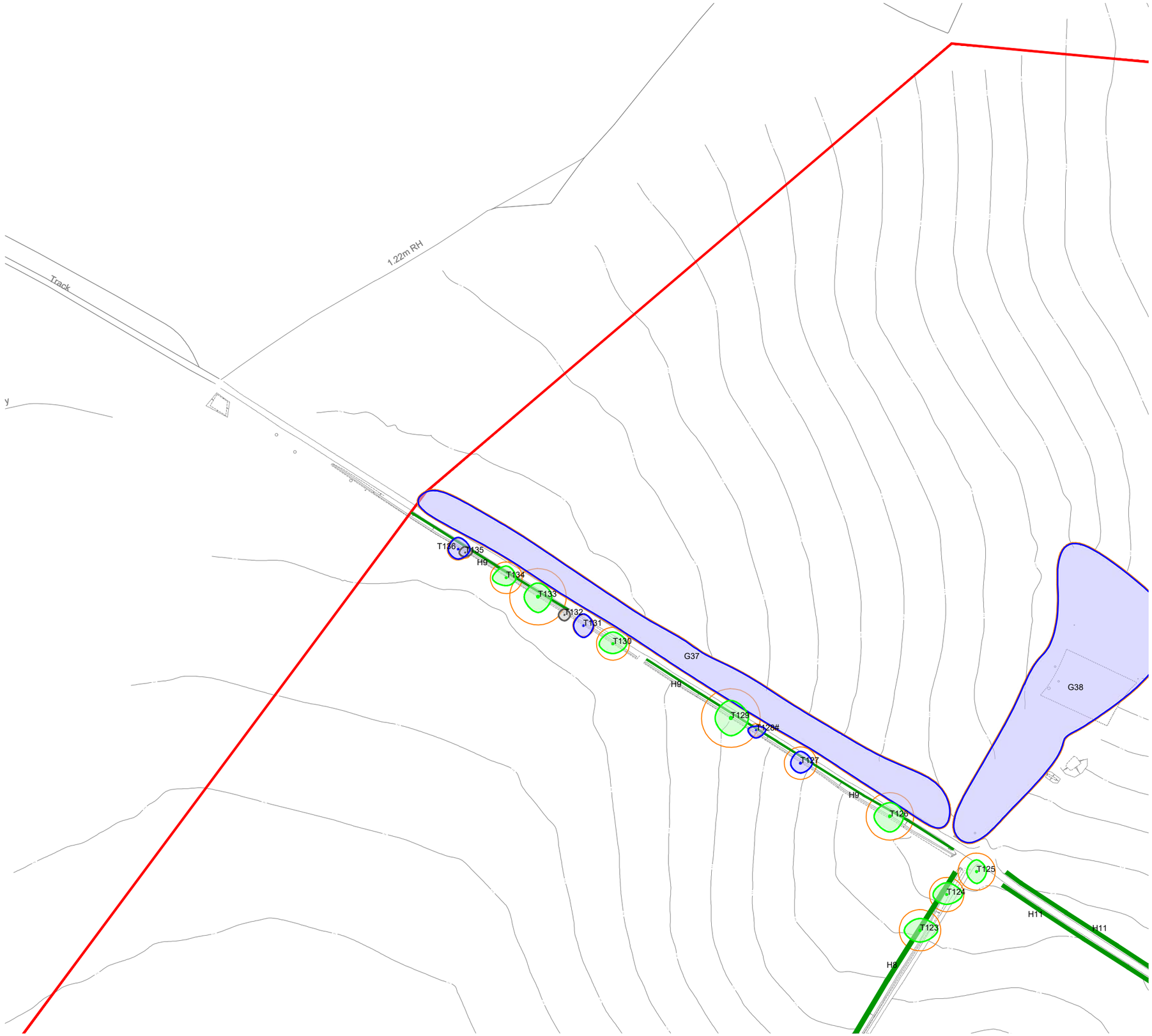

KEY

[This drawing must be reproduced in colour]

- T1/G1 Trees and Groups
- H1 Hedgerow
- Root Protection Area (RPA)
- Survey Boundary
- # Approximate location (Feature not shown on supplied topographical survey)

Tree Quality Categorisation

(Based on BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations)

- Category A (High quality)
- Category B (Moderate quality)
- Category C (Low quality)
- Category U (Unsuitable for retention)
- Hedgerow (Not categorised)

NOTE: This drawing should be read in conjunction with the respective Arboricultural Survey Data (Appendix A).

Rev	Description	Drawn	Approved	Date
A	Updated key	HEE	JGS	03.08.2023

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Project
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Title
Drawing 1: Tree Constraints Plan [BASELINE] - Inset 7 of 7

Drawing Number
D9546.06.007

Drawn	Checked	Approved	Scale	Date
REC	JAH	JGS	1:2,000 @ A3	08/03/02023

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Appendix K

Transport and Accessibility study

Report
March 2024

Letchworth Site LG1- Transport & Accessibility Report

Letchworth Garden City Heritage Foundation
23045811

steer

Report
March 2024

Letchworth Site LG1- Transport & Accessibility Report

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Prepared for:

Letchworth Garden City Heritage Foundation
One Garden City
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Contents

Executive Summary ..... **vi**

Overview vi

Transport Policy Context vii

Surrounding Developments and Multi-modal Transport Scheme Proposals vii

Existing Travel Trend Assessments viii

Accessibility Audits viii

Site LG1 Opportunities and Constraints and Emerging Site LG1 Access Strategy viii

Transport Impact Assessments xi

Next Steps xii

1 Introduction **1**

Project Context 1

Document Structure 3

2 Transport Policy Context **4**

Overview 4

Key policies 4

3 Baseline Transport Context **15**

Site Location 15

Sustainable Access 15

Vehicle Access and Local Highway Network 26

Public Transport Access 27

Personal Injury Collision Analysis 35

Future Surrounding Development Sites and Transport Access 39

Future Transport Scheme Proposals 42

4 Existing Travel Trend Analysis **48**

2011 Census Travel to Work Data – Letchworth Level 48

Grange Estate Travel Trends 50

5 Accessibility Audits **56**

Overview 56

Accessibility Audit Route Identification 56

Audit methodology 56
Accessibility Audit Findings 61

6 Emerging Site LG1 Access Strategy, Opportunities and Constraints 91

Introduction 91
North Hertfordshire Local Plan Representation 93
Vehicle Access 93
Potential for Rat Running 96
Existing Grange Estate Vehicle Trip Distribution 96
Public Transport Access 96
Walking and Cycle Access 104
New Technologies 107
LG1 Sustainable Mobility Hub 107
On-site Car Parking Strategy 108
Transport Impact Assessments 109
Travel Plan, Delivery and Servicing Plan and Construction Logistics Plan 117
Challenges and Responses Summary 118

7 Next Steps 121

Figures

Figure 1-1: Site Location 2
Figure 2-1: Hertfordshire Vision 8
Figure 2-2: Package 11 Letchworth Centre and Employment Area- schemes 13
Figure 2-3: Package 12 North Letchworth 14
Figure 3-1: Letchworth Key Destinations and Transport Map 16
Figure 3-2 – Site LG1 Walking Catchment 20
Figure 3-3 – Potential Site LG1 Neighbourhood Centre Walking Catchment 21
Figure 3-4 – Walking catchment from Site LG1 Plot HSG02 Centroid 22
Figure 3-5 – Walking Catchment from Site LG1 plot HSG03 Centroid 23
Figure 3-6 – Walking Catchment from Site LG1 Plot HSG05 Centroid 24
Figure 3-7 – Site LG1 Cycling Catchment 25
Figure 3-8: Local Highway Network 26

Figure 3-9: Letchworth Bus Routes Bus Map 28
Figure 3-10: Letchworth Bus Network 29
Figure 3-11: Existing Bus Route 55 serving the Grange Estate 32
Figure 3-12: Collision analysis for Letchworth (STATS19) 36
Figure 3-13: Letchworth Cycle Strategy Schemes 44
Figure 3-14: Geographical Scope of Letchworth Garden City Sustainable Travel Town 46
Figure 4-1: Letchworth Grange MSOA (E02004911 North Hertfordshire 003) 50
Figure 4-2: 2010 Mid Year Population Estimates 51
Figure 4-3: The Grange Estate Car Ownership Comparison to North Hertfordshire and England 54
Figure 4-4: Average Travel Time in Minutes by walking or public transport to the nearest key service for Letchworth Grange compared to North Hertfordshire and England. 55
Figure 5-1: TfL's 10 Healthy Streets Indicators 57
Figure 5-2: Accessibility Audit Routes 60
Figure 5-3: Accessibility Audit Interventions Map 62
Figure 6-1: Conceptual Site Layout 91
Figure 6-2: Arriva 55 Bus Route Letchworth to Stevenage Existing Route (left) and Potential Extension (right) 99
Figure 6-3: Arriva 55 Bus Route Letchworth to Stevenage Existing Route (left) and Potential Extension (right) 100
Figure 6-4; Example of Cycle Route Signage with Journey Times in the Fairfield Park Development 107
Figure 6-5: ATC Locations 112
Figure 6-6: Junction Turning Count Locations 113
Figure 6-7: AM Peak Levels of Service 115
Figure 6-8: PM Peak Levels of Service 116

Tables

Table 2-1: Minimum Disabled Parking Standards 5
Table 2-2: C3 Residential – Minimum Car Parking and Cycle Parking Standards 6
Table 2-3: DfT Cycling and Walking Long Term Aspirations 10
Table 3-1: Bus Routes Serving Letchworth 30
Table 3-2: Frequent Bus Routes Servicing Letchworth 30
Table 3-3: Less Frequent Bus Services Serving Letchworth 31

Table 3-4: Bus Route 55 – Weekday AM Peak, PM Peak and Daily Service Frequencies 31
Table 3-5: Letchworth Garden City Rail Station – Weekday AM Peak Period Frequency 33
Table 3-6: Letchworth Garden City Rail Station – Weekday PM Peak Period Frequency 34
Table 3-7: Arlesey Rail Station- Weekday AM Peak Period Frequency 34
Table 3-8: Arlesey Rail Station- Weekday PM Peak Period Frequency- July 2022 35
Table 3-9: Collision Casualties by severity (2016-2020) 37
Table 3-10: Letchworth Cycle Strategy Scheme Summary 43
Table 4-1: Travel to Work mode shares – Letchworth Level 48
Table 4-2: Top 10 inter-urban travel to work flows in Hertfordshire 49
Table 4-3: Top five travel to work destinations of Letchworth residents 49
Table 4-4: Population figures and structure for The Grange, Letchworth 51
Table 4-5: 2011 Census Mode share data for travel to work in the Grange 52
Table 4-6: 2011 Census Top five travel to work destinations of The Grange residents 53
Table 4-7: Car ownership statistics for The Grange, Letchworth 54
Table 4-8: Letchworth Grange Average Distance in KM to Local Services vs England Average . 55
Table 4-9: Average Broadband Speeds – Letchworth Grange vs England Comparison 55
Table 5-1: Audit Routes and Descriptions 58
Table 5-2: Key destinations, users and improvement options for all Urban routes 63
Table 5-3: Key destinations, users and improvement options for all Non-Urban routes 86
Table 6-1: Key Changes to Bus Routes and Stops to Facilitate Arrive 55 Bus Route Diversion Options Along Gaunts Way 100
Table 6-2: Letchworth Town Centre Long-stay Car Parking 103
Table 6-3: Forecast LG1 Multi-Modal Trip Generation – Excluding Sustainable Mitigation (November 2018 Assessment) 109
Table 6-4: ATC locations 112
Table 6-5: Junction Turning Count Locations 114
Table 6-6: Junction Level of Service Thresholds 114

Appendices

A Local Cycling and Walking Infrastructure Plan Proposals

B Letchworth Personal Injury Collision Map

C Letchworth Garden City Cycling Strategy (October 2018)

D **Highover Farm Sustainable Transport Link drawings (January 2022)**

E **Sustainable Travel Towns Outline Plan (April 2021)**

F **Local Insight profile for 'Letchworth Grange' Area (March 2022)**

G **Journey to work mode share maps**

H **Journey to work origin and destination maps by mode**

I **Accessibility Audit Assessment sheets**

J1 **Land to the North of Letchworth Garden City- Norton Road Access (July 2020)**

J2 **Updated Norton Road Access Design and HCC Agreement in Principle**

K **Site LG1: Third Access Feasibility Technical Note (August 2018)**

L **Potential Western Way Access Arrangements and Swept Path Analysis (January and April 2019)**

M - **Letchworth Site LG1 – ANPR Surveys Technical Note**

N **Land to the North of Letchworth Garden City- Draft Public Transport Strategy (July 2019)**

O **Avocet Link- Proposed Site Plan (April 2019)**

P **LG1 Land to the North of Letchworth Garden City- Trip Generation Methodology (November 2018)**

Q **AECOM Strategic Highway Model Impact Assessment (February 2019)**

R **Vehicle Distribution Methodology (November 2018)**

S **Letchworth Garden City, Baseline Traffic Modelling Report (July 2020)**

Executive Summary

Overview

Steer has been appointed by Letchworth Garden City Heritage Foundation (LGCHF) to prepare a Transport and Accessibility Report in support of the development of the 'Land to the north of the Grange' (Site LG1), located to the north of Letchworth Garden City.

Site LG1 is located to the north of the Grange Estate, at the northern edge of Letchworth. The site comprises an L-shaped parcel of land, which is located to the north of Gaunts Way and to the west of Western Way and is bound by rural undeveloped land to the north, east and west of the site. The Grange Estate to the south is predominantly residential.

The local planning authority is North Hertfordshire Council (NHC) and Hertfordshire County Council (HCC) are the highways authority. Central Bedfordshire Council (CBC) are also a stakeholder as the HCC/ CBC boundary is in close proximity to the north and west of the site.

Site LG1 is allocated in the North Hertfordshire Local Plan 2011-2031 as a Strategic Housing Site for 900 residential dwellings, a 2FE primary school and a new neighbourhood centre with retail, community and medical facilities. Since its inception, LGCHF have been clear that the development will be supported by a multi-modal transport strategy, to encourage sustainable transport access to the site including by cycling, walking, bus and rail.

All large strategic sites within North Hertfordshire are now required to prepare a Strategic Masterplan in accordance with Policy SP9 Design & Sustainability and the site-specific Allocation Policy SP15: Site LG1 of the North Hertfordshire Local Plan 2011-2031.

This Transport and Accessibility Report examines travel opportunities, considering the site's location within the wider setting in relation to key destinations, other future development sites and the multi-modal transport networks. Understanding this strategic context is critical to developing an effective Transport Strategy and design for Site LG1 to ensure the development is well integrated with the wider community, key destinations and transport networks and takes account of the location of complimentary development and existing social infrastructure.

Part of the overall vision for the LG1 development relevant to transport is as follows:

"The LG1 development will include a vibrant local centre with a primary school and local facilities, promote a multi-modal transport approach, encouraging cycling, walking, bus and rail use and sustainable transport improvements across the town whilst substantially reducing reliance on travel using private car."

Furthermore, LGCHF's Housing Development Committee adopted a more detailed vision for LG1's Transport Strategy:

"The LG1 development will be sustainable, accessible and well-integrated with Letchworth Garden City and the surrounding transport networks. It will support modal shift and minimise greenhouse gas emission by encouraging travel by sustainable and active transport modes including public transport, walking, and cycling and embracing new mobility/ technology concepts.

The development will minimise impacts on existing residents in the Grange Estate and incorporate a sustainable travel hub that will reduce the need for a private car. The scheme will provide access points onto Norton Road and Western Way if agreed by the highways authority and promote an enhanced cycling and pedestrian network for existing and new residents and a new demand responsive bus system."

Transport Policy Context

Chapter 2 provides a review of the transport policy context for Site LG1.

Baseline Transport Context

Chapter 3 provides a detailed overview of the Baseline transport context.

Site LG1 is well connected to local pedestrian and cycle networks with the Garden City Greenway, Etonbury Green Wheel, NCN12, Footpath 32 and a number of other permissive footpaths directly serving the site. The site is also situated approximately 2km north of Letchworth Garden City Rail Station and town centre which can be accessed in approximately 25 minutes on foot and approximately 10 minutes by bicycle. The rail station is the main commuter link located on the Cambridge Line and is served by Great Northern rail and Thameslink services, with direct connections to Stevenage, Welwyn Garden City, Finsbury Park, London St Pancras International, London Kings Cross and Brighton to the south, and Baldock, Royston, and Cambridge to the north. Arlesey Rail Station is located 7km to the north of the Site with frequent peak hour services to London, Peterborough and Horsham.

This Transport and Accessibility Report includes maps which show the location of Site LG1 in relation to key destinations and transport routes/ facilities in the surrounding areas and destinations falling within 20 minute walking and cycling catchments of the site.

At present the only vehicle access point serving the site is from Gaunts Way which serves the Grange Recreation Ground and car park which has 51 car parking spaces including two accessible spaces.

Bus Route 55 operated by Arriva is the only bus route serving the Grange Estate, south of Site LG1. The route links the Grange Estate with central Letchworth, Lister Hospital and central Stevenage. Within Letchworth, it also serves Sainsburys and the Jackmans Estate. This route only currently runs two buses per hour in peak periods. The hours of service are quite restrictive for commuters to/from London, who have no alternative public transport options when travelling to the station prior to 06:00 and from the station after 19:26.

Surrounding Developments and Multi-modal Transport Scheme Proposals

A review has also been undertaken of surrounding proposed development sites within Central Bedfordshire and Hertfordshire. Two of the proposed development sites within close proximity to Site LG1 are the redevelopment proposals for the Pelican Way Neighbourhood Centre and the Western Way residential apartments, along the western side of Western Way. These are both owned by settle.

This report also reviews a number of future multi-modal transport scheme proposals within North Hertfordshire and Central Bedfordshire including potential improvements to Letchworth Garden City Railway Station, and potential schemes identified in the Letchworth Garden City Cycling Strategy (2018), the Central Bedfordshire Local Plan Transport Modelling Study, Local Cycling and Walking Infrastructure Plans (LCWIPS), North Central Hertfordshire Growth and Transport Plan Stage 3 Interventions Paper (2022), and the Letchworth Sustainable Travel Town

Outline Plan (2021). CBC are also undertaking an A507 Corridor Study, the findings of which are due to be issued shortly.

Existing Travel Trend Assessments

Chapter 4 includes a detailed assessment of existing travel trends based on the 2011 Census and Local Insight Data, including travel to work data, trip origin and destination data and car ownership data. One of the main findings of this is that at the time of the 2011 Census 67% of residents within the Grange Estate travelled to work by car, with walking and rail-based trips both accounting for 11% of trips. 2021 Census data has been provided for comparison purposes.

Accessibility Audits

Comprehensive accessibility audits have also been undertaken of the main pedestrian and cycle access routes between Site LG1 and surrounding destinations – the findings of which are presented in **Chapter 5**. These were undertaken on 26 April 2022, 3 May 2022 and 20 September 2023 (the 20 September 2023 audit comprised the routes to The Highfield School and Fearnhill School). A total of 36 routes were audited against Healthy Streets Indicators. The audits identified the main issues and suggested areas for improvement for further consideration by local authorities as part of the strategic master planning process as opposed to being a list of schemes to be delivered/ funded by the LGCHF.

Site LG1 Opportunities and Constraints and Emerging Site LG1 Access Strategy

Chapter 6 outlines the Site LG1 opportunities and constraints, the previous studies undertaken by Steer and how these have informed the emerging Site LG1 multi-modal transport access strategy. The proposed development will be sensitively designed in accordance with Letchworth Garden City and HCC Design principles.

The proposed vehicle access strategy assumes a primary vehicle access from Norton Road and a secondary vehicle connection from Western Way. The primary access would also serve as the main construction vehicle access route. Steer originally undertook a Norton Road Access Study (April 2019) including an initial conceptual design for the junction (**see Appendix J1**).

Due to visibility requirements, potential discouragement of rat-running and land ownership constraints, the proposed Norton Road access junction has been subsequently moved further eastwards so it is now located c200m to the east of the Greenway (north-south running section). Updated designs were submitted HCC and their highways consultants WSP who have agreed to the proposed location/design in principle. Both the designs and review comments are provided in **Appendix J2**.

The HCC Speed Management Group (including HCC Highways Safety Teams and the Police) approved in principle a submission by Steer on Monday 22 January 2024 to reduce the speed limit from 60mph to 50mph. A subsequent Traffic Regulation Order (TRO) application will still need to be submitted for approval. As the development cannot be bound by a design requiring a TRO to be implemented, the designs initially assume a 60mph speed limit on Norton Road as a worse case. The secondary vehicle access from Western Way is initially proposed from the western side of Western Way utilising the existing resident's car parking court to the north of the settle flats. Settle is considering a potential re-development of the adjoining buildings, so ongoing dialogue will need to be maintained regarding this access. An initial conceptual layout has been developed for this access (**see Appendix L**), this can co-exist with the existing buildings.

The existing Grange Estate Recreation Ground car park access will be retained.

Full justification has been provided for the choice of these access routes. Detailed discussions will continue with settle regarding the access route.

The next stage for the Norton Road north and Western Way access points is to hold further discussions with HCC and NHC to agree the final junction forms.

A study was also undertaken by Steer in 2018 which concluded that a third vehicle access from Gaunts Way would not be feasible (**see Appendix K**).

A consideration resulting from the provision of two vehicle access points to the development will be the distribution of trips between the access point and how to prevent rat-running through the development through internal masterplan design. This has also been an issue raised by local residents in community engagement.

Automatic Number Plate Recognition (ANPR) Surveys have been undertaken on the cordon of local highways surrounding the site within both North Herts and Central Bedfordshire to review the distribution of trips entering and exiting the Grange Estate and whether this could be used to inform the future distribution of Site LG1 trips via the proposed Site LG1 Norton Road primary access and Western Way secondary access points.

These surveys were undertaken on Saturday 15 October and Tuesday 18 October 2022 and the results of these surveys are included in the Site LG1 ANPR Survey – Technical Note in **Appendix M**.

It is considered unlikely that rat running would occur based on the revised location of the Norton Road northern access, now located c 200m east of the Greenway and therefore the preference would be to have a more convoluted primary route through the site, with internal traffic calming measures and the 20mph speed limit, as opposed to a physical constraint such as a bus gate. There is also potential to monitor the number of through trips once the development is operational and provide mitigation should significant rat-running be observed as part of a Travel Plan.

A significant factor towards supporting mode shift will be providing bus access to Site LG1, however a number of challenges will need to be overcome and opportunities explored. As detailed above the Arriva 55 bus route is the only route serving the Grange Estate and the peak hour frequencies and hours of service are quite restrictive for potential commuters and other users. The initial Public Transport Strategy for the site was first considered in the Public Transport Strategy Technical Note in **Appendix N**.

The LGCHF is currently exploring a potential demand responsive bus service into Site LG1, with a bus stop provided within the site. It is envisaged that in addition to a bus stop being provided within Site LG1, a bus stop could also be located centrally within the Grange Estate. An associated bus stop on Southfields/ Pelican Way would ensure that the demand led system would also benefit existing residents in the Grange Estate.

NHC and CBC have raised that they would like potential bus connections between Site LG1 and Central Bedfordshire destinations to also be explored. A meeting was held with the HCC and CBC Passenger Transport Teams, NHC and HCC officers and Arriva and Centrebus representatives on 23 November 2023 to discuss the above further and future bus access to Site LG1. It was agreed that the following approach could be undertaken for the Strategic Masterplan:

- The Strategic Masterplan and primary internal highway link design specifications should safeguard bus access, identify bus stops and include a bus turn around location.

- At the planning application stage, the designs will accommodate the above and an indicative bus access strategy proposal will be provided, identifying the principles/ costs for implementing a minimum viable service to the centre of Letchworth/ the railway station.
- It is envisaged that a demand response service, such as the current HertsLynx service could serve the development from the outset until the point a standard bus service can be introduced. This may include a shuttle service to the town centre station, providing a stop centrally in the Grange, as well as within the development.
- The bus service will form part of the Travel Plan.

The future transport strategy will need to ensure there are sufficient connections to Letchworth Garden City Railway Station (and therefore the town centre) by bus, walking and cycling to deter car trips, to help mitigate the potential impact of Site LG1 car trips in general and also on car parking demand surrounding Letchworth Garden City Rail Station.

It is proposed to retain the alignment of the existing pedestrian/ cycling routes through the Site LG1 masterplan as well as the existing pedestrian/ cycle access points to the site, with the following additional measures:

- Upgrading the existing pedestrian and cycle access point from Gaunts Way including enhanced surfacing and footways.
- The new access proposed from Western Way would also include a pedestrian/ cycle access point as well as vehicle access.
- Creation of an additional section of the Greenway/ Etonbury Green Wheel to the west of the development to allow users to have the option to bypass the development.
- Creation of a linear park to the west of the Grange Recreation Ground.
- Creation of a new pedestrian/ cycle link from the Avocet residential area to the southwest of the site (see **Appendix O**).

Discussions will continue to be held with HCC, NHC and CBC to identify potential external walking and cycling improvements that could be brought forward to support the delivery of Site LG1, including the potential enhancement of NCN12 between LG1 and the town centre. Some of these were identified in the accessibility audit and others have been identified in the Letchworth Garden City Cycling Strategy (Steer, 2018) (**Appendix C**) and the Letchworth Sustainable Travel Towns – Outline Plan (**Appendix E**).

The emerging Site LG1 Masterplan will also need to be well integrated with wider surrounding destinations, transport networks and development sites. This includes any future Pelican Way and Western Way redevelopment proposals by settle, should these proceed.

A comprehensive wayfinding and signage strategy should be developed for proposed Site LG1, to promote the most important destinations and the walking and cycling routes that can be used to access these.

Site LG1 will also embrace emerging technologies where feasible and it is also proposed to include a sustainable mobility hub within the centre of the proposed development which could potentially include a high-quality bus interchange area linking to the town centre multi-modal transport interchange, a car club, car share spaces, electric vehicle and cycle charging points, a community cycle workshop, potential cycle hire facilities and centralised parcel lockers. These options will be explored further as the masterplan and scheme proposals evolve.

Agreeing a suitable level of on-site car parking will be carefully considered, as a fine balance will need to be achieved between providing adequate car parking capacity on-site, to prevent

overspill car parking in the Grange Estate, which has been a matter raised as a concern in community consultation, whilst at the same time promoting mode shift to sustainable modes. Car parking will also need to be sensitively designed within the emerging masterplan to ensure that it does not dominate over facilities for sustainable transport modes. It is our understanding that an approach compliant with the Council's car parking standards will be taken, with review of future proofing should the demand for parking reduce. Potential car parking strategy options include: traditional – low on plot provision with off plot car lots, re-purposing car parking lots/land in the future and house types with convertible garages for reduced car ownership. This will also be considered from a commercial perspective.

Transport Impact Assessments

Chapter 6 of the report also outlines the initial transport impact assessments that have previously been undertaken including an initial trip generation exercise in 2018 (to be updated and scoped with NHC, HCC and CBC), an AECOM Strategic Highway Model Run Impact Assessment (2019) (see **Appendix Q**) and a Steer high-level appraisal of the potential distribution of development trips which identified that during the AM peak circa 80% of trips would potentially use the Norton Road access with 20% using the Western Way access (see **Appendix R**). This was considered to be a more realistic assumption that the AECOM strategic highways model which initially forecast that c99% of Site LG1 development trips would use the Norton Road access during the AM and PM peak periods.

The ANPR surveys in **Appendix M** have also considered the future distribution of trips between Site LG1 access points and across the wider network. However, more detailed assessments will need to be undertaken of the future trip distributions and these will be scoped with both HCC and NHC. Discussions will also focus on the form of assessments required to test the capacities of junction forms, if a COMET model re-run is required, and timescales for undertaking this prior to a future planning submission.

In February 2020 a comprehensive programme of traffic surveys were also undertaken on the surrounding highway network including Automatic Traffic Counts and Classified Junction Turning Counts. Modelling assessments were then undertaken of the most important junctions to assess 2020 baseline highway network capacities. The full capacity assessment report is included in **Appendix S**.

Scoping discussions will also be held with HCC, NHC, CBC and National Highways to identify the junctions for which localised traffic capacity modelling needs to be undertaken for the Site LG1 Transport Assessment that will be undertaken to support the future planning application.

It should be noted that the February 2020 surveys did not include a count of the A1 (M) junction. Therefore, discussions will need to be undertaken with National Highways to identify whether they have available counts and a model for this junction or whether an additional survey and modelling will need to be undertaken.

It is envisaged that Outline Travel Plan and Delivery and Servicing Plan (DSP) documents will be produced to support the future planning application for the site to outline the long-term management strategies for the sustainable movement of both people and goods to the site. It is likely that both the Outline Travel Plan and DSP will be secured as pre-occupation conditions, with Detailed documents submitted to HCC/ NHC for approval prior to occupation of the development.

An Outline Construction Logistics Plan (CLP) will also be submitted as part of the planning application to set out the construction transport requirements, access strategy and associated mitigation measures. A Detailed CLP will be secured by means of a pre-commencement condition.

Next Steps

This Transport and Accessibility Report combined with other studies undertaken by the multi-disciplinary project team acting on behalf of the LGCHF will inform the development of the Site LG1 Strategic Masterplan.

As part of the development of the Transport Strategy, LGCHF will undertake market testing of the various options. This is to ensure that any measures enhance the attractiveness of the development and do not have a harmful impact on its commerciality. Therefore, all measures will be tested to demonstrate their deliverability and viability, whilst meeting the values and principles included in LGCHF's adopted vision for the site.

Further discussions will be held with the NHC, HCC and CBC to inform the development of the Strategic Masterplan and access designs to ensure it is well integrated with the surrounding area and future development sites, and to scope the methodology for the Transport Assessment and highway modelling studies that will be required to support the future planning application for the site.

1 Introduction

Project Context

1.1 Steer has been appointed by Letchworth Garden City Heritage Foundation (LGCHF) to prepare a Transport and Accessibility Report in support of the development of the 'Land to the north of the Grange' (Site LG1), located to the north of Letchworth Garden City.

1.2 Site LG1 is located to the north of the Grange Estate, at the northern edge of Letchworth. The site comprises an L-shaped parcel of land, which is located to the north of Gaunts Way and to the west of Western Way and is bound by rural undeveloped land to the north, east and west of the site. The Grange Estate to the south is predominantly residential. A site location plan is included in **Figure 1-1**.

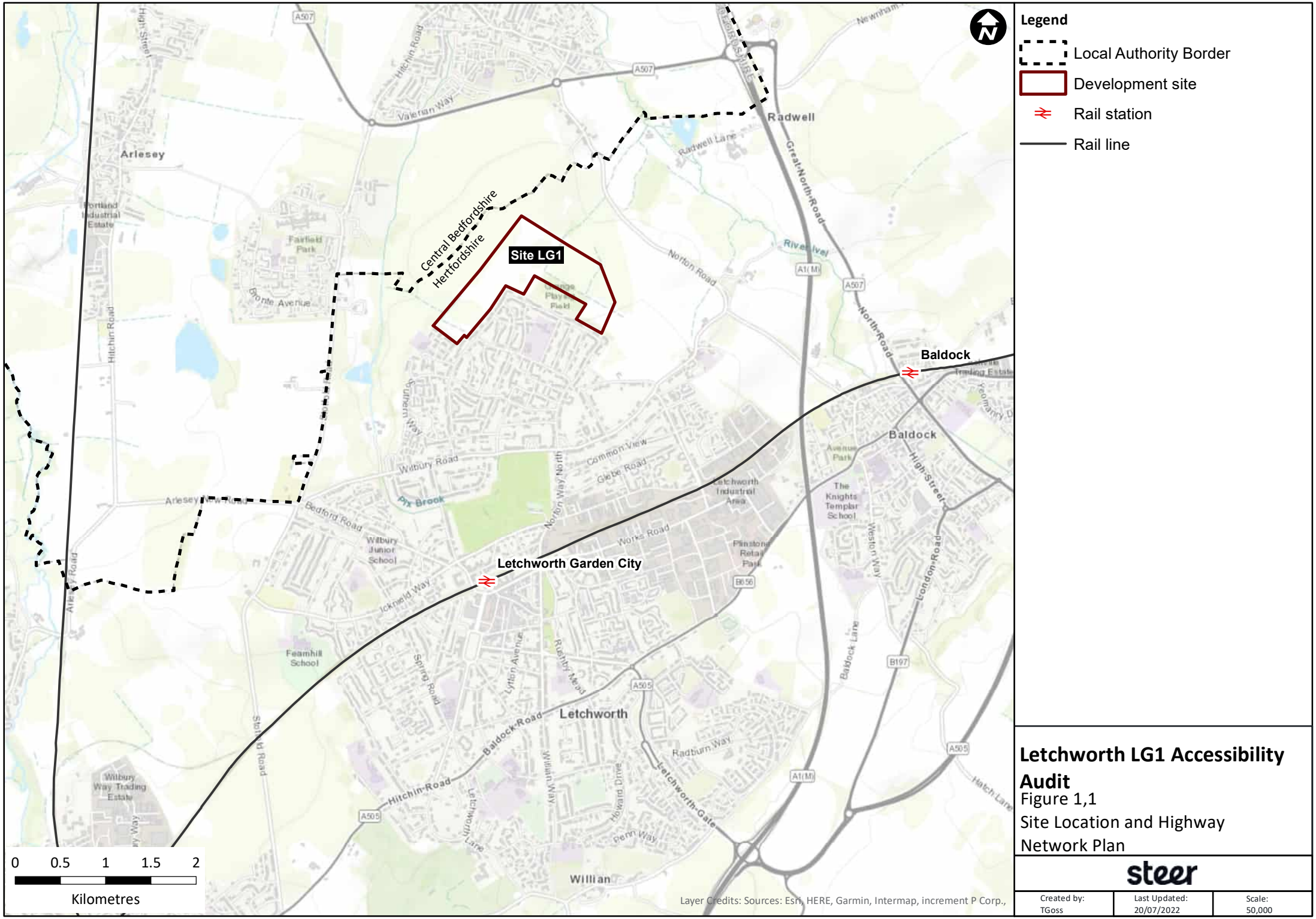
1.3 This land is allocated in the North Hertfordshire Local Plan 2011-2031 as a Strategic Housing Site for 900 residential dwellings, a 2FE primary school and a new neighbourhood centre with retail, community and medical facilities. Since its inception, LGCHF have been clear that the development will be supported by a multi-modal transport strategy, to encourage sustainable transport access to the site including by cycling, walking, bus and rail.

1.4 LGCHF IS the freeholder for the site, which is the subject of a lease to the Rand Brothers, who farm the land. North Herts Council (NHC) are the local planning authority and Hertfordshire County Council (HCC) are the highways authority.

1.5 All large strategic sites within North Hertfordshire are now required to prepare a Strategic Masterplan in accordance with Policy SP9 Design & Sustainability and the site-specific Allocation Policy SP15: Site LG1 in the Local Plan.

1.6 The aims of the Masterplan approach to the project are as follows:

- To secure a comprehensive and integrated evidence base to inform an optimal distribution of development, land uses and green, physical and social infrastructure (including transport infrastructure) to create a high-quality development that meets the NHC policy objectives.
- To co-ordinate a wide range of planning, infrastructure and delivery issues to support timely delivery and implementation.
- To facilitate a collaborative process and agree a shared vision between the landowner, NHC and Hertfordshire County Council (HCC), key stakeholders and the community to ensure a well-integrated, designed and sustainable new community that is in-keeping with the character of the local area.
- To provide a series of plans, drawings and written guidance to support the delivery of a co-ordinated and integrated place, design quality and phased infrastructure provision.



Letchworth LG1 Accessibility Audit

Figure 1,1

Site Location and Highway Network Plan

steer

Created by:	Last Updated:	Scale:
TGoss	20/07/2022	50,000

\\sdgworld.net\Data\London\Projects\230\4\58\01\GIS\MAPPING\ARCGIS\Map_Documents\Figure 1 - Local Rail Connections.mxd

1.7 This Transport and Accessibility Report is required to examine travel opportunities, considering the site's location within the wider setting in relation to key destinations, other future development sites and the multi-modal transport networks. Understanding this strategic context is critical to developing an effective Transport Strategy and design for Site LG1 taking into account the location of complimentary development and existing and future social infrastructure.

Overall Site LG1 Vision

1.8 The part of the overall vision for the LG1 development relevant to transport is as follows:

"The LG1 development will include a vibrant local centre with a primary school and local facilities, promote a multi-modal transport approach, encouraging cycling, walking, bus and rail use and sustainable transport improvements across the town whilst substantially reducing reliance on travel using private car."

1.9 Furthermore, LGCHF's Housing Development Committee adopted a more detailed vision for LG1's Transport Strategy:

"The LG1 development will be sustainable, accessible and well-integrated with Letchworth Garden City and the surrounding transport networks. It will support modal shift and minimise greenhouse gas emission by encouraging travel by sustainable and active transport modes including public transport, walking, and cycling and embracing new mobility/ technology concepts.

The development will minimise impacts on existing residents in the Grange Estate and incorporate a sustainable travel hub that will reduce the need for a private car. The scheme will provide access points onto Norton Road and Western Way if agreed by the highways authority and promote an enhanced cycling and pedestrian network for existing and new residents and a new demand responsive bus system."

Document Structure

1.10 The remainder of this report is structured as follows:

- **Chapter 2** – provides an overview of the transport policy context.
- **Chapter 3** – reviews the existing baseline transport context.
- **Chapter 4** – includes analysis of existing travel trends within the Grange Estate and Letchworth.
- **Chapter 5** – provides an overview of the accessibility audits for the main pedestrian/ cycle routes and associated findings.
- **Chapter 6** – provides a summary of the emerging Site LG1 multi-modal transport access strategy and opportunities and constraints.
- **Chapter 7** – sets out the next steps to feed into the development of the Strategic Masterplan.

2 Transport Policy Context

Overview

2.1 This Chapter provides a review of the existing and emerging regional and local policies applicable to Site LG1. It also includes a summary of the Draft Letchworth Garden City Sustainable Travel Town Action Plan.

Key policies

Hertfordshire Local Transport Plan (May 2018)

2.2 The Hertfordshire Local Transport Plan (LTP4) provides a framework to guide all future transport planning and investment for the 2018 – 2031 period.

2.3 LTP4 seeks to encourage a mode shift from private cars to sustainable transport modes (e.g. walking, cycling and passenger transport) wherever possible.

2.4 The most relevant Transport Policies within LTP4 include:

- **Policy 1** 'Transport User Hierarchy' supports the creation of built environments that encourage greater use of sustainable transport, and outlines that transport strategies for new developments should consider access by transport modes in the following order:
  - Opportunities to reduce travel demand.
  - Vulnerable roads user needs.
  - Passenger transport user needs.
  - Powered two-wheeler user needs.
  - Other motor vehicle needs.

  The hierarchy should be applied to design proposals for new developments as recommended in Manual for Streets guidance, with the final schemes demonstrating how the hierarchy has been reflected in the design.
- **Policy 2** 'Influencing land use planning' sets out that the council will encourage the location of new developments in areas with the potential to be served by high-quality passenger transport, walking or cycling as an alternative to car travel.
- **Policy 3** 'Travel Plans and Behaviour Change' involves encouraging the widespread adoption of travel plans.
- **Policy 5** 'Development Management' sets out that the Council will:
  - Ensure the location and design of proposals reflect the LTP user Hierarchy.
  - Ensure access arrangements are safe and suitable for all and adhere to the Councils Highway Design Standards.
  - Consider the adoption of access roads and internal road layouts where they comply with the appropriate adoption requirements and will offer demonstrable utility to the wider public.
  - Secure developer mitigation measures to limit development impacts.
  - Require Travel Plans for developments.

- Only consider new accesses onto primary and main distributor roads where special circumstances can be demonstrated.
- Resist development that would severely affect the rural or residential character of a road or right of way or which would severely affect safety on rural roads, local roads or rights of way particularly for vulnerable road users.
- Ensure new parking provision includes facilities for electric vehicles and shared mobility solutions (car clubs).

- **Policy 13** 'New roads and junctions' states that the Council will design new transport infrastructure, following application of the Transport User Hierarchy to manage existing demand and that of planned development.
- **Policy 16** 'Freight and Logistics' states that HCC will seek to manage freight and logistics traffic by providing advice to local planning authorities in respect of highways and freight implications of new development proposals.

NHDC Vehicle Parking at New Development Supplementary Planning Document (2011)

2.5 This document sets out the currently adopted parking standards applicable to Site LG1, which are as follows:

Disabled Parking Provision

2.6 Disabled parking provision should be included in the overall vehicle parking provision with the bays extending beyond the standard minimum with a 1.2m strip of additional width to be provided along each side creating a total minimum bay size of 3.6m x 6m. Dropped kerbs should be provided where necessary and pedestrian routes to and from car parks should be free from steps, bollards or steep slopes, ideally as close as possible to the entrance of the building but at least within 50m.

C3 Residential Car Parking Provision

2.7 **Table 2-1** identifies the disabled car parking standards.

Table 2-1: Minimum Disabled Parking Standards

Car Park Use	Car Park Size	
	Up to 200 spaces	Over 200 spaces
Employees and visitors to business premises	Individual bays for each disabled employees plus 2 bays or 5% of total capacity, whichever is the greater	6 bays plus 2% of total capacity
Shopping and recreation	3 bays or 6% of total capacity, whichever is the greater	4 bays plus 4% of the total capacity

2.8 The minimum car and cycle parking standards for residential development are presented in **Table 2-2** below.

Table 2-2: C3 Residential – Minimum Car Parking and Cycle Parking Standards

Class Use C3	Car Parking Standard	Minimum Cycle Parking Standard
1 Bedroom	1 space per dwelling minimum	1 secure covered space per dwelling. None if garage or secure area provided within curtilage of dwelling
2+ Bedrooms	2 spaces per dwelling minimum	
(The above standards will also require visitor/unallocated parking as set out below to be added. Garages will be counted towards meeting the standards only if they are at least 7m x 3m measured internally. Reductions will be considered only in exceptional circumstances e.g. very small-scale conversion of buildings for small number of residential units in town centre)		
Visitor / unallocated	Between 0.25 and 0.75 spaces per dwelling (rounded up to nearest whole number) with the lower standard being applied where there are no garages in the schemes and the higher standard applied where every dwelling in the scheme is to be provided with a garage	If no garage or secure area is provided within curtilage of dwelling then 1 covered and secure space per dwelling in a communal area for residents plus 1 space per dwelling for visitors
(For the above standards reduction considered where: *1. Alternative publicly available off-street parking is available within 2 minutes walk of site* *2. Where visitor parking arising from small scale (i.e. infill) development can be accommodated onstreet without compromising highway safety, the amenity of existing residents or the ability for businesses to operate.* *3. Relevant evidence is submitted by the applicant that supports a reduction in standard which considers existing and future car ownership and likely visitor demand)*		

2.9 Although the policy states that the norm is that minimum parking provision will be met in all cases flexibility is built into the standards and an exception to the minimums must be accompanied by a strong evidence case with specific reference to considering car ownership and visitor parking demand for the potential lifetime of the development.

North Hertfordshire Local Plan 2011-2031

2.10 The Local Plan was adopted in November 2022. The Local Plan seeks to address the most significant issues facing North Hertfordshire and sets out a strategic vision and spatial strategy for the District over the period 2011 to 2031.

2.11 The main transport policies of relevance to Site LG1 (and to which LG1 can and will align) are as follows:

2.12 **Policy SP1** 'Sustainable development in North Hertfordshire' supports the principles of sustainable development within North Hertfordshire.

2.13 **Policy SP6** relates to 'Sustainable transport' and sets out the council's objectives to deliver accessibility improvements and promote the use of sustainable transport modes by adhering to the following:

- Comply with the provisions of the HCC Local Transport Plan;
- Encourage development in locations with sustainable travel options available to/from and between key services and facilities;

- Work with HCC, National Highways and service providers to ensure a range of sustainable transport options are available to all potential users, including new/improved pedestrian, cycle and passenger transport links and routes;
- Seek early implementation of sustainable travel infrastructure on Strategic Housing Sites to influence user behaviours, along with supporting Travel Plans to embed sustainable travel patterns;
- Assess development proposals against the parking standards and supplementary planning guidance;
- Require applicants to provide assessments, plans and supporting documents to demonstrate the safety and sustainability of their proposals; and,
- Protect existing rights of way, cycling and equestrian routes.

2.14 **Policy SP15** 'Site LG1 – North of Letchworth Garden City' relates directly to the proposed development stating that the site is allocated for as a Strategic Housing Site for approximately 900 homes.

2.15 The following transport-specific site requirements are to be met for planning approval:

- A site masterplan to be approved prior to the submission of any detailed matters which also sets out:
  - how the site will follow Garden City principles;
  - the most appropriate points of vehicular access considering landscape and traffic impacts.
  - on-site provision of a new Primary School.
- Neighbourhood-level retail and community facilities providing around 900sqm (net) of A-class floorspace;
- At least 9 serviced plots for self-build development;
- Diversion and / or re-provision of the Letchworth Greenway to provide a revised route around the new urban edge.

2.16 The masterplan will be required to demonstrate an access solution which works in highway and urban design terms. Impacts upon the existing local highway network will need to be managed within acceptable limits.

2.17 **Policy T1** 'Assessment of transport matters' states that planning permission will be granted where:

- Development would not adversely impact upon highway safety;
- Mechanisms to secure any necessary sustainable transport measures and / or improvements to the existing highway network are secured in accordance with Policy SP7;
- Suitable Transport Statements, Transport Assessments and / or Travel Plans along with supporting documents are provided where required; and
- For major developments, applicants demonstrate (as far as is practicable) how:
  - the proposed scheme would be served by public transport; and
  - safe, direct and convenient routes for pedestrians and cyclists will be provided.

2.18 As Site LG1 exceeds 80 homes a Transport Assessment and Travel Plan will be required to support any future planning application.

2.19 It is recognised that the Local Plan traffic modelling is strategic, therefore developers will be required to supplement the modelling with additional local intelligence and modelling to ensure

the schemes impacts on localities, junctions etc. are fully understood and mitigated. There has already been engagement with HCC who have tested the LG1 proposals within their strategic COMET model. Contributions will be sought for the implementation of relevant schemes in the vicinity of the development site under Policy SP7.

2.20 All major developments should set out public transport, walking and cycling considerations. Safe pedestrian access should be provided in all instances. Larger developments should include demarcated cycle routes should along principal arterial roads with links to lower order streets where safe on-street cycling can be encouraged and shared spaces may be appropriate.

2.21 **Policy T2** relates to Parking. Planning permission will be granted where:

- Parking is provided in accordance with the minimum standards in the Local Plan.
- Proposals have regard to relevant Supplementary Planning Documents, strategies or advice; and
- Applicants clearly identify how they provide for all likely types of parking demand."

2.22 The car and cycle parking standards are identical to those in the Vehicle Parking at New Development Supplementary Planning Document (2011) as set out in **Table 2-2**.

Hertfordshire Transport Vision 2050

2.23 HCC have developed a long-term strategy that sets out how the additional pressure from future population growth can be managed on the transport networks.

2.24 The transport related elements are highlighted in the Vision Venn diagram shown in **Figure 2-1.**

Figure 2-1: Hertfordshire Vision

Source: HCC Transport Vision 2050 (Autumn 2016)

2.25 In addition to the three core themes highlighted by the Vision and the LTP objectives, the document emphasises the important that Hertfordshire's strategies can demonstrate the following:

- Application and adoption of new technology
- Cost effective delivery and maintenance
- Modal shift and encouraging active travel
- Integration of land use and transport planning.

2.26 Policy MS1: Sustainable Travel Towns is focused on reducing the need to travel overall and increasing the proportion of journeys made by sustainable modes. This scheme would contribute significantly to the LTP objectives under the People and Place themes, with specific benefits including:

- Reduction in private vehicle use for shorter trips within towns, with associated improvements in local air quality
- Enhanced public realm in town centres
- Increased proportion of shorter trips made on foot, by bicycle or by public transport, with associated benefits to public health through increased levels of physical activity
- Improved connectivity between key destinations within towns- more pleasant, more reliable journeys.

2.27 The nine main LTP objectives that will underpin the policy options and major schemes, ultimately contributing to towards achieving the overall vision are summarised below:

- Improve access to international gateways and regional centres outside of Hertfordshire
- Enhance connectivity between primary urban centres in Hertfordshire
- Improve accessibility between employers and their labour markets
- Enhance journey reliability and network resilience across Hertfordshire
- Enhance the quality and vitality of town centres
- Preserve the character and quality of the Hertfordshire environment
- Reduce carbon emissions
- Making journeys and their impact safer and healthier
- Improving access and enabling participation in everyday life through transport

2.28 The Vision document identifies the potential for more sustainable travel behaviour and is evidenced by the following:

- In Hertfordshire 43% of journeys to work are under 10 miles
- 63% of all trips in the county are estimated to be under 5 miles
- 3% of people in Hertfordshire travel by bus to work, the national average is 7%
- Analysis of travel patterns suggests that there is scope to increase mode share by bus, rail, walking and cycling through better connections with and between towns.

Local Cycling and Walking Infrastructure Plans

2.29 In April 2017, the Department for Transport (DfT) published the National Cycling and Walking Investment Strategy (CWIS). The CWIS is centred around the ambition to make cycling and walking 'the natural choices for shorter journeys, or as part of longer journeys. The strategy is seeking to support the transformation of local areas where the dominance of the motorised vehicle will be reduced to help tackle congestion and support local economies and improve physical and mental health.

2.30 The CWIS sets out objectives which underpin the 2040 ambition to deliver what is summarised in **Table 2-3**.

Table 2-3: DfT Cycling and Walking Long Term Aspirations

Ambition	Objectives
BETTER SAFETY 'A safe and reliable way to travel for short journeys'	• Streets where cyclists and walkers feel they belong, and are safe • Better connected communities • Safer traffic speeds, with lower speed limits where appropriate to the local area • Cycle training opportunities for all children
BETTER MOBILITY 'More people cycling and walking – easy, normal and enjoyable'	• More high-quality cycling facilities • More urban areas that are considered walkable • Rural roads which provide improved safety • More networks of routes around public transport hubs and town centres, with safe paths along busy roads • Better links to schools and workplaces • Technological innovations that can promote more and safer walking and cycling • Behaviour change opportunities to support increased walking and cycling • Better integrated routes for those with disabilities or health conditions
BETTER STREETS 'Places that have cycling and walking at their heart'	• Places designed for people of all abilities and ages so they can choose to walk or cycle with ease • Improved public realm • Better planning for walking and cycling • More community- based activities, such as led rides and play streets where local places want them • A wider green network of paths, routes and open spaces

2.31 To achieve the objectives set out within the CWIS, it is imperative that local bodies across England develop high quality cycling and walking infrastructure to encourage mode shift towards these active modes. To help achieve the Government's ambition to normalise both modes of travel, guidance has been development to support local authorities producing Local Cycling and Walking Infrastructure Plans (LCWIPs).

2.32 Local Cycling and Walking Infrastructure Plans are a new approach, developed by the Department for Transport, to improving walking and cycling networks in local areas. They set out the Government's Cycling and Walking Investment Strategy and enable a long-term approach to increase the number of trips made on foot or by cycle.

NHC LCWIP

2.33 The NHC LCWIP Report (August 2023) included in **Appendix A** sets out walking and cycling improvements in Hitchin, Letchworth Garden City, Baldock, Royston and Knebworth form part of these LCWIPs. The proposals identify suitable routes, which can then be prioritised for future investment, leading to a high-quality network of footpaths and cycle paths for the local area.

2.34 Priorities for Letchworth include improving access to the railway station, town centre and employment hubs, with provision of a direct route linking the town to Hitchin and Baldock.

2.35 The LCWIP includes an overview of the prioritised routes in Letchworth Garden City, together with the extending network connections to Baldock, Hitchin and Letchworth Greenway. Section

7.4 of the LCWIP outlines the range of improvements proposed which include footway and cycle facility improvements, segregated cycleways, new green links, traffic calming, modal filters, crossing improvements and the potential to create a one-way system near Letchworth railway station (including Bridge Road, Station Place and Station Road), with one lane replaced with a two-way cycle track.

2.36 Segregated cycle facilities are also proposed in places on the Hitchin Road A505/ Baldock Road B656 route. Further details can be found in the LCWIP.

CBC LCWIP

2.37 CBC consulted on their LCWIP covering Arlesey, Fairfield, Henlow and Stotfold up to 14 December 2023 and this is also included in **Appendix A**.

2.38 The off-road routes connecting to Fairfield to the north and west of Site LG1 and the route alongside Norton Road, Stotfold (north-south) are of particular relevance to Site LG1 and future sustainable connections and consultation comments are currently being provided on these routes. Initial public comments received on the route alongside Norton Road are that the existing crossing point at the northern end could be improved, that the footway feels narrow and unsafe and could be improved and that the Greenway crossing point across Norton Road to the north of proposed Site LG1 feels unsafe due to traffic speeds and could be improved with visibility enhancements. Comments are still to be received on the off-road routes to the north and west of Site LG1.

Letchworth Sustainable Travel Town- Outline Plan (April 2021)

2.39 Sustainable Travel Towns (STTs) are an innovative approach to reshaping the local highway network and places as a whole, in line with sustainable transport objectives set out in the Local Transport Plan (LTP4). The geographic extent of each STT is limited to a single urban area, and the development of a STT plan for Letchworth is underway.

2.40 Hertfordshire's LTP4 defines STTs as 'comprehensive packages of schemes and behaviour change initiatives aimed at achieving a significant modal shift to non-car modes and reduction in single occupancy car use'. The Outline Plan is the gateway for Letchworth to enter the full STT programme.

2.41 The following objectives are taken from LGCHF's submission to the STT programme:

1. Make cycling safe and more attractive incorporating the ideas set out in the Letchworth Cycling Strategy
2. Enhancements to the station forecourt to create a transport hub, incorporating buses, safe and secure cycling access and storage, pedestrian access and taxis, whilst enhancing the physical environment as an important gate and entry point to the Garden City.
3. Enhance the use of footpaths and level of pedestrian activity by identifying paths that could be improved in terms of usability, safety and attractiveness.
4. Enriching the biodiversity and attractiveness of sustainable travel routes and public spaces.
5. Improved access to the countryside via the Letchworth Garden City Greenway.
6. Improved sustainable travel links to adjoining towns and villages.
7. Encourage greater use of the Letchworth Garden City Greenway by the development and implementation of a Greenway Improvement Plan.
8. Ensure that the planned expansion sites included in the North Herts Local Plan in Letchworth provide a range of non-car travel opportunities for new residents and those who live in existing nearby neighbourhoods.

9. Increase the number of people cycling and walking.

2.42 The benefits of the STT include:

- Improving public health through better air quality and more physical activity;
- Enhancing the local economy;
- Promoting social interaction; and
- Generating a sense of place.

2.43 The intended outcome is that the general perception to all highway users will be that pedestrians, cyclists and public transport users will have a greater priority than they do at present.

North Central Hertfordshire Growth and Transport Plan Stage 3 Interventions Paper (May 2022)

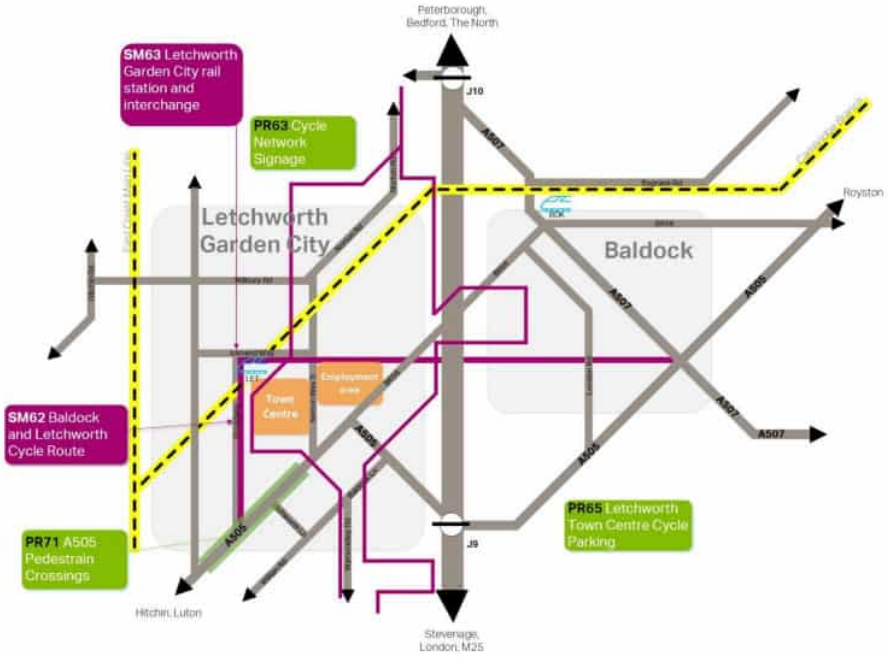
2.44 This is the third paper within the North Central Growth and Transport Plan and was endorsed by the HCC Highways and Transport Cabinet in May 2022. The paper provides an insight to the 15 proposed packages developed, based on analysis of the existing evidence base and assessment of transport networks and services against the NC GTP objectives. The North Central Growth Transport Plan Vision sets out how the transport network could appear and the opportunities it could provide in the future.

2.45 Package 11 which focuses on the Letchworth Centre and Employment Area, has an overarching aim to increase transport provision by providing a signposted and connected active network, whilst also improving access to Letchworth Garden City rail station. The package consists of the following:

- A cycle route which connects the main employment areas to Baldock and the rail station and links to a signed network.
- Linking the current cycle network to new routes combined with town centre cycle parking to ensure access to most important areas.
- Improving access of Letchworth Garden City rail station via sustainable travel modes and enabling easy interchange between active travel and bus services.

2.46 **Figure 2-2** below shows the five schemes that make up this package.

Figure 2-2: Package 11 Letchworth Centre and Employment Area- schemes

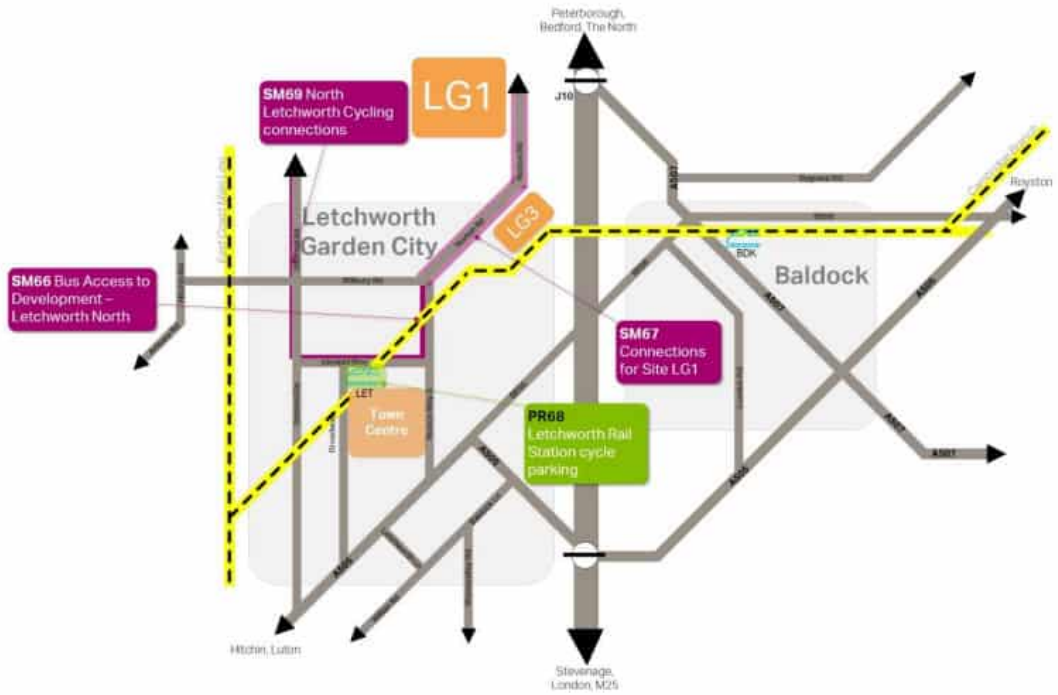


2.47 Package 12 which focuses on North Letchworth, has an overarching aim to provide improved sustainable connections by supporting a more frequent bus connection, as well as a cycle facility between north Letchworth and the town centre. The package consists of the following:

- Sustainable access to the development with bus, cycle and pedestrian options
- Ensuring there are links between northern Letchworth and the town centre by bike, as well as providing cycle parking at the station.

2.48 **Figure 2-3** shows the four schemes that make up this package.

Figure 2-3: Package 12 North Letchworth



Summary

2.49 As set out above, existing transport planning policy within North Hertfordshire is shifting towards a greater focus on sustainability with greater weight being provided to planning applications which seek mitigation measures that encourage sustainable travel through walking, cycling and public transport. This approach has been driven through the new policies contained within HCC LTP4 (recently adopted) and is also reflected in the NHC Local Plan.

2.50 Whilst promotion of public transport, walking and cycling priorities are likely to be supported by HCC and NHC through a planning application there will remain a need for consideration of highways matters and careful consideration will need to be given to potential car parking levels which providing suitable on-site capacity whilst promoting sustainable transport modes.

2.51 The LG1 proposal is fully compliant with the strategic planning aims set out above and the intention is that the planning application will be brought forward with the supporting evidence to demonstrate compliance as required.

3 Baseline Transport Context

3.1 This Chapter sets out the accessibility of Site LG1 by the different transport modes including a summary of the local highway network, collision analysis, and access by the walking, cycling and public transport networks.

Site Location

3.2 Proposed Site LG1 is located to the north of the Grange Estate, at the northern edge of Letchworth. The site comprises a parcel of land of c 45 hectares (112 acres), to the north of Gaunts Way and to the west of Western Way.

3.3 The site is currently utilised for agricultural purposes and is bound by rural undeveloped land to the north, east and west of the site, and the Grange Recreation Ground and Grange Estate residential area to the south.

3.4 The Grange Estate comprises former local authority housing and community building and spaces and private owned dwellings, purchased under the right to buy (approximately 60% of homes are now owner occupied). Settle Housing Association is now the main landlord and land owner following a stock transfer to its predecessor (North Herts Homes) and also own a large amount of public space and are the landlord of some commercial and community buildings. NHC and HCC also have some ownership in the Grange.

3.5 The Grange Estate Recreation Ground is owned by NHC and covers an area of 6.8ha (17 acres) including football pitches, a sports pavilion, an outdoor gym, basketball court, skate facility, children's play area and a car park. The site incorporates a series of hedgerows which will be retained as part of the future development.

3.6 The site's location in relation to important destinations within Letchworth and multi-modal transport connections are illustrated in **Figure 3-1**.

Sustainable Access

Pedestrian and Cycle Access

3.7 As shown in **Figure 3-1**, Site LG1 is well connected to the local pedestrian and cycle networks. The following walking and cycling routes directly serve the site:

- **The Garden City Greenway (Greenway)** – The Greenway is a 21.8km circular route that surrounds the Letchworth Garden City Estate, which is suitable for walkers, runners and cyclists. The Greenway was developed in 2003 following £1million funding from the LGCHF. The Greenway enters the site from the west and then runs on a north-south alignment to the rear of the residential properties on Western Way (north of Stoneley) and northwards along the western side of the Grange Recreation Ground, up to Norton Road. The route then crosses Norton Road at a dropped kerb crossing point before running eastwards into Radwell Meadows County Park and then skirting around the eastern edge of Letchworth.

Figure 3.1
Letchworth Key Destinations and Transport Map

steer

0 500 1,000 m

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Key

- LG1 Site
- LG3 Site
- Other Developments
- Baldock Masterplan
- Bus Stops
- Railway Station
- National Cycleway
- Greenway
- Etonbury Green Wheel - Walking
- Etonbury Green Wheel - Cycling
- Footpath (Public and Permissive)
- Bridleway
- Byway
- Restricted Byway
- Proposed new Pedestrian/Cycle link
- Industrial areas
- Retail areas
- Community Orchard
- Primary School
- Secondary School
- Higher Education
- GP surgery
- Leisure Facilities
- Large Supermarkets
- Park
- Recreation Ground
- Cinemas
- Community Centres
- Nursery
- Librarys
- Museums
- Pharmacies
- Pubs
- Supermarkets
- Places of Worship
- Sports Venues
- EV Charge Points
- Playground / Multi-use facility

- **The Etonbury Green Wheel** – This is a walking route connecting Letchworth, Fairfield Park, Stotfold and Arlesey which passes through areas of landscape, heritage and wildlife interest. It was launched in May 2019 and sections of the route have been recently upgraded to enable cycling. Further upgrades to further promote cycling will be undertaken in future years. The Etonbury Green Wheel runs on the same alignment through Site LG1 as the Greenway and passes through agricultural land to the west of the site, providing a connection to Fairfield Park. To the north of the site the route runs through agricultural land prior to joining Norton Road where it run northwards on a shared use footway/ cycle path providing a direct link to Stotfold. At the northern end of Norton Road the route crosses over to the eastern side at a raised table crossing and then becomes a segregated footway and cycle route passing through a subway beneath the A507.
- **National Cycle Network 12 (NCN12)** - NCN12 is c 121 miles long and runs in sections from Enfield Lock in north London to Spalding via Stevenage, St Neots and Peterborough. It will extend from Enfield Lock to Spalding when fully complete (the section between Enfield Lock and Hadley Wood is currently under development). NCN12 passes on a north-south alignment through the site along the western side of the Grange Recreation Ground before exiting to the south via the car park/ Gaunts Way vehicle access. To the south of the Site NCN12 provides the strategic cycle connection to Letchworth town centre, passing along Gaunts Way, Sparhawke, Danescroft, Grange Road and through Norton Common, before continuing on The Quadrant, Nevells Road, Bridge Way and Station Place to Letchworth Garden City Rail Station. To the south of the station the route heads southwards along the Broadway and Spring Road, ultimately joining Roxley Court Road, where it continues southwards. To the north of the site NCN12 shares the same alignment as the Greenway and Etonbury Green Wheel up until Norton Road where the route splits into two. The northern section then runs along the same alignment as the Etonbury Green Wheel to Stotfold and the eastern section shares the same alignment as the Greenway around the eastern edge of Letchworth until it connects with the other town centre running section of NCN12 at Roxley Court Lane.
- **Footpath 32a** – This runs from Western Way north of Stoneley westwards through the site. Around 95m west of Western Way, the footpath joins with the Etonbury Green Wheel and the Greenway and shares the same alignment up until the point the two routes diverge.
- **Permissive Footpaths** - A permissive footpath provides a connection from the north west and runs along the northern boundary of the site connecting with the Etonbury Green Wheel, Greenway and NCN12. Two permissive footpaths run along the northern and southern sides of the Grange Recreation Ground providing a connection to Footpath 31 which runs between Croft Lane and Norton Road.

3.8 A full audit of the above routes and other walking and cycling routes is included in **Chapter 5 – Accessibility Audit**.

3.9 To the south of the site the Grange Estate has existing footways alongside the estate roads which provide access to the residential land uses and local facilities. The local roads within the vicinity of the Grange Estate are considered to be suitable for cycling.

3.10 The Grange Estate Recreation Ground currently includes four sheffield stands (capacity for eight cycles) to the south of the pavilion building. The Pelican Way Community Centre also includes four Sheffield stands (capacity for eight cycles) to the south of the building.

Journey Time Catchments and Key Destinations

3.11 The walking catchment from Site LG1 is illustrated in **Figure 3-2.** This has been based on the existing site access points and the future connections from Norton Road and Western Way.

3.12 Areas falling within a 5 minutes' walk (400m) include:

- The whole of Site LG1.
- The Grange Recreation Ground and associated leisure uses.
- The Norton Road NCN12/ Greenway crossing to the north.
- The majority of the northern part of the Grange Estate between Gaunts Way and Northfields.
- The Grange Academy, Sparhawke – a primary school for children aged 7 – 11 years.
- Croft Lane Community Orchard.
- Stonehill Primary School, Western Close - a primary school for children aged 3-11 years.

3.13 Areas falling within 10 minutes' walk (800m) include the above locations plus:

- A greater area of the Grange Estate to the southern including Southern Way, Southfields and The Pelican Way Neighbourhood Centre.
- Northfields Infants and Primary School, Burley - a nursery and primary school for children aged 3 – 11 years.
- Norton Road to the southwest around the Green Lane junctions.
- The Three Horseshoes PH and Norton St Nicholas Primary School.
- The Etonbury Green Wheel to the west.

3.14 Areas falling within a 20 minutes' walk (1,600m) include the above locations plus:

- The southeastern area of Stotfold.
- Radwell Meadows Country Park.
- Radwell village.
- Larger areas of Norton including the LG3 site, Flint Road Industrial Estate and Letchworth Recycling Centre.
- Northern areas of the Letchworth Industrial/ Business Park.
- The majority of Norton Common including associated sports facilities and Letchworth Outdoor Pool.
- The Wilbury Road area.
- Standalone Farm.
- The majority of Fairfield Park including the neighbourhood centre, sports, recreation facilities and business park.

3.15 The walking catchment from the potential LG1 Neighbourhood Centre is illustrated in **Figure 3-3**. Note this is only based on existing walking connections within the site and externally, and does not factor in future internal site walking connections as these will be identified as the masterplan is developed. As the potential LG1 Neighbourhood Centre is located further to the north within Site LG1, north of the Grange recreation ground, the catchment area is less than in **Figure 3-2** to the south of the site. The Pelican Way Neighbourhood Centre would be around a 15 minutes' walk from the LG1 Neighbourhood Centre.

3.16 **Figures 3-4 – 3-6** identify the walking catchments from the southwest (Parcel HSG02), northwest (Parcel HSG03) and northeast (Parcel HSG05) corners of the site. Estimated walking time between Parcel HSG02 and the Pelican Way Centre is just over 10 minutes, and for Parcel HSG03 and HSG04 it is c. 15 minutes.

3.17 The 20 minutes' cycling catchment from Site LG1 is illustrated in **Figure 3-7**. This equates to a 6km distance. Areas following within a 20 minutes' cycle include:

- The whole of the Letchworth Garden City town and Baldock including associated railway stations.
- The villages of Bygrave and Newham.
- The northeast of Hitchin (including Walsworth Common) and Ickleford.

The proposed Highover Farm development.

- Fairfield, Arlesey, Arlesey Railway Station.
- Glebe Meadows Nature Reserve.
- Eastern areas of Henlow Camp.
- Stotfold and Etonbury Woods.

3.18 Site LG1 is located approximately 2km north of Letchworth Garden City Rail Station and the town centre. Current journey times to the station by mode include:

- Walking: approximately 25 minutes;
- Bus: approximately 12 minutes;
- Cycling: approximately 10 minutes; and
- Car: approximately 6 minutes.

Pelican Way Neighbourhood Centre Amenities

- Post Office
- Tesco Express
- Community Centre
- Cafe
- Tiny Hands Preschool
- Childrens Playground
- Multi-use Sports Pitch
- Community Garden
- Grange Baptist Church

Figure 3.2 Letchworth Key Destinations and Transport Map Including Walking Catchment from LG1 Site

steer

0 500 m

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Key

- Walking Catchment
  - 5 minutes: 400m
  - 10 minutes: 800m
  - 20 minutes: 1,600m
- LG1 Site
- LG3 Site
- Other Developments
- Baldock Masterplan
- Bus Stops
- Railway Station
- National Cycleway
- Greenway
- Etonbury Green Wheel - Walking
- Etonbury Green Wheel - Cycling
- Footpath (Public and Permissive)
- Bridleway
- Byway
- Restricted Byway
- Industrial areas
- Retail areas
- Community Orchard
- Primary School
- Secondary School
- Higher Education
- GP surgery
- Leisure Centres
- Large Supermarkets
- Park
- Cinemas
- Community Centres
- Nursery
- Librarys
- Museums
- Pharmacies
- Pubs
- Supermarkets
- Places of Worship
- Sports Venues
- EV Charge Point
- Playground / Multi-use facility

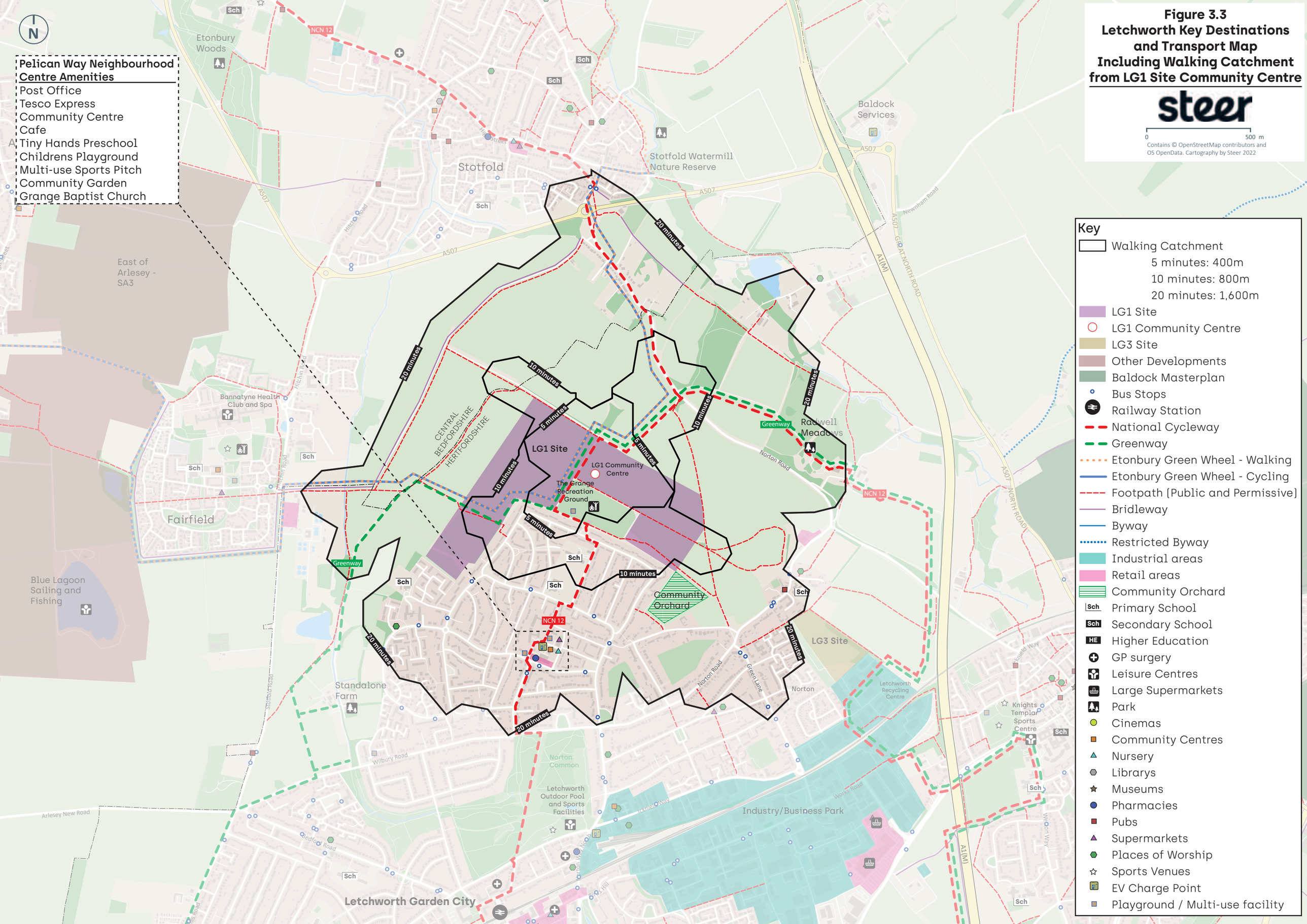

Figure 3.3
Letchworth Key Destinations and Transport Map Including Walking Catchment from LG1 Site Community Centre

steer

0 500 m

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Figure 3.4
Letchworth Key Destinations and Transport Map Including Walking Catchment from Plot HSG02 Centroid

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0 500 m

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Pelican Way Neighbourhood Centre Amenities

- Post Office
- Tesco Express
- Community Centre
- Cafe
- Tiny Hands Preschool
- Childrens Playground
- Multi-use Sports Pitch
- Community Garden
- Grange Baptist Church

Key

- Walking Catchment
  - 5 minutes: 400m
  - 10 minutes: 800m
  - 20 minutes: 1,600m
- LG1 Site
- Plot HSG02
- LG3 Site
- Other Developments
- Baldock Masterplan
- Bus Stops
- Railway Station
- National Cycleway
- Greenway
- Etonbury Green Wheel - Walking
- Etonbury Green Wheel - Cycling
- Footpath (Public and Permissive)
- Bridleway
- Byway
- Restricted Byway
- Industrial areas
- Retail areas
- Community Orchard
- Sch Primary School
- Sch Secondary School
- HE Higher Education
- GP surgery
- Leisure Centres
- Large Supermarkets
- Park
- Cinemas
- Community Centres
- Nursery
- Librarys
- Museums
- Pharmacies
- Pubs
- Supermarkets
- Places of Worship
- Sports Venues
- EV Charge Point
- Playground / Multi-use facility

Figure 3.5
Letchworth Key Destinations and Transport Map Including Walking Catchment from Plot HSG03 Centroid

steer

0 500 m

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Pelican Way Neighbourhood Centre Amenities

- Post Office
- Tesco Express
- Community Centre
- Cafe
- Tiny Hands Preschool
- Childrens Playground
- Multi-use Sports Pitch
- Community Garden
- Grange Baptist Church

Key

- Walking Catchment
  - 5 minutes: 400m
  - 10 minutes: 800m
  - 20 minutes: 1,600m
- LG1 Site
- Plot HSG03
- LG3 Site
- Other Developments
- Baldock Masterplan
- Bus Stops
- Railway Station
- National Cycleway
- Greenway
- Etonbury Green Wheel - Walking
- Etonbury Green Wheel - Cycling
- Footpath (Public and Permissive)
- Bridleway
- Byway
- Restricted Byway
- Industrial areas
- Retail areas
- Community Orchard
- Primary School
- Secondary School
- Higher Education
- GP surgery
- Leisure Centres
- Large Supermarkets
- Park
- Cinemas
- Community Centres
- Nursery
- Librarys
- Museums
- Pharmacies
- Pubs
- Supermarkets
- Places of Worship
- Sports Venues
- EV Charge Point
- Playground / Multi-use facility

Figure 3.6
Letchworth Key Destinations and Transport Map Including Walking Catchment from Plot HSG05 Centroid

steer

0 500 m

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Pelican Way Neighbourhood Centre Amenities

- Post Office
- Tesco Express
- Community Centre
- Cafe
- Tiny Hands Preschool
- Childrens Playground
- Multi-use Sports Pitch
- Community Garden
- Grange Baptist Church

Key

- Walking Catchment
  - 5 minutes: 400m
  - 10 minutes: 800m
  - 20 minutes: 1,600m
- LG1 Site
- Plot HSG05
- LG3 Site
- Other Developments
- Baldock Masterplan
- Bus Stops
- Railway Station
- National Cycleway
- Greenway
- Etonbury Green Wheel - Walking
- Etonbury Green Wheel - Cycling
- Footpath (Public and Permissive)
- Bridleway
- Byway
- Restricted Byway
- Industrial areas
- Retail areas
- Community Orchard
- Sch Primary School
- Sch Secondary School
- HE Higher Education
- GP surgery
- Leisure Centres
- Large Supermarkets
- Park
- Cinemas
- Community Centres
- Nursery
- Librarys
- Museums
- Pharmacies
- Pubs
- Supermarkets
- Places of Worship
- Sports Venues
- EV Charge Point
- Playground / Multi-use facility

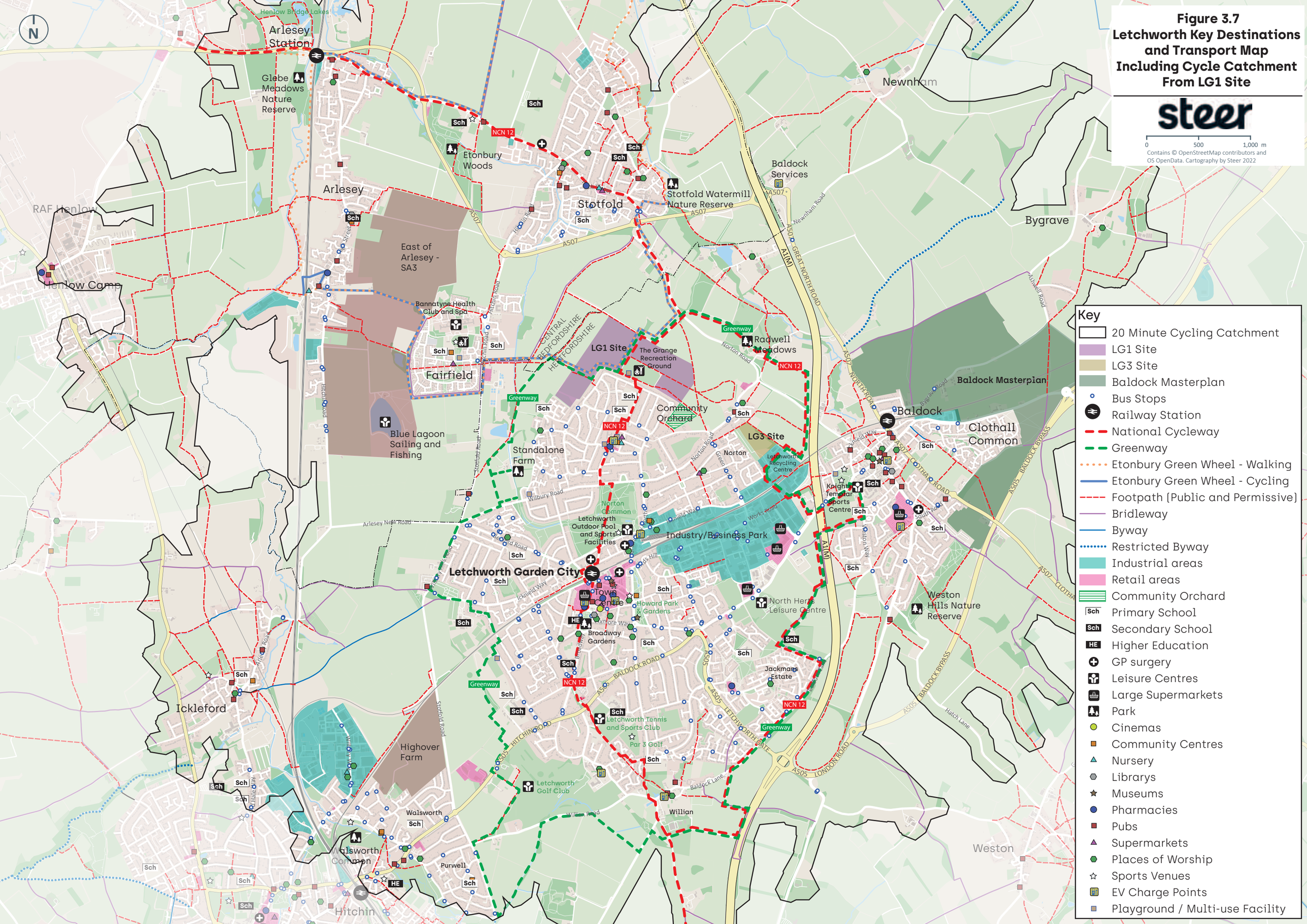

Figure 3.7
Letchworth Key Destinations and Transport Map Including Cycle Catchment From LG1 Site
steer
0
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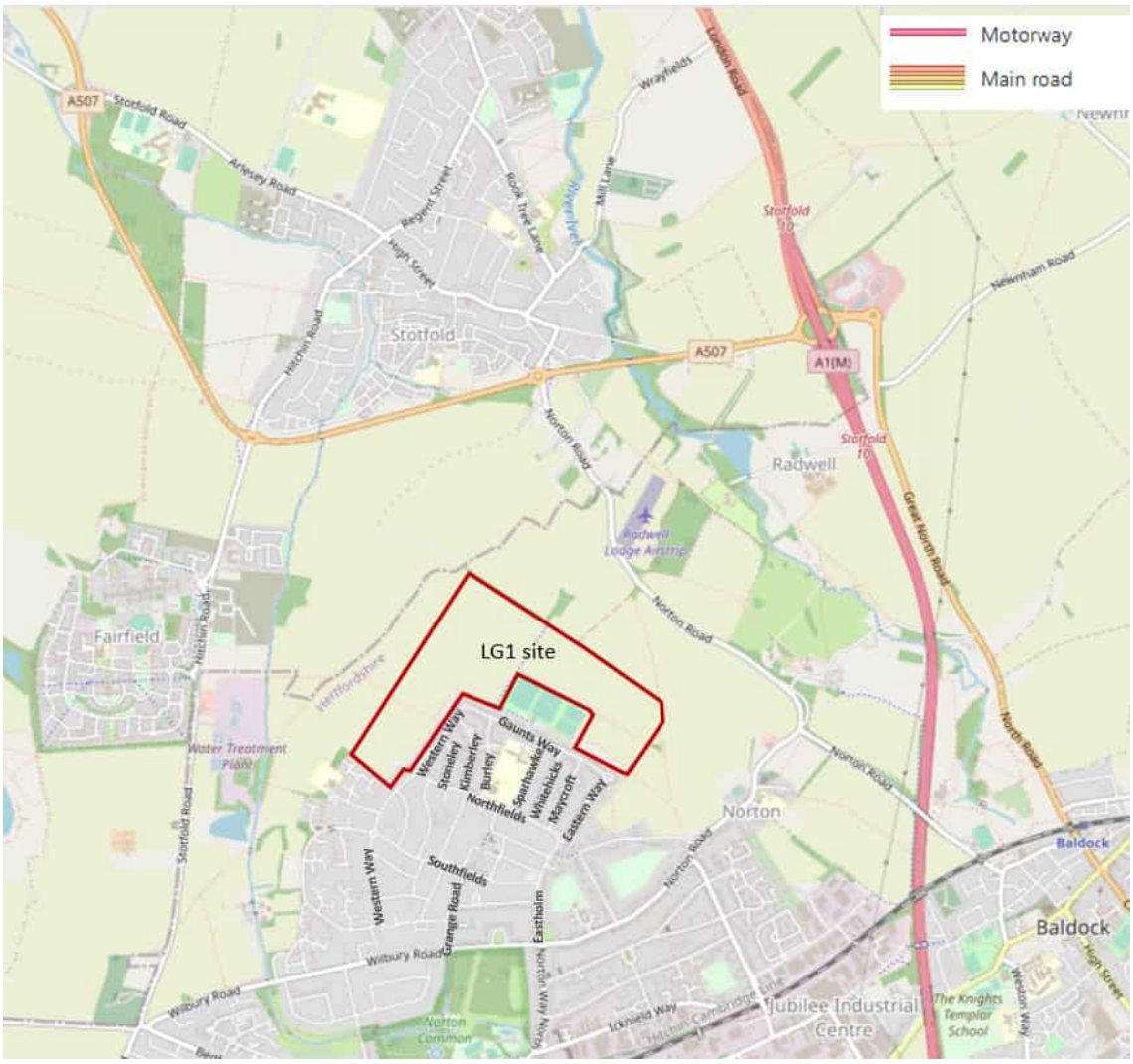
1,000 m
Contains © OpenStreetMap contributors and OS OpenData. Cartography by Steer 2022
Key
20 Minute Cycling Catchment
LG1 Site
LG3 Site
Baldock Masterplan
Bus Stops
Railway Station
National Cycleway
Greenway
Etonbury Green Wheel - Walking
Etonbury Green Wheel - Cycling
Footpath (Public and Permissive)
Bridleway
Byway
Restricted Byway
Industrial areas
Retail areas
Community Orchard
Primary School
Secondary School
Higher Education
GP surgery
Leisure Centres
Large Supermarkets
Park
Cinemas
Community Centres
Nursery
Librarys
Museums
Pharmacies
Pubs
Supermarkets
Places of Worship
Sports Venues
EV Charge Points
Playground / Multi-use Facility
Arlesey Station
Glebe Meadows Nature Reserve
Etonbury Woods
Stotfold
Stotfold Watermill Nature Reserve
Baldock Services
Newnham
Bygrave
Arlesey
RAF Henlow
Henlow Camp
East of Arlesey - SA3
Bannatyne Health Club and Spa
Fairfield
Blue Lagoon Sailing and Fishing
LG1 Site
The Grange Recreation Ground
Radwell Meadows
Community Orchard
LG3 Site
Norton
Letchworth Recycling Centre
Standalone Farm
Baldock
Baldock Masterplan
Clothall Common
Knights Templar Sports Centre
Letchworth Outdoor Pool and Sports Facilities
Industry/Business Park
Letchworth Garden City
Town Centre
Howard Park & Gardens
Broadway Gardens
North Herts Leisure Centre
Weston Hills Nature Reserve
Jackmans Estate
Ickleford
Highover Farm
Letchworth Tennis and Sports Club
Par 3 Golf
Letchworth Golf Club
Walsworth
Walsworth Common
Purwell
Hitchin
Willian
Weston
A1(M)
A507
A505
NCN 12
Greenway
Sch
HE

Vehicle Access and Local Highway Network

3.19 **Figure 3-8** illustrates the local highway network in the vicinity of the site.

Figure 3-8: Local Highway Network



Source: www.openstreetmap.org

3.20 At present the only vehicle access point to the site is from Gaunts Way which serves the Grange Recreation Ground and car park which has c. 51 car parking spaces including two accessible spaces.

3.21 The Grange Estate to the south of the site is served by a network of 30mph residential roads, which are all well-lit. Gaunts Way runs east-west directly to the south of the site and is connected to Western Way at its western end and Eastern Way to the east, which both run on north-south alignments connecting with Northfields at priority junctions. Western Way, Gaunts Way and Eastern Way are all tertiary residential roads with c 4.9m wide carriageways and are bordered to both sides by wide grass verges and footways (between the verges and dwellings). As with all the roads within the Grange Estate there are no kerbside parking restrictions and there is an abundance of on-street kerbside parking on both sides of the roads, however it is observed that drivers do not usually park immediately opposite other cars to allow informal passing places.

3.22 A number of residential access roads run on a north-south alignment between Gaunts Way and Northfields including Maycroft, Whithicks, Sparhawke, Burley, and Kimberley.

3.23 Northfields and Southfields (both east-west running) and Western Way, Grange Road, Eastern Way and Eastholm to the south of Northfields (all north-south running) are the major circulatory access roads within the Grange Estate. All of these roads are typically c 7.5m wide, to accommodate the higher traffic flows and buses, and are bordered to both sides by wide grass verges and footways. These routes are interconnected by several smaller residential access roads.

3.24 The Grange Estate is accessed by two mini-roundabout roundabout junctions – the Grange Road/ Wilbury Road three arm mini-roundabout and the Eastholm/ Norton Road/ Norton Way North/ Wilbury Road four arm mini-roundabout.

3.25 Wilbury Road/ Norton Road is one of the principle east-west routes serving Letchworth providing access to Norton village to the east, and then heading northwards as a derestricted route providing access to Stotfold, the A507 and the A1 (M).

3.26 To the west, Wilbury Road connects with Arlesey New Road, Stotfold Road and Wilbury Hills Road at a triple-mini roundabout junction. Arlesey New Road is an east-west road providing a link to Ickleford and Hitchin and Willbury Hills Road runs southwards providing links to the A505, Purwell and Hitchin. Stotfold Road runs northwards from the triple mini-roundabout junction connecting to Hitchin Road, Fairfield Park and Stotfold to the north.

3.27 To the south of Wilbury Road, Cowslip Hill/ Bridge Road and Norton Way North are the main highway routes linking the north of Letchworth to the town centre and rail station.

Public Transport Access

Bus Access

3.28 The bus network map is illustrated in **Figure 3-9**, which shows the bus routes serving Letchworth and connections with adjacent towns. **Figure 3-10** shows the more detailed route coverage within Letchworth.

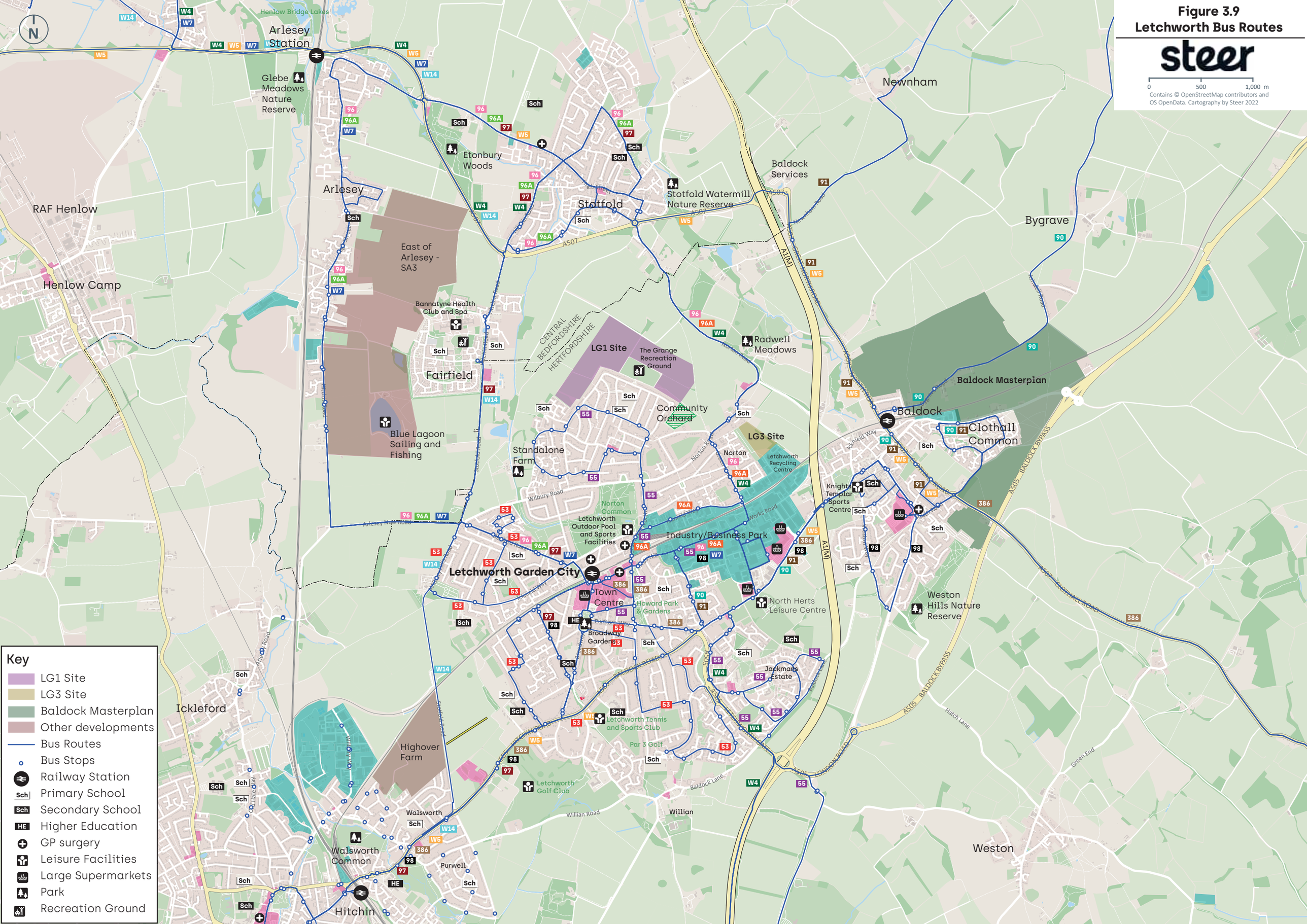


Figure 3.9
Letchworth Bus Routes
steer
0
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Key
LG1 Site
LG3 Site
Baldock Masterplan
Other developments
Bus Routes
Bus Stops
Railway Station
Primary School
Secondary School
Higher Education
GP surgery
Leisure Facilities
Large Supermarkets
Park
Recreation Ground
Arlesey Station
Henlow Bridge Lakes
Glebe Meadows Nature Reserve
Etonbury Woods
Arlesey
RAF Henlow
Henlow Camp
East of Arlesey - SA3
Bannatyne Health Club and Spa
Fairfield
Blue Lagoon Sailing and Fishing
Stotfold
Stotfold Watermill Nature Reserve
Baldock Services
Newnham
Bygrave
Radwell Meadows
LG1 Site
The Grange Recreation Ground
CENTRAL BEDFORDSHIRE
HERTFORDSHIRE
Community Orchard
Standalone Farm
LG3 Site
Norton
Letchworth Recycling Centre
Baldock Masterplan
Baldock
Clothall Common
Knights Templar Sports Centre
Norton Common
Letchworth Outdoor Pool and Sports Facilities
Industry/Business Park
Letchworth Garden City
Town Centre
Howard Park & Gardens
Broadway Gardens
North Herts Leisure Centre
Weston Hills Nature Reserve
Jackmans Estate
Letchworth Tennis and Sports Club
Par 3 Golf
Letchworth Golf Club
Ickleford
Highover Farm
Walsworth
Walsworth Common
Purwell
Hitchin
Willian
Weston
A1(M)
A505 BALDOCK BYPASS
A507 CLOTHALL ROAD
A505 LONDON ROAD
Wilbury Road
Norton Road
Works Road
Baldock Lane
Willian Road
Hatch Lane
Green End

Figure 3-10: Letchworth Bus Network

https://www.intalink.org.uk/timetables/

3.29 Eleven bus services run within Letchworth Garden City, which are managed by a number of different bus operators as shown in **Table 3-1**. To help encourage travel by public transport the Intalink Partnership was established in 1999, which is a unique collaboration between local authorities and bus and train operators in Hertfordshire. By pooling resources and ideas, the partnership strives to provide both customers with a range of dynamic products and improved information for both bus and rail users in Hertfordshire.

Table 3-1: Bus Routes Serving Letchworth

Bus Route Number	Route	Bus Operator
53	Letchworth – Lordship Estate (circular)	Landmark Coaches
55	Letchworth – Stevenage	Arriva
90	Royston/Ashwell – Letchworth	Richmond's Coaches
91	Royston/Ashwell – Letchworth	Richmond's Coaches
96	Letchworth – Arlesey/Stotfold – Letchworth *	Centrebus
96A	Letchworth – Arlesey/Stotfold – Letchworth*	Centrebus
97	Arlesey/Stotfold/Baldock – Letchworth – Hitchin*	Arriva
98	Arlesey/Stotfold/Baldock – Letchworth – Hitchin*	Arriva
386	Bishop's Stotfold – Letchworth – Stevenage*	Richmond's Coaches
787	Cambridge – Letchworth – Heathrow Airport	National Express
W7	Meppershall – Letchworth **	Whitbread Wanderbus

Source: https://www.intalink.org.uk/services
*No services on Sundays
** Fridays only

3.30 On **Figure 3-10**, a black route number indicates a route running at least hourly between 08:00-18:00 Mondays to Fridays and a red route number shows services running less frequently.

3.31 There are only four routes (53, 55, 97 and 98) which are frequent enough to be shown in black. These are detailed in **Table 3-2.**

Table 3-2: Frequent Bus Routes Servicing Letchworth

Route	Operator	Contract or Commercial	From	To	Mon-Fri Peak Interval (mins)	Mon-Fri Off peak & Sat Interval (mins)	Note
53-1	Landmark Coaches	Contracted – Herts CC	Letchworth	Lordship Estate	45-50	60	No evening or Sunday service
53-2	Landmark Coaches	Contracted – Herts CC	Letchworth	Wilbury Hills	45-50	60	No evening or Sunday service
53-2	Landmark Coaches	Contracted – Herts CC	Letchworth	Beech Hill	-	60	No peak, evening or Sunday service
55	Arriva	Commercial	Stevenage	Grange Estate	30	30	No evening service. One service every 2 hours on Sundays
97	Arriva	Commercial	Hitchin	Stotfold	30/40	60	No evening or Sunday service
98	Arriva	Commercial	Hitchin	Baldock	40	60	No evening or Sunday service

3.32 Services 97 and 98 combine to provide a 20-minute interval service between central Letchworth and Hitchin.

3.33 The less frequent services (90, 91, 96, 96A, 386 and W7) are summarised in **Table 3-3**.

[1] Route 53 is shown three times due to its complex routing and its unequal service frequency on each leg.

Table 3-3: Less Frequent Bus Services Serving Letchworth

Route	Operator	Contract or Commercial	From	To	Description
90/91	Richmond's Coaches	Contracted - Hertfordshire	Letchworth	Royston	Five buses per day in each direction Mondays to Saturdays
96/96A	Centrebus	Contracted – Central Bedfordshire	Letchworth	Arlesey & Stotfold (circular)	Nine buses per day Monday to Fridays, eight buses per day on Saturdays. 96 and 96A operate opposite ways round the circle.
386	Richmond's Coaches	Contracted - Hertfordshire	Bishops Stortford	Stevenage	Four or five buses per day in each direction Mondays to Saturdays
W7	Whitbread Wanderbus	Commercial	Letchworth	Meppershall	One bus each way on Fridays only

3.34 In addition, National Express service 787 which links Cambridge and Heathrow Airport serves one stop on Baldock Road in Letchworth every two hours seven days a week.

3.35 Route 55 operated by Arriva is the only bus route serving the Grange Estate, immediately south of Site LG1. The route links the Grange Estate with central Letchworth, Lister Hospital and central Stevenage. Within Letchworth, it also serves Sainsburys and the Jackmans Estate.

3.36 **Table 3-4** outlines the peak period and daily service frequencies by direction. The numbers in black represent the current frequencies as of February 2024 and the numbers in red reflect the frequencies pre-Covid-19.

Table 3-4: Bus Route 55 – Weekday AM Peak, PM Peak and Daily Service Frequencies

Bus Route	AM Peak Hours			PM Peak Hours			Daily Frequency
	06:00–07:00	07:00–08:00	08:00–09:00	16:00–17:00	17:00–18:00	18:00–19:00	
The Grange Estate (Northfields, Whitehicks) – Letchworth/ Stevenage Bus Station	2 (3)	1 (2)	2 (3)	2 (2)	2 (2)	1 (3)	24 (31)
Stevenage Bus Station/ Letchworth – The Grange Estate (Grange Road/ Southfields)	0 (3*)	2 (3)	1 (2)	2 (2)	2 (3)	2 (2)	24 (29)
Total	**2 (6)**	**3 (5)**	**3 (5)**	**4 (4)**	**4 (5)**	**4 (4)**	**48 (60)**

Source: Arriva Bus 55 Timetable
*Note one of these services commence from Jackmans Estate.

3.37 This shows that the current frequency of service to the Grange Estate has reduced following the Covid-19 emergency and it is unclear at this stage whether the frequencies will return to pre-Covid levels.

3.38 On weekdays a 30-minute interval service to the Grange Estate is achieved at the height of the peak in any one direction. During 'off-peak' periods (weekdays outside of the peak periods and Saturdays) the service also runs at 30-minute intervals (two buses per hour).

3.39 The first service from the Grange Estate departs Grange Road, Southfields at 06:25 and the final service (towards the Grange Estate) departs from Stevenage Bus Station at 18:45. On route, this service calls at Letchworth Garden City Rail Station at 19:26 and the Grange Estate at 19:37.

3.40 The hours of service are quite restrictive for commuters to/from London, who have no alternative public transport options when travelling to the station prior to 06:00 and from the station after 19:26.

3.41 Bus route 55 provides reasonably frequent daytime access to Letchworth Garden City town centre and Stevenage by public transport, and to destinations on the route including Letchworth industrial area and Lister Hospital.

3.42 The bus route and bus stop locations within the Grange Estate are shown in **Figure 3-11**. Out of the fifteen bus stops shown, nine have a bus shelter and flag as well as timetable information while the remaining eight[2] only having a bus stop flag with timetable information (no bus shelter). Real-time information is not available at any of these stops.

3.43 The closest bus stop to Site LG1 is 'Heathermere', located on Western Way 120m (a one-minute walk) to the south of the potential Site LG1 vehicle access on Western Way. Bus stops 'Kimberley' and 'Whitehicks' on Northfields are the closest ones to the pedestrian and cycle access on Gaunts Way, 670m and 580m away respectively.

Figure 3-11: Existing Bus Route 55 serving the Grange Estate

[2] The following stops do not have a bus shelter: Bittern Way, Swift Close, Spencer Way, Southfields, Linden Green, Farm Close, Glebe Road northbound and Glebe Road southbound.

HertsLynx

3.44 The HertsLynx on demand public transport mini-bus service was launched in September 2021. The service operates from a free-floating travel zone which encompasses Buntingford at the centre, with connections to designated locations within Hub Towns: Bishop's Stortford, Stevenage, Hitchin, Letchworth, Baldock, Royston, Hertford and Ware.

3.45 The service is funded by HCC and operated by Uno and runs seven Cityline low entry mini-buses.

3.46 The service operates from 07:00 – 19:00 Mondays to Saturdays and 10:00 – 16:00 on Sundays and public holidays.

Rail Access

3.47 Letchworth Garden City Rail Station is located within the centre of Letchworth Garden City, approximately 2km (25 minutes' walk) south of Site LG1.

3.48 Letchworth Garden City Rail Station is on the Cambridge Line and is served by Great Northern rail and Thameslink services, with direct connections to Stevenage, Welwyn Garden City, Finsbury Park, London St Pancras International, London Kings Cross and Brighton to the south, and Baldock, Royston, and Cambridge to the north. **Table 3-5** outlines the AM peak rail services serving Letchworth Garden City Rail Station.

Table 3-5: Letchworth Garden City Rail Station – Weekday AM Peak Period Frequency

Route	Weekday AM Peak		
	06:00–07:00	07:00–08:00	08:00-09:00
Southbound			
Letchworth Garden City – Brighton (Thameslink)	2	2	2
Letchworth Garden City – London Kings Cross (Great Northern)	4	4	4
Northbound			
Letchworth Garden City – Cambridge (Thameslink)	1	2	2
Letchworth Garden City – Cambridge (Great Northern)	3	2	2
Total	**10**	**10**	**10**

Source: Great Northern Timetable A

3.49 As shown in **Table 3-5**, the maximum number of trains serving Letchworth Garden City Rail Station in the peak hour is 10 from 08:00 – 09:00.

3.50 **Table 3-6** outlines the service frequency during the PM peak period.

Table 3-6: Letchworth Garden City Rail Station – Weekday PM Peak Period Frequency

Route	Weekday PM Peak		
	16:00 – 17:00	17:00 – 18:00	18:00- 19:00
Northbound			
Brighton (Thameslink) - Letchworth Garden City	2	2	2
London Kings Cross (Great Northern) - Letchworth Garden City	4	4	4
Southbound			
Cambridge (Thameslink) - Letchworth Garden City	4	5	5
Total	**10**	**11**	**11**

Source: Great Northern Timetable A

3.51 Baldock Rail Station is located 3.6km west of Site LG1. Baldock Rail Station is located on the same line as Letchworth Garden City, with connections and servicing patterns similar to Letchworth Garden City.

3.52 Hitchin is located approximately 5.5km southwest of Letchworth Garden City and Stevenage is located approximately 11km southwest of Letchworth Garden City. Both stations have faster and more frequent services to London, and services to Peterborough which route via Arlesey and Biggleswade. Letchworth Garden City residents can also interchange at these stations and commute to London (or Arlesey and Biggleswade) via these services.

3.53 Arlesey Rail Station is located approximately 7km northeast of Letchworth Garden City. This Station has frequent services to Peterborough and Horsham. **Table 3-7** outlines the AM peak rail services serving Arlesey Rail Station.

Table 3-7: Arlesey Rail Station- Weekday AM Peak Period Frequency

Route	Weekday AM Peak		
	06:00 – 07:00	07:00 – 08:00	08:00- 09:00
Northbound			
London Kings Cross - Arlesey - Peterborough	2	0	0
Gatwick - Arlesey - Peterborough	1	2	2
Southbound			
Peterborough - Arlesey – Horsham/ Gatwick	2	2	2
Total	**5**	**4**	**4**

3.54 **Table 3-8** outlines the service frequency during the PM peak period.

Table 3-8: Arlesey Rail Station- Weekday PM Peak Period Frequency- July 2022

Route	Weekday PM Peak		
	16:00 – 17:00	17:00 – 18:00	18:00- 19:00
Northbound			
Gatwick/ Horsham - Arlesey - Peterborough	2	2	2
Southbound			
Peterborough - Arlesey – Horsham/ Gatwick	2	2	2
Total	**4**	**4**	**4**

Personal Injury Collision Analysis

3.55 A review of Personal Injury Collisions (PICs) has been undertaken using the Crashmap database, for the period between January 2016 and December 2020, with these categorised by severity and road user type.

3.56 The map including in **Appendix B** illustrates the PIC locations by severity and road user type for the whole of Letchworth.

3.57 **Figure 3-12** illustrates the PICs within the study area covered by this assessment.

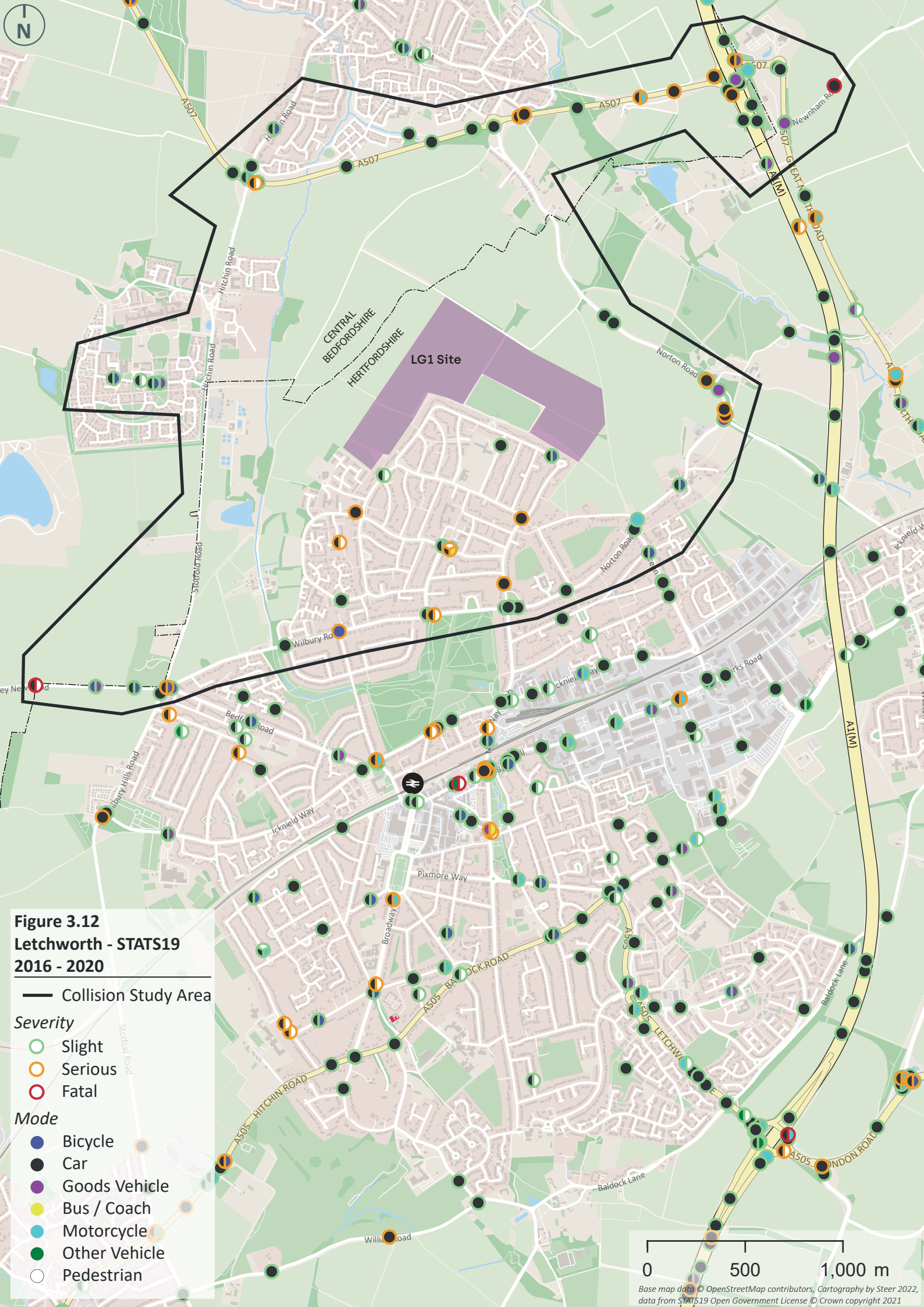


Figure 3.12
Letchworth - STATS19 2016 - 2020

Collision Study Area

Severity

- Slight
- Serious
- Fatal

Mode

- Bicycle
- Car
- Goods Vehicle
- Bus / Coach
- Motorcycle
- Other Vehicle
- Pedestrian

3.58 The assessment shows that a total of 79 collisions occurred resulting in 112 casualties within the area during the 5-year period examined. A more detailed examination of the collisions reveals that 3 of 112 were fatal, 26 were serious, with the remaining 83 resulting from slight collisions, as shown in **Table 3-9**.

Table 3-9: Collision Casualties by severity (2016-2020)

Accident Type	Slight	Serious	Fatal
Bicycle	12	3	0
Pedestrian	5	3	1
Car	49	17	2
Goods vehicle	11	1	0
Bus/ coach	0	1	0
Motorcycle	6	1	0
Other vehicle	0	0	0
Total	**83**	**26**	**3**

Collisions

3.59 There are no clusters that would be likely to be relevant to any additional traffic arising from the site, however there are isolated PICs at the following locations closest to the site:

- Eastern end of Gaunts Way – slight PIC involving a bicycle and a car.
- Northern end of Sparhawke – slight PIC involving a car.
- Western Way south of Northfields – slight PIC involving a car and a pedestrian.
- Eastern Way/ Northfields junction – serious PIC involving a car.

3.60 The nearest locations to the site where multiple PICs have occurred are the access routes into the estate from the south:

Southfields/ Grange Road

- There were three PICs in this location. Two were slight, one involved a car and pedestrian and the other a car and motorcycle. One was serios and involved a car, bus/coach and a pedestrian.

Grange Road/ Wilbury Road

- There were two PICs in this location. One was slight and included a car and goods vehicle and one was serious and involved a car and a pedestrian.

Eastholm/ Wilbury Road/ Norton Road

- There were four PICs in this location. All four were slight, two of which involved cars only, one involved a car and goods vehicle, and the fourth a car and pedestrian.

3.61 Other PIC clusters within the study area included:

Norton Road/ Green Lane/ Croft Lane

- There were two PICs in this location. Both were slight, one involved a car and the other a motorcycle.

Stotfold Road/ Wilbury Road/ Bedford Road junction

There were four PICs in this location. Three were slight, two of which involved a car and bicycle, the other a car. One was serious and involved a car and bicycle.

Norton Road/ Norton Road (Baldock) Junction

- There were four PICs in this location. Two were slight, one involving a motorcycle and the other a goods vehicle. Two were serious, both involving cars.

Norton Road/ Nortonbury Lane

- There were four PICs in this location. Three were slight, one involving a car, one involving a car and pedestrian and one involving a goods vehicle. One was serious which involved a car.

Norton Road south of Radwell Lodge Airstrip

- There were two accidents in this location. Both were slight and involved cars.

Norton Road/ A507 – on immediate approaches and junction

- There were six accidents in this location. Four were slight, three of which involving cars only and one a car and goods vehicles. Two accidents were serious, one involving a car and the other a car and goods vehicle.

A507 between A507/ Norton Rd roundabout and A1 (M).

- There were four accidents in this location. Two were slight, one involving a car and the other a goods vehicle and motorcycle. Two were serious, one involving a car and the other a car and motorcycle.

A1 (Motorway)

- There were 14 accidents in this location. 11 of which are slight and three are serious. Eight of the slight involved a car, one involved a goods vehicle and one a motorcycle. Of the three serious, two involved cars and one a car and bicycle.

A507/ Hitchin Rd

- There were five accidents in this location. Four were slight, two involving cars only, one a car and motorcycle and the other a car and bicycle. One was serious and involved a car and pedestrian.

3.62 A full and detailed STATS 19 analysis including causation factors will be undertaken for the Transport Assessment to be submitted with the planning submission.

Future Surrounding Development Sites and Transport Access

North Hertfordshire Development Sites

Relevant development sites proposed in Hertfordshire include the following:

Pelican Way and Western Way

3.63 Settle is currently considering potential regeneration sites in the Grange Estate at Pelican Way and Western Way. A meeting was held between LGCHF, Steer and settle to discuss these proposals on 16 August 2022 and it was agreed to maintain dialogue on these.

3.64 Settle have undertaken community consultation in relation to the redevelopment of the Pelican Way Neighbourhood Centre to provide a range of homes (c. 230 residential units), shops, retirement living, a church and a community centre. This will be supported by public realm improvements and the aspirations are to improve street elevations, landscape and circulation.

3.65 The current proposals include some conceptual design options but these are at a very early stage and the proposal and programme is under review.

3.66 The LGCHF and Masterplan Team will be working with settle to ensure that the NCN12 route is recognised should a development of this site progress.

3.67 Settle is also looking at opportunities to improve and regenerate some of the residential apartments along the western side of Western Way, including the settle owned resident's car park at the northern end of their site.

Croft Lane, Letchworth

3.68 An outline planning application (ref: 19/00520/OP) was submitted for a residential development of up to 42 dwellings, with all matters reserved on the former Norton School playing field between Croft Lane and Cashio Lane. The application was refused in July 2021 on highway safety grounds and is currently subject to an appeal (ref RR/2021/012). A subsequent application with all matters reserved 22(01464/OP) has also been submitted and remains undetermined.

3.69 The following highway works are proposed to support the development:

- Raised table features at the proposed main site access on Croft Lane.
- Shared footway/ cycleway connection on Cashio Lane.
- Widening of the existing footway on Croft Lane to 2.0m.
- Localised widening of Croft Lane on the north side near to the Greenway crossing;
- Installing bollards close to the Greenway crossing to prevent verge parking;
- Providing a new uncontrolled crossing point at the junction of Croft Lane and Cashio Lane to allow access to the pedestrian/cycle route to Eastholm;
- Installing signs at the eastern end of Croft Lane to advise that pedestrians will be using the carriageway;
- A financial contribution to a new footway connecting Croft Lane to a potential new crossing of Norton Road; and
- A Potential raised speed table at the junction of Croft Lane and Cashio Lane.

Highover Farm, Hitchin

3.70 The proposed development will be residential led with up to 700 dwellings, approximately 500sqm of neighbourhood-level facilities, a new 2 form of entry primary school, allotments within the wider green space as well as open space, play space and green infrastructure. The

site is allocated within Policy SP17 (Site HT1 – Highover Farm, Hitchin) in the North Hertfordshire Local Plan 2011-2031. The proposed development will be completed over a period of 7-8 years.

3.71 An Outline planning application (ref: 18/01154) with all matters reserved except for access was submitted for this site in April 2018 and it is currently awaiting determination as the Section 106 agreement is finalised.

3.72 The transport measures proposed for Highover Farm include:

- A main vehicle access point from Stotfold Road with a secondary access point from High Dane.
- A proposed east-west primary vehicle route running through the centre of the site with an intermediate bus gate to prevent rat running and just allow a bus only through-route.
- Pedestrian access points onto Stotfold Road, Collison Close, Highover Way and High Dane.
- An internal network of pedestrian and cycle routes.
- An internal bus hub outside the neighbourhood facilities.
- A proposed footway/ cycleway on Stotfold road between Frensham Drive and the main primary route junction.

Highover Farm Sustainable Transport Link

3.73 A planning application (Ref: 22/00303/FP) has been submitted on behalf of the LGCHF for the creation of a footpath/ cycleway Stotfold Road, Hitchin and The Greenway, Letchworth Garden City. This is currently awaiting determination.

3.74 **Figure 3-1** 'Letchworth Key Destinations and Transport Map' illustrates the proposed alignment of the link and full details are included in **Appendix D**.

3.75 The purpose of the proposed footpath/cycleway is to provide a sustainable, off-road, safe route for the residents of the district to use from both a recreational and general travel point of view.

3.76 The footpath/cycleway will consist of a 3m width of unsealed gravel path with a 1m grass verge either side, with an overall length of 547.5m. The materials will be consistent with what is currently in place on other parts of the Greenway.

3.77 A toucan crossing point is to be installed on Stotfold Road close to the main access point of the Highover Farm development allocation/application. This crossing will facilitate a future connection with the proposed footpath/cycleway link. The proposed footpath/cycleway will start from the rear of HCC's public footpath at this point and run along the northern side of the hedgerow to join the Greenway adjacent to the woods within the grounds of The Highfield School. The proposed route will be accessible to pedestrians and cyclists of all mobility levels and school children.

Baldock Masterplan and other Allocated Sites

3.78 'Policy SP14: Site BA1 – North of Baldock' in the North Hertfordshire Local Plan 2011-2031 allocates this as a Strategic Housing Site for a residential development with c 2,800 homes, a new local centre with c 500sqm of retail and c 1,400 sqm of other supporting uses. The allocation also includes a community centre and GP surgery, and a 6FE primary and secondary school. This 20-year development scheme will be delivered by 2042.

3.79 The homes, local facilities and high-quality commercial space will be linked by a network of footpaths and cycleways to help integrate Baldock.

3.80 The site allocation sets out the requirements for the following access measures:

- A new link road connecting the A507 London Road to the A505 Baldock bypass including a new bridge across the railway.
- Sustainable transport measures including:
  - a secondary rail crossing for pedestrians and cyclists in the vicinity of Ashville Way. safe access routes to / from, and upgrades to, Baldock station.
  - sensitive integration of Bridleway Baldock 034 / Bygrave 002 as a north-south route through the development; and
  - the use of Bygrave Road / Ashwell Road from the south-western edge of the allocated site to the link road as a sustainable transport corridor.

3.81 A number of other development sites within Baldock have local site allocations in the Local Plan within Baldock including:

- **Site BA2** – Land west of Clothall Road – c. 200 residential dwellings.
- **Site BA3** – Land South of Clothall Common – c. 200 residential dwellings.
- **Site BA4** – Land east of Clothall Common – c. 95 residential dwellings.
- **Site BA5** – Land off Yeomanry drive – c 25 residential dwellings.
- **Site BA6 –** Land at Icknield Way – c 26 residential dwellings.
- **Site BA7 –** Land rear of Clare Crescent – c 20 residential dwellings.
- **Site BA11 –** Deans Yard, South Road – c 20 residential dwellings.

3.82 Employment allocations within Baldock include:

- **Site BA10 –** Royston Road – 19.6 ha of employment uses.
- **Site BE1 –** Bondor Business Centre – 2.5 ha of employment uses.
- **Site BE2 –** Royston Road – 3.3 ha of employment uses.

Central Bedfordshire Development Sites

Relevant development sites within Central Bedfordshire include:

East of Arlesey (Policy SA3 in the CBC Local Plan)

3.83 This site is proposed as a strategic housing allocation Policy SA3 in the CBC Local Plan 2015 – 2035 (July 2021), and the development will comprise approximately 2,000 homes, a country park, land to deliver a health and social care hub, new community, educational and leisure facilities.

Henlow Camp

3.84 This involves a large residential led development proposal on the Central Bedfordshire/ Hertfordshire border that will emerge imminently. This is not covered by a site specific policy but is mentioned under CBC Local Plan Policy EMP5: Significant Facilities in the Countryside and Greenbelt.

3.85 Other development sites within Central Bedfordshire include:

- Hitchin Rd Shefford Bovis Homes 19/03753/RM 150 homes
- Ivel Rd Shefford Redrow Homes 19/03340/RM 90 homes
- Bedford Rd Lower Stondon Redrow Homes 22/01045/RM 115 homes
- Bedford Rd Lower Stondon Bloor Homes 21/02947/RM 85 homes
- Land south of Arlesey Road subject to planning appeal 21/01248/OUT
- Astwick Road Redrow Homes 19/03872/RM

- Taylors Road off Aspen Gardens 19/01302/RM
- Taylors Road DWH 19/01302 RM
- Fairfield Park Campbell Buchanan George 18/04780 FULL
- Taylor Wimpey 17/01642 (but may have been built out by now)
- Chase Farm 15/02916 REG3

3.86 Overall, integrated cross-boundary planning is required (including across boundaries) to ensure that these developments are well integrated with Site LG1.

Future Transport Scheme Proposals

Letchworth Garden City Rail Station

3.87 The Letchworth STT Outline Action Plan includes an aspiration to upgrade the station and transport interchange. However, no further details are available at this stage.

Letchworth Garden City Cycling Strategy (Steer, October 2018)

3.88 Steer was commissioned by Letchworth Heritage Foundation (LHF) in autumn 2017 to develop a cycling strategy for Letchworth Garden City.

3.89 The overall aim of the strategy was to assist HCC, NHC and other external funders in identifying and proposing potential improvements for cyclists in Letchworth Garden City. The purpose of this strategy was to build on the strong foundations of Letchworth Garden City's built environment for active travel modes and to identify 'quick-win', as well as medium- to long-term improvements to cycling conditions in Letchworth. The strategy also considered what new cycling schemes / improvements could be included within possible new developments including the 'Land to the North of Letchworth Garden City' development.

3.90 **Table 3-10** provides a summary of the Cycling Strategy Schemes and the locations of these are included in **Figure 3-13**. The full Cycling Strategy report is included in **Appendix C.**

Table 3-10: Letchworth Cycle Strategy Scheme Summary

Scheme ID	Scheme Description
1.1	Improve NCN12 route across Norton Common
1.2	Development of secondary north-south cycle corridor
1.3	East-west cycle corridor improvements
1.4	Re-route Greenway away from Wilbury Road mini-roundabouts
1.5	Surfacing and access improvements to Greenway
1.6	Green link from Standalone Farm to Norton Common
2.1	Improved wayfinding for cyclists
2.2	Cycle track priority over junction mouths
2.3	Tightening junction turning radii
2.4	Sharing the footpaths on Jackmans Estate
3.1	Leisure cycle hub at Standalone Farm
3.2	Leys Avenue improvements for cyclists
3.3	Broadway improvements for cyclists
3.4	Town centre cycle parking improvements
3.5	Improving cyclist access to North Herts Leisure Centre
3.6	Implementing 20 mph school zones
4.1	Mitigating path user conflict on the Greenway
4.2	Driver behaviour cycle awareness campaign
4.3	Extend the programme of cycle training
4.4	Develop a programme of community cycling events

Figure 3-13: Letchworth Cycle Strategy Schemes

Central Bedfordshire Local Plan Transport Modelling Study Schemes

3.91 As part of the Central Bedfordshire Council Local Plan (2015-2035) development CBC commissioned AECOM to undertake a transport modelling study to review the impacts of planned Local Plan growth on strategic network performance and the mitigation necessary to address "the hotspots" where congestion levels will increase.

3.92 The findings of this study were presented in the Central Bedfordshire Council Local Plan (2015-2035) – Transport Modelling Stage 2B & 2C Report (April 2018).

3.93 The following highway mitigation schemes of relevance to Site LG1 were included within the assessment at the following hotspots:

- **Hotspot 6A Hitchin Road/ Arlesey New Road Junction** – additional flares proposed to aid capacity (Indicative Cost - £2.5 - £5m).
- **Hotspot 7A A507 Stotfold** – A1 (M)/ A507 junction - including widening of A507 approach and signalising southern and western arms (Indicative Cost - 2.5m - £5m).
- **Hotspot 7A A507 Stotfold** – new link road to provide an alternative access to Arlesey and east of Arlesey development (Indicative Cost - £5m - £10m).

Arlesey Relief Road

3.94 The Arlesey Relief Road formed part of the 2015 Chase Farm application (15/02916/REG3) and provides a link between Arlesey High Street and the A507. The junction arrangement at the western end was amended under application 21/02756/REG3.

Central Bedfordshire Council – A507 Corridor Study

3.95 It is understood that CBC are currently in the process of producing a CBC A507 Corridor Study to explore congestion issues on the A507 and potential mitigation. CBC will share this report post completion.

HCC and Central Bedfordshire – Proposed Transport Schemes

3.96 Steer have reached out to HCC and CBC to provide a list of their proposed transport schemes in the local area and will consider these once they are provided.

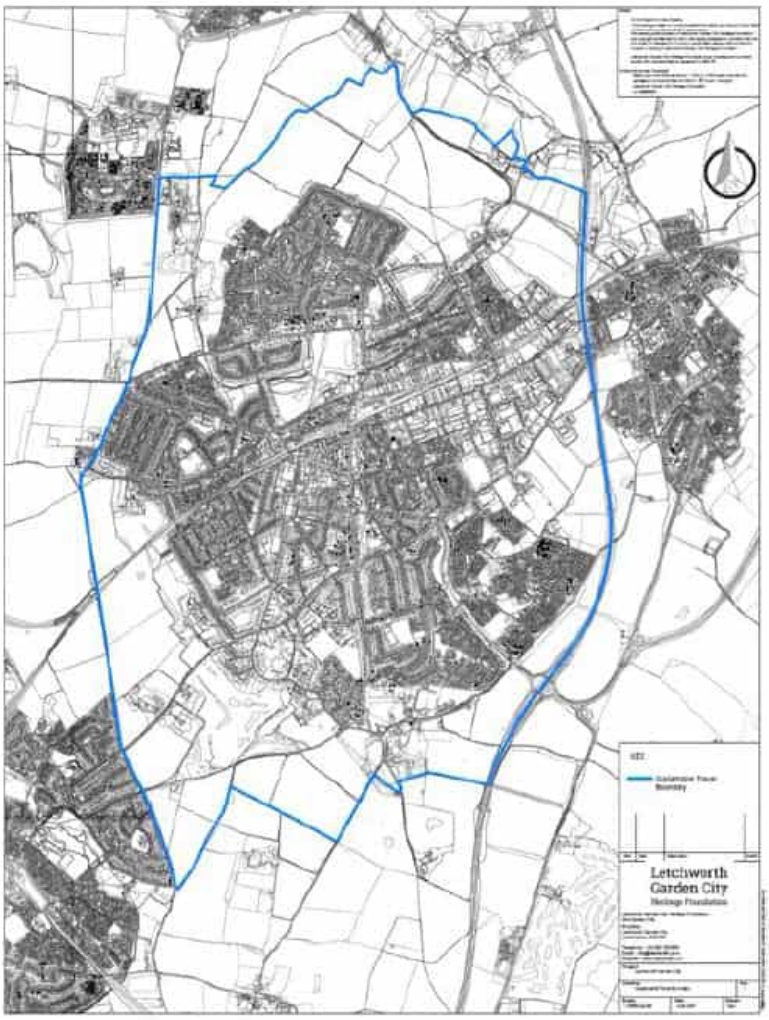
Sustainable Travel Towns Proposal

3.97 The Sustainable Travel Town programme forms part of Hertfordshire County Council's (HCC) Local Transport Plan and aims to reduce the need to travel by car and uplift the number of people walking, cycling and using public transport.

3.98 The initial application has been submitted by LGCHF with support from NHC and HCC is the overall lead on the programme.

3.99 The geographical area covered by the Letchworth Garden City Sustainable Travel Town is shown in **Figure 3-14.**

Figure 3-14: Geographical Scope of Letchworth Garden City Sustainable Travel Town



Source: Letchworth Sustainable Travel Town Outline Plan Working Draft (April 2013)

3.100 The LGCHF have prepared an Outline Plan in partnership with HCC and NHC (dated April 2021) which constitutes the first stage in development the programme of schemes that will be necessary to ensure success. The Plan outlines the objectives for Letchworth Garden City as set out by the LGCHF, it identifies a number of scheme proposals and measures that will need to be investigated and monitored by all partners and key stakeholders.

3.101 A range of schemes have been identified for inclusion in the Final Plan. A high-level summary of the scheme categories is provided below and the full Outline Plan is included in **Appendix E**:

- Data collection
- Behaviour change
- Active travel infrastructure:
- Walking
- Cycling
- Train improvements
- Bus improvements
- Other measures

3.102 The cycling schemes include the cycle improvements identified in the Letchworth Garden City Cycling Strategy (Steer, October 2018).

4 Existing Travel Trend Analysis

2011 Census Travel to Work Data – Letchworth Level

4.1 The 2011 Census has been analysed to help understand existing travel trends within Letchworth and the Grange Estate. Analysis will also be subsequently undertaken once detailed 2021 Census data has been made available, as only high-level Local Authority level information is available at this stage. However, an initial comparison of 2011 Census and 2021 Census travel to work mode shares has been made for the Grange Estate in **Table 4-5**.

4.2 The 2011 Census travel to work mode share data at the wider Letchworth level is shown in **Table 4-1.** This is an average of five MSOA areas covering the Grange, East Letchworth, South East, South West and Wilbury.

Table 4-1: Travel to Work mode shares – Letchworth Level

Mode	2011 Census
Car Driver	65%
Car Passenger	5%
Bus/Coach	2%
Underground/ Overground	0%
National Rail	11%
Taxi	0%
Motorcycle	1%
Pedal Cycle	3%
Walk	11%
Other	0%
Total	**100.0%**

4.3 **Table 4-2** shows the mode share for the for the top 10 inter-urban travel to work flows in Hertfordshire. This identifies that the highest mode share of trips starting and finishing within Letchworth is car driver trips (58%), with walking the second highest proportion (32%). Cycling accounts for a 6% mode share of inter-urban Letchworth trips, which is joint highest out of all Hertfordshire urban areas. However, is likely that the majority of trips to work that start and finish within Letchworth are cyclable for most, assuming that those trips have a maximum distance of three miles (the maximum 'as the crow flies' distance from one side of Letchworth's urban area to the other). It is reasonable to conclude therefore that there is considerable scope to decrease the proportion of people driving to work within Letchworth and increase the proportion of journeys to work made by sustainable modes.

Table 4-2: Top 10 inter-urban travel to work flows in Hertfordshire

Origin	Destination	Mode of travel to work					
		London Underground	Train	Bus	Car	Cycle	Walk
Letchworth	**Letchworth**	**0%**	**1%**	**3%**	**58%**	**6%**	**32%**
Welwyn Garden City	Welwyn Garden City	0%	1%	4%	62%	6%	25%
Hatfield	Hatfield	0%	1%	4%	43%	6%	44%
Stevenage	Stevenage	0%	1%	11%	63%	5%	19%
Watford	Watford	1%	1%	6%	49%	5%	37%
St Albans City	St Albans City	0%	2%	4%	49%	5%	39%
Hitchin	Hitchin	0%	1%	2%	47%	4%	44%
Cheshunt	Cheshunt	0%	2%	4%	63%	3%	27%
Bishop's Stortford	Bishop's Stortford	0%	1%	2%	53%	3%	40%
Hemel Hempstead	Hemel Hempstead	0%	1%	5%	66%	2%	24%

Source: 2011 Census

4.4 **Table 4-3** shows the most common travel to work destinations for Letchworth residents, and the mode of travel used to make these trips. Overall, the greatest number of trips by Letchworth residents are to a destination within Letchworth for which the highest mode share is car drivers (58%).

4.5 The second most common destination for Letchworth residents on their journey to work is to Greater London. The majority of Letchworth residents who make this journey currently travel by public transport (73%), with most of the remainder travelling by car (25%). It is likely that most of the journeys made by public transport are made from Letchworth Garden City Rail Station.

4.6 The three remaining top five destinations are Stevenage, Hitchin and Welwyn Garden City. Car is the highest mode share for trips to these destinations, accounting for over 80% of trips.

Table 4-3: Top five travel to work destinations of Letchworth residents

From Letchworth to:	Flow (no. of travel to work trips)	Mode									
		Car		Public transport		Walk		Cycle		Other	
		Trips	%	Trips	%	Trips	%	Trips	%	Trips	%
Letchworth	**5045**	**2938**	**58**	**172**	**3**	**1580**	**31**	**294**	**6**	**61**	**1**
Greater London	1810	456	25	1315	73	18	1	8	0	13	1
Stevenage	1804	1541	85	196	11	21	1	22	1	24	1
Hitchin	1240	1018	82	119	10	45	4	40	3	18	1
Welwyn Garden City	615	534	87	64	10	11	2	1	0	5	1

Source: Letchworth Garden City Cycling Strategy (June 2018)

4.7 Clearly travel for work purposes is only one of many reasons for travel. Shorter trips are clearly more likely to be undertaken by foot or cycle and bus travel is particularly attractive for moderate length trips, for example education, retail and leisure. It would be expected that the

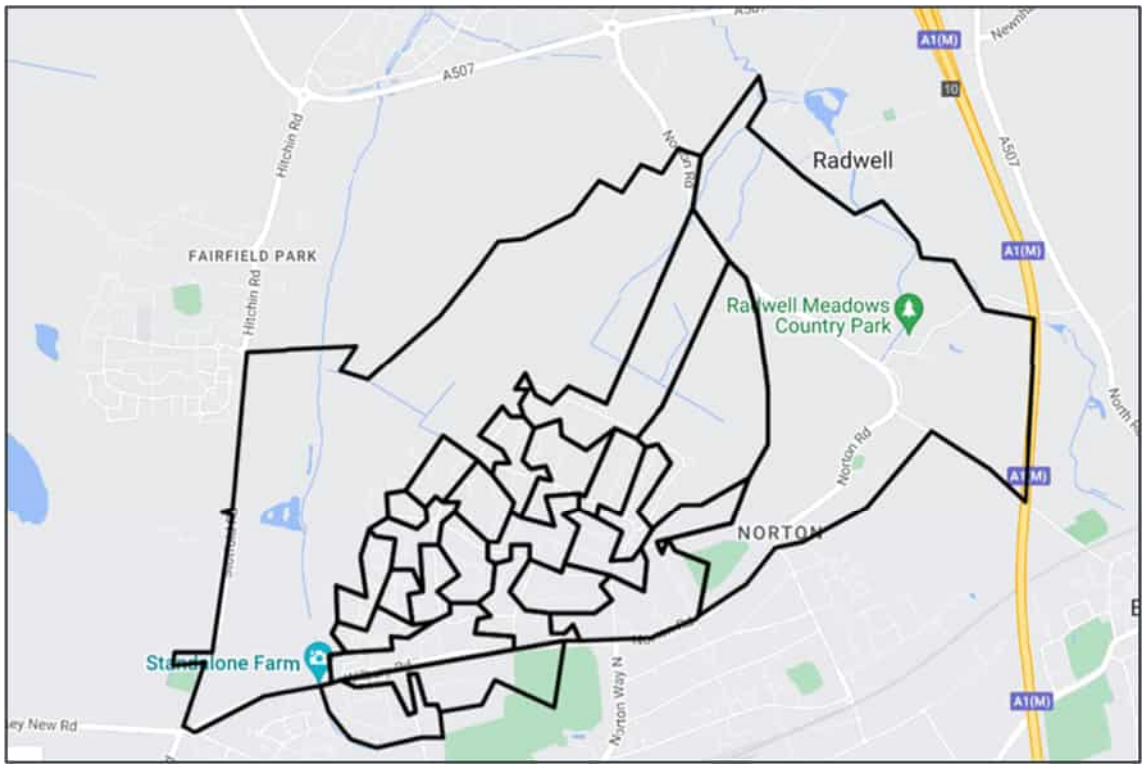
overall distribution of travel arising from an urban area will hence be less car orientated than the data available from the census.

Grange Estate Travel Trends

4.8 The Oxford Consultants for Social Inclusion (OSCI) in March 2022 produced a Local Insight profile for the 'Letchworth Grange' area which shows social and economic indicators for this area and comparator areas within North Hertfordshire and England. The 'Letchworth Grange' profile covers the MSOA shown in **Figure 4-1** which comprises the following four LSOAs:

- E01023635 North Hertfordshire 003A
- E01023636 North Hertfordshire 003B
- E01023637 North Hertfordshire 003C
- E01023638 North Hertfordshire 003D

Figure 4-1: Letchworth Grange MSOA (E02004911 North Hertfordshire 003)



4.9 A summary is provided below and the full Local Insight Report is included in **Appendix F**.

Population Insights - The Grange

4.10 A summary of the total population for The Grange and the population structure by age is provided in **Table 4-4**, with a comparison to England. There are 7,258 people in Letchworth Grange, with a higher proportion of males than females. The working age population of 58.6% is lower than England (62.3%). Letchworth Grange also has a higher proportion of young people and people over 65 than in England.

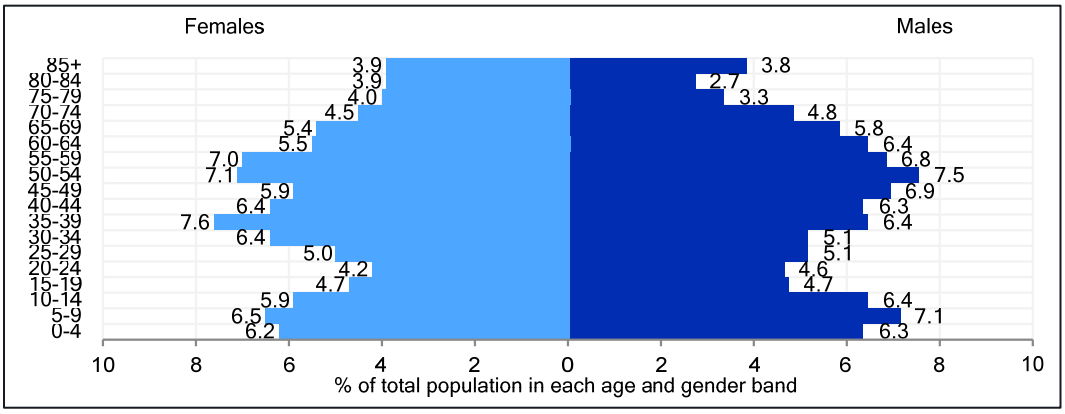
Table 4-4: Population figures and structure for The Grange, Letchworth

	Number of people	Proportion of total households in Letchworth	Comparison to England
Total population	7,258	47.7% Male 52.3% Female	-
Aged 0-15	1,476	20.3%	19.2%
Working age population	4,252	58.6%	62.3%
Aged 65+	1,530	21.1%	18.5%
Dependency ratio	0.71	-	0.60

Source: OSCI Local Insight Profile (March 2022)- Mid-Year Estimates (ONS) 2020

4.11 **Figure 4-2** presents the mid-year population estimates by age band based on 2020 Office of National Statistics (ONS) figures.

Figure 4-2: 2010 Mid Year Population Estimates



Source: Local Insight Data for Letchworth Grange – based on 2020 ONS Mid Year Population Estimate Data

Journey to Work Mode Share - The Grange

4.12 The 2011 Census dataset WU03EW- location of usual residence and place of work by method of travel to work (MSOA level The Grange- E02004911) has been interrogated to identify the mode shares within the Grange Estate shown in **Table 4.5.** An initial dataset is also currently available for the 2021 Census for method to travel to work by car or van availability (Table RM076), and these results have also been provided within the table for comparison purposes.

Table 4-5: 2011 Census Mode share data for travel to work in the Grange

Mode	2011 Census	2021 Census
Car Driver	67%	71%
Car Passenger	7%	7%
Bus/Coach	4%	2%
Underground/ Overground	0%	0%
National Rail	7%	5%
Taxi	0%	0%
Motorcycle	1%	1%
Pedal Cycle	3%	3%
Walk	11%	10%
Other	0%	1%
Total	**100%**	**100%**

Please note that figures have been rounded 0.d.p for consistency purposes

4.13 The 2011 Census data indicates that at the time of the 2011 Census, travel to work by car was the most popular option for residents of The Grange Estate (67%), with the next highest proportions being rail (7%) and walking (11%). The 2021 Census was impacted by the Covid pandemic and as expected the data shows a higher level of travel by car (71%) than the 2011 Census (67%), with a reduction in travel by rail (5%) and bus (2%), compared to the 2011 Census. This was more likely due to more people travelling by car to avoid mixing with other people on public transport.

4.14 The spatial representation of this 2011 mode share data for smaller output areas within the Grange Estate and the wider Letchworth area is presented on the maps included in **Appendix G**.

4.15 **Table 4-6** shows the most common travel to work destinations for residents of the Grange, and the mode of travel used to make these trips from the 2011 Census. Overall, the greatest number of trips by Grange residents are to a destination within Letchworth East for which the highest mode share are car drivers (70%). The second most common destination for Grange residents on their journey to work is to Letchworth South. The majority of Letchworth residents who make this journey currently also travel by car (55%), with the majority of the remainder travelling by foot (32%). The three remaining top five destinations are the Grange, Hitchin Bearton and Hitchin Town and East. Car is the highest mode share for trips to these destinations, accounting for over 80% of trips. For the Grange travel by foot is the highest mode share for trips (50%), for the two destinations in Hitchin travel by car is the highest mode share (89% for Hitchin Bearton and 78% for Hitchin Town and East).

Table 4-6: 2011 Census Top five travel to work destinations of The Grange residents

From Grange Estate to:	Flow (no. of travel to work trips)	Mode									
		Car		Public transport		Walk		Cycle		Other	
		Trips	%	Trips	%	Trips	Trips	%	Trips	%	Trips
Letchworth East	**490**	**343**	**70%**	**19**	**4%**	**78**	**16%**	**42**	**9%**	**2**	**0%**
Letchworth South	287	157	55%	29	10%	91	32%	7	2%	0	0%
Grange	117	48	41%	3	3%	59	50%	7	6%	0	0%
Hitchin Bearton	96	85	89%	6	6%	2	2%	1	1%	0	0%
Hitchin Town and East	80	62	78%	11	14%	4	5%	2	3%	0	0%

Journey to Work Origin and Destinations - The Grange

4.16 Journey to work analysis using Census 2011 origin and destination data has been undertaken to identify the destinations of residents living in the Grange Estate by travel mode. Spatial representation of these trends for smaller output areas within the Grange Estate and the wider Letchworth area are presented on the maps included in **Appendix H**. To calculate the flows of people the centre point of the Letchworth MSOA has been used.

4.17 Driving a car or van is the most popular mode of travel for individuals working in a range of areas in and outside of Letchworth.

4.18 Popular destinations of work include Letchworth, Hitchin, Baldock and Stevenage. All of these locations are accessible by train with services running from Letchworth Garden City station and journey times are all less than 10 minutes. By bicycle Hitchin and Baldock are both reachable within 20 minutes and Stevenage can be reached in 40 minutes via the National Cycle Network (NCN) Route 51.

4.19 In summary, the journey to work analysis by travel mode from the Grange Estate indicates the following:

- The highest number of walking trips are to Letchworth town centre and the Letchworth Business Park/ Industrial area, south of Icknield Way.
- The highest number of cycling trips are to Letchworth Business Park/ Industrial area, south of Icknield Way, followed by the town centre/ Southern Letchworth and Baldock.
- Car driver trips are more widely dispersed with highest numbers accessing destinations within Letchworth, Baldock, Stevenage and Hitchin.
- The highest number of bus trips are to destinations within Letchworth town centre and southern Letchworth, followed by the Letchworth Business Park/ Industrial area, Hitchin, Baldock and Stevenage.
- The highest number of train journeys are to London.

Car Ownership - The Grange

4.20 The Local Insights data summarises the car ownership statistics for Letchworth Grange, which are shown in **Table 4.7**. The data shows that almost half of the Letchworth Grange residents

own one car, however one quarter do not own a car which presents potential opportunities for mode shift to sustainable travel modes. The car ownership levels are fairly similar to the statistics for England, the Grange has slightly lower ownership of multiple cars than in England.

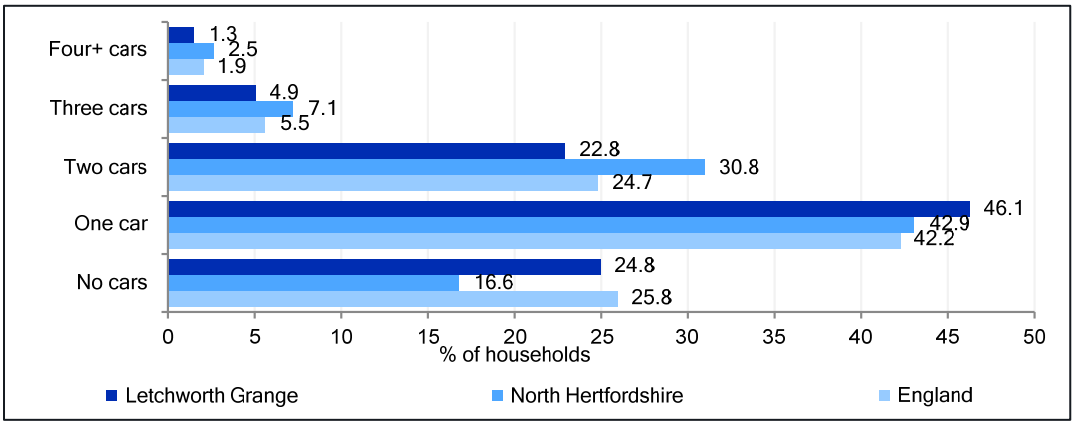
Table 4-7: Car ownership statistics for The Grange, Letchworth

Number of cars and vans in each household	Number of households	Proportion of total households in Letchworth Grange	Comparison to England
No cars	795	24.8%	25.8%
One car	1,475	46.1%	42.2%
Two cars	725	22.8%	24.7%
Three cars	160	4.9%	5.5%
Four+ cars	45	1.3%	1.9%

Source: Census 2011

4.21 **Figure 4-3** provides a comparison between the car ownership levels in Letchworth Grange and those in North Hertfordshire and England. This demonstrates that the Letchworth Grange has a higher proportion of one car owning households than North Hertfordshire and London and also a significantly higher proportion of households with no cars than the North Hertfordshire average.

Figure 4-3: The Grange Estate Car Ownership Comparison to North Hertfordshire and England



Source: Local Insight Data for Letchworth Grange – based on 2011 Census

4.22 The Letchworth Grange Local Insight report also includes the following information on average distances in km to five key services as shown in **Table 4-8**. The average distance from the Letchworth Grange to a job centre, PH and post office is lower than the England average, however, the average distance from the Letchworth Grange to a Secondary School and GP Surgery is higher than the England average.

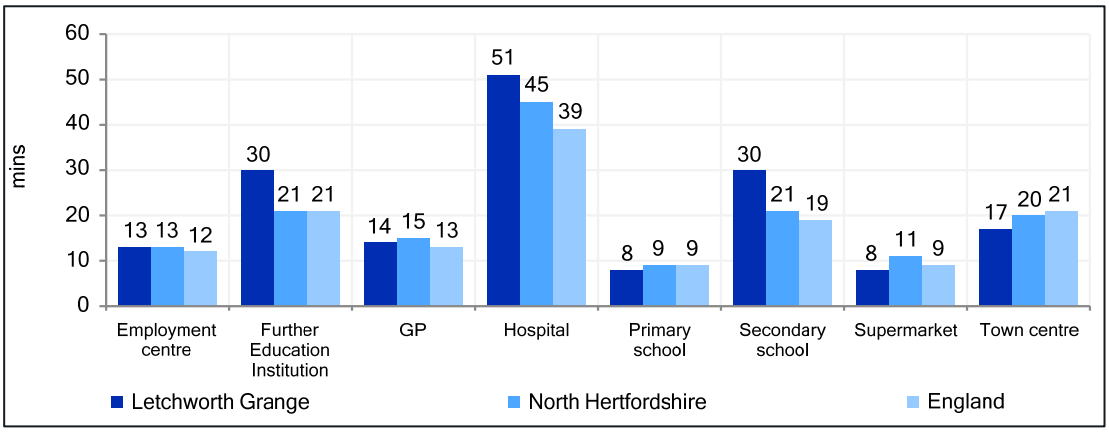
Table 4-8: Letchworth Grange Average Distance in KM to Local Services vs England Average

Key Service	Average Distance from Letchworth Grange	Average England Average Distance
Job Centre	1.8km	4.6km
Secondary School	2.5km	2.1km
GP Surgery	1.4km	1.2km
Public House	0.6km	0.7km
Post Office	0.7km	1km

Source: Local Insight Data for Letchworth Grange – based on Road distances - Commission for Rural Communities: Distance to Service dataset (2010); UK Onward (2021)

4.23 **Figure 4-4** identifies the average travel time in minutes by walking or public transport to the nearest service for Letchworth Grange compared to North Hertfordshire and England. This identifies that the travel time by walking and public transport to Further Education, Secondary Schools and Hospitals is higher from Letchworth Grange than both the North Hertfordshire and England averages.

Figure 4-4: Average Travel Time in Minutes by walking or public transport to the nearest key service for Letchworth Grange compared to North Hertfordshire and England.



Source: Local Insight Data for Letchworth Grange – based on Department for Transport: Core Accessibility Indicators (2017)

4.24 The Local Insight data also provides a comparison between average local broadband speeds in Letchworth Grange and average speeds within England. A summary is provided in **Table 4-9**.

Table 4-9: Average Broadband Speeds – Letchworth Grange vs England Comparison

Broadband Speed	Average Distance from Letchworth Grange	Average England Average Distance
Premises with Broadband Speeds below the Universal Service Obligation (2019)	04 – 0.1%	1.8%
Average Broadband Download Speed (Mbit/s) (2020)	94.21	73.40
Average Broadband Upload Speed (Mbit/s) (2020)	11.83	12.74

5 Accessibility Audits

Overview

5.1 This Chapter provides a summary of the accessibility audits that have been undertaken to review the quality of the key pedestrian and cycle access routes between Site LG1 and main destinations.

Accessibility Audit Route Identification

5.2 The accessibility audit routes were identified following a review of the Key Destination and Transport Network Map (see **Figure 3-1**) and the walking and cycling catchment maps (**Figures 3-2 – 3-7**) to identify the key walking and cycling routes to main destinations within Letchworth and the surrounding areas, including locations in Central Bedfordshire.

5.3 The proposed audit routes were then identified in map form and agreed with HCC and NHC prior to undertaking the audits.

Audit methodology

5.4 As HCC and NHC do not have their own detailed accessibility audit criteria the Accessibility Audit has been undertaken in line with Transport for London's (TfL) Healthy Streets approach and the guidance for Active Travel Zone Assessments (ATZ)[3], both of which reflect best practice. Whilst Site LG1 is located outside of London, the tools can still be applied to any route or street and be used in the same fashion.

5.5 The audits were undertaken across three days, on the 26 April 2022, 3 May 2022 and 20 September 2023 (western Letchworth Secondary School routes), between the hours of 10:00 and 17:00.

5.6 Each route was walked, and point of view (POV) photographs were taken for the 'worst' part of each journey. To assess the 'worst' part of each route, a photo survey assessment was undertaken and photographs were taken at 150m intervals, in line with TfL's ATZ assessment guidelines. 'Worst' is defined as the most unpleasant or potentially unsafe section for people on the street.

5.7 The 10 Healthy Streets criteria are shown in **Figure 5-1** and a summary of each is provided below the figure.

[3] Transport for London (TfL) Active Travel Zone instructions. Available at: https://content.tfl.gov.uk/atz-assessment-instructions.pdf

Figure 5-1: TfL's 10 Healthy Streets Indicators

Source: TfL Healthy Streets

5.8 Each route has been reviewed and assessed against eight of the 10 Healthy Streets Criteria in line with TfL's Healthy Streets guidance. The following eight criteria have been assessed:

1. **Easy to cross**- Making streets easier to cross is important to encourage more walking and to connect communities;
2. **People feel safe**- Making streets easier to cross is important to encourage more walking and to connect communities;
3. **Things to see and do**- People are more likely to use streets when the journey is interesting and stimulating, with attractive views, buildings, planting and street art;
4. **Places to stop and rest**- A lack of resting places a limit mobility for certain groups of people;
5. **People feel relaxed**- More people will walk or cycle if the streets are not dominated by motor traffic, and if pavements and cycle paths are not overcrowded, dirty or in disrepair;
6. **Not too noisy**- Reducing the noise impacts of traffic will directly benefit health and improve the ambience of our streets;
7. **Clean air**- Improving air quality delivers benefits for everyone and reduces unfair health inequalities; and

8. **Shade and shelter**- Providing shade and shelter enables everybody to use our streets, despite the weather conditions.

Routes Assessed

5.9 The 36 routes that were audited are listed in **Table 5-1** and illustrated in map form in **Figure 5-2**.

5.10 The 27 urban routes were assessed against the full healthy streets criteria outlined above. A qualitative assessment was undertaken for the non-urban routes and not a full assessment against the healthy streets criteria as many of these criteria are not applicable to more rural routes.

Table 5-1: Audit Routes and Descriptions

Route	Route Description
Urban Routes	
U1	Gaunts Way, Eastern Way and Western Way
U2	Grange Estate residential roads north of Northfields
U3	Northfields, Eastern Way and Western Way
U4	Western Close to Stonehill Primary School
U5	Southfields
U6	Caslon Way south of Northfields
U7	Southern Way, Jay Close, Linnet Close/ Kite Way – Link to Standalone Farm
U8	Norton Road - A507 - Green Lane
U9	Link between Eastern Way and Cashio Lane
U10	Gaunts Way south to Wilbury Road
U11	Wilbury Road south via Letchworth Town Centre to Baldock Road
U12	From Baldock Road northbound to Wilbury Road
U13	Cashio Lane- Cromwell Gardens- Glebe Road to Hampden Close
U14	South from Norton Road, across railway - Dunhams Avenue to North Herts Leisure Centre
U15	Ave One, Fourth Ave and Third Ave to Sainsburys
U16	Works Road east of Green Lane - A1 footbridge - Baldock
U17	South works Road along western side of A1 (M) to Letchworth Rd
U18	Green Lane from Works Road to Norton Road
U19	Norton Road from Green Lane to Wilbury Hills Rd
U20	Wilbury Hills Rd - Icknield Way- Campfield Way- Highover Rd- Railway- Hillbrow
U21	Stotfold Rd from Wilbury Road to A507 subway
U22	East-West Pedestrian/ cycle link through Fairfield Park
U23	Cowslip Hill to Letchworth Garden City Train Station

Routes to Western Letchworth Secondary Schools – The Highfield School and Fernhill School	
U24	The Highfield School: Station Way – The Highfield School
U25	The Highfield School: The Highfield School – Sollershott W – Broadway (alternative to U25).
U26	Fearnhill School: Hawthorn Hill – Cowslip Hill – Redhoods E and W – Icknield Way
U27	Fearnhill School: Icknield Way east of Redhoods W to Norton Common (alternative to U27)
Non-urban Routes	
NU1	Greenway- Standalone Farm to Grange Recreation Ground
NU2	Grange Recreation Ground to Radwell Meadows
NU3	Footpath 26 - Church Lane to Green Lane
NU4	Footpath from Croft Lane Norton Road to Grange Recreation Ground
NU5	Greenway west of Hillbrow
NU6	Etonbury Green Wheel and links around outside of Fairfield Park
NU7	Footpath from Fairfields to Arlesey
NU8	Etonbury Green Wheel - West of Fairfield Park to Arlesey
NU9	Rural PROW running to the west of the Grange

Figure 5.2
Letchworth Key Destinations Including Cycle Catchment and Audit Routes

steer

0 500 m

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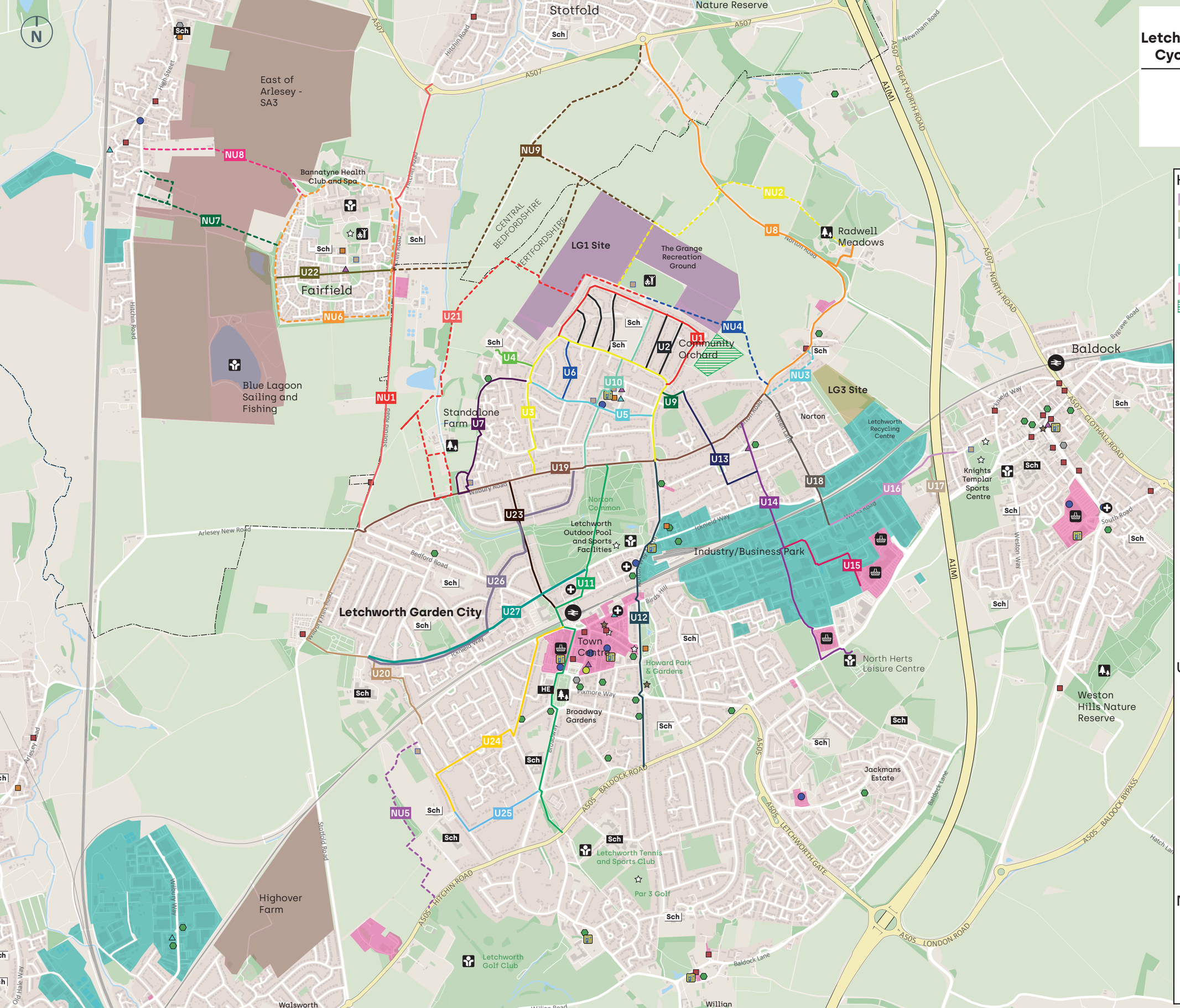

Key

- LG1 Site
- LG3 Site
- Baldock Masterplan
- Railway Station
- Industrial areas
- Retail areas
- Community Orchard
- Sch Primary School
- Sch Secondary School
- HE Higher Education
- GP surgery
- Leisure Centres
- Large Supermarkets
- Park
- Cinemas
- Community Centres
- Nursery
- Librarys
- Museums
- Pharmacies
- Pubs
- Supermarkets
- Places of Worship
- Sports Venues
- EV Charge Points
- Playground / Multi-use Facility

Urban Audit Routes

- U1
- U2
- U3
- U4
- U5
- U6
- U7
- U8
- U9
- U10
- U11
- U12
- U13
- U14
- U15
- U16
- U17
- U18
- U19
- U20
- U21
- U22
- U23
- U24
- U25
- U26
- U27

Non-Urban Audit Routes

- NU1
- NU2
- NU3
- NU4
- NU5
- NU6
- NU7
- NU8
- NU9

Accessibility Audit Findings

5.11 The full accessibility audit route assessments are included in **Appendix I** which identify existing issues and barriers and suggested improvements. These suggested improvements are a series of suggested areas for further consideration by local authorities as part of the strategic master planning process as opposed to being a list of schemes to be delivered/ funded by the LGCHF. Discussions will need to be held between the LGCHF and NHC, HCC and CBC to identify priorities for improvements.

5.12 **Table 5-2** and **Table 5-3** provide a summary of the main characteristics of each urban and non-urban route and potential improvements.

5.13 **Figure 5-3** provides a summary of the interventions by category for routes to the north of the town centre.

Figure 5.3
Accessibility Audit - Interventions Map

steer

0 250 500 750 1,000 m

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Key

- National Cycleway
- Greenway
- Etonbury Green Wheel - Walking
- Etonbury Green Wheel - Cycling
- Footpath (Public and Permissive)
- Bridleway
- Byway
- Restricted Byway
- Sch Primary School
- Sch Secondary School
- HE Higher Education
- GP surgery
- Leisure Centres
- Large Supermarkets
- Park
- New / additional cycle parking
- Pedestrian priority (dropped kerbs / tactiles)
- New / upgraded crossings (pedestrians and cyclists)
- Western Way junction enhancement (includes pedestrian priority)
- Pedestian benches
- Enhanced / new wayfinding and destination signage
- Enhanced / new NCN12 signage
- Footway resurfacing
- Remove / improve footway clutter
- Trim vegetation
- New yellow line markings / parking enforcement / management
- Bus stop enhancements /RTPI
- Anti-social behaviour measures / CCTV / enhanced lighting
- Vehicle gateway
- New footway / pedestrian link
- Lighting enhancements: Norton Common
- Railway station interchange improvements
- Repaint slow on-road marings
- Upgrade Etonbury Green Wheel /NCN12 / Greenway surfacing
- Footpath /Cyclepath gate upgrade
- Future LG1 Linear Park
- Indicative new vehicle access to LG1 (Norton (Norton Road access location tbc)
- New alternative Greenway link
- New pedestrian and cycle link to LG1
- On-street parking management to aid bus access
- Realign cycle route to remove blind corner

Generic Measures

- Grange Estate: Refurbish verges
- Grange Estate: Refurbish / replace street name signs
- Grange Estate: Potential 20 mph zone
- Schools: Management of school vehicle drop-offs / pickups
- Schools: School Travel Plans to reduce vehicle trips

Table 5-2: Key destinations, users and improvement options for all Urban routes

Route No	Route Name	Key Destinations	Users	Improvement Options
U1	Gaunts Way, Eastern Way and Western Way	Northfields Infants & Nursery School via Burley, The Grange Academy via Sparhawke, Grange Recreation Ground. Access to Greenway, NCN 12 and Etonbury Green Wheel via Gaunts Way and Western Way	Local residents, recreational users, cyclists, dog walkers, school children of the local schools in the estate.	• Consider provision of cycle stands at the Recreation Ground, possibly hire cycles to encourage travel by this active modes. • Introduce dropped kerbs with tactile paving at crossing points of side junctions including Stoneley, Kimberley, Burley, Sparhawke and White Hicks (dropped kerb eastern side only) • Introduce tactile paving at recreation ground entrance, Eastern Way Green and cul-de-sac to 148 Eastern Way. • Replace tactile paving at eastern side of Maycroft/ Gaunts Way junction. • Provide aligned crossing points with dropped kerbs and tactile paving on Eastern Way at Eastern Way/ Norton Road crossing point. • Install tactile paving at crossing points at Western Way/ Northfields junction. • Consider additional locations to provide benches such as at Grange Recreation Ground entrance, Eastern Way green space and in grassed areas at Eastern Way and Western Way/ Northfields junctions. • Introduce signage at the Grange Recreation Ground to provide direction to the Greenway and NCN12 route. At the southern end of the future LG1 development, at the entry to Gaunts Way a wayfinding map board/obelisk could be provided with a map detailing the pedestrian/ NCN12 route to the town centre, adjacent destinations, and contours with 10 minute walking and 20 minute cycle catchments. • Maps could also be included in the potential LG1 community centre (if ultimately delivered) and if this includes a café, the café tables, could have a map surface similar to in the Standalone Farm café. • Provide finger post signs at Gaunts Way/ Sparhawke junction to direct NCN12 cyclists along Sparhawke and identify as route to town centre. These could be of a similar format to the signs within the new Fairfield Park development which include finger post signs for important destinations with access times in brackets.

				• Provide signage for Community Orchard from Eastern Way at Footpath 32 connection. • Improve road surfacing between Western Way and Kimberley. • Enhance maintenance of grass verges where rutting/ damage present. • Refurbish or replace old road signs. • Remove paving slabs and resurface footway on the green at the northeast side of the Northfields/ Western Way junction. • Review potential feasibility for implementing a 20mph zone along Gaunts Way, Western Way and Eastern Way north of Northfields and the residential north-south running streets north of Northfields. Consider the potential feasibility of implementing Home Zones on the north-south running roads north of Northfields.
U2	Grange Estate residential roads – Maycroft, Whitehicks, Burley, Kimberley, Stoneley	Residential land uses, Northfields Infants and Nursery School, The Grange Academy.	Residents, recreational users, school children and parents, users of the town centre and Norton Common, NCN cycle route users.	• Introduce dropped kerbs with tactile paving at crossing points where Stoneley, Kimberley, Burley, Sparhawke and White Hicks (dropped kerb eastern side only) meet Gaunts Way. • Provided dropped kerbs with tactile paving on all east-west crossing points of these roads at their junctions with Northfields. • Replace tactile paving at eastern side of Maycroft/ Gaunts Way junction. • Provide dropped kerbs and tactile paving at all side roads along these routes. • Resurface vehicle crossover for Northfields Infants School on Burley. • Introduce benches on the larger grass areas on the eastern sides of Stoneley, Kimberley, Crossleys, and Maycroft. • Remove paving slabs and resurface footway on the eastern side of the northern part of Maycroft. • Relocate post box from outside of Northfield Infants School on Burley to grass verge on western side of Burley at the junction with Northfields. Ensure hedge outside school is regularly trimmed.
U3	Western Way, Northfields and Eastern Way	Resident's homes, local shops/ neighbourhood centre at Pelican Way, NCN12 route.	Local residents, leisure walkers individuals using community facilities, school	• Introduce dropped kerbs and tactile paving at all arms of the Western Way/ Southfields roundabout and along Western Way. Enhance pedestrian waiting islands to provide raised waiting area for pedestrians on island at a different level to road.

			children and parents.	• Provide dropped kerbs with tactile paving on all side arm junctions including important crossing points such as across Burley, as this is a busy crossing used by Northfields Infants & Nursery School children. • Repair road surfacing at zebra crossing on Northfields east of Saxon Close and repaint line markings. • Provide aligned crossing points with dropped kerbs and tactile paving on Eastern Way northern arm at Eastern Way/ Norton Road crossing point. • Provide tactile paving at Eastern Way crossing point north of Danescroft that provides a connection to the pedestrian/ cycle link through to Cashio Lane. • Provide tactile paving on all arms and refuge islands at Eastholm/ Norton Road junction. • Install double yellow lines on Southern Way immediately west of Western Way roundabout to stop parked cars parking close to junction and improve pedestrian visibility looking west, for pedestrians crossing at junction. • Consider provision of benches on northern side of Northfields between Burley and Sparhawke junctions and at green space at Eastern Way/ Northfields junction. • Replace broken paving slabs and resurface footway on southwestern footway at Southfields/ Western Way roundabout and on Northfields between Western way and Burley junctions. • Resurface footway either side of Sparhawke junction. • Explore potential to slightly widen footway on northern side of Northfields between Burley and White Hicks. • Ensure hedging is trimmed east of White Hicks junction. • Replace missing road sign at Southern Way arm. • Replace some of the street name signs on side roads where poorly maintained.
U4	Western Close to Stonehill Primary School	Stonehill Primary School, Avocet and Sax House residential areas	Local residents, school children and parents, pedestrians and cyclists.	• Introduce tactile paving at dropped kerbs outside school. • Introduce crossing point east of school access with dropped kerbs and tactile paving to help pedestrians crossing the road between the southern residential side and school. • Repaint line markings and zig zag markings outside school. • Potential for additional management of pupil drop-off periods.

				• Provide double yellow line markings close to Western Way junction to prevent vehicles from parking too close. • Consider providing some benches in green spaces along southern side of road in Sax House area. • Improve surface quality on southern side of Western Close and removal of paving slabs. • School could encourage parents to switch off engines during school drop off periods. • Sustainable access to be promoted to Academy in school travel plan.
U5	Southfields east to west	Resident's homes, Pelican Way shops and community facilities- Tesco Express, café, Tiny hands pre-school, children's playground and multi-use sports pitch, community garden and Grange Baptist Church.	Local residents, leisure walkers and people accessing Pelican Way shops and community facilities.	• Potential to provide cycle parking at Linden Green and additional sheffield stands outside Pelican Way shops. • Real time passenger information could be considered in future at Middlefields bus stop. • Install dropped kerbs and tactile paving at crossing point on Southfields arm at Eastern Way junction. • Ensure all side roads provide dropped kerbs and tactile paving at pedestrian crossing points in vicinity of Southfields. • Letchworth Cycling Strategy (2018) suggested installing a parallel pedestrian/ cycle crossing on Southfields at the Southfields/ Pelican Way junction. This could connect to a shared use pedestrian/ cycle footpath running along the Southfields pavement from opposite Pelican Way to the east-west pedestrian-cycle crossing at the northern end of Grange Road. • The pedestrian crossing outside the Pelican Way shops would be enhanced by resurfacing the whole of the northern Southfields footway, providing dropped kerbs with tactile paving at the crossing and repairing the road surface at the crossing point. Refuge could be lengthened to provide more space for pedestrians to wait in centre. • An alternative option to both the pedestrian and cycle crossing improvements above could be to create a raised table from the western side of the Pelican Way junction, to the eastern side of the Middlefields junction. Pedestrians/ cyclists would then have more priority in this area to cross Southfields. • Resurface footway on northern side outside Pelican Way shops.

				• Cut back weeping willow at southwestern corner of Southfields/ Grange Road junction. • Benches could be considered outside Pelican Way shops for shop users. Additional benches could be provided at Linden Green to allow people to rest and enjoy the green space. • The northern footway outside the Pelican Way shops requires resurfacing. This space is quite wide between the shop frontages and the road so the public realm could be significantly enhanced within this location, with landscaping, greenery, resting places and cycle stands. The bollards should be removed as part of any improvements. • Wayfinding signage could be provided for the Pelican Way shops and community facilities. • Outside the shops a wayfinding map board/ obelisk could be provided with a map detailing the pedestrian/ NCN12 routes to the town centre, adjacent destinations, and site LG1, and contours with 10 minute walking and 20 minute cycle catchments. This could potentially include braille and audio. • Provide larger finger post signs for NCN12. It should be noted that the potential improvements identified for Pelican Way outlined above are solely based on the accessibility audit and settle are proposing to redevelop the Pelican Way area and will be submitting a separate planning application for this.
U6	Caslon Way south of Northfields	Residential neighbourhoods	Local residents, leisure walkers and people accessing Pelican Way shops and community facilities.	• Consider providing some benches in the open green space area to the northern end to serve residents and users of the route. • Could introduce signage to connect cyclists with local cycle network.
U7	Southern Way, Jay Close, Linnet Close/ Kite Way- link to Standalone Farm	Residential neighbourhoods	Local residents, recreational users, people travelling to Southern Way bus stops, Kingdom Hall	• Remove old and uneven section of paving slabs on northern side of Southern Way, immediately west of Western Way and resurface this area. • Provide raised bus border at Bittern Way bus stop and update timetable information.

			of Jehovah's Witnesses and Standalone Farm.	• Provide raised bus border at Firecrest bus stop. Update timetable information. Provide a pedestrian crossing point between the bus stop and the eastern side of road with dropped kerbs and tactile paving. • Consider introduction of cycle parking at locations along route. • Southern Way and Jay Close - Install tactiles at all pedestrian crossing points. • Kite Way – provide tactiles on west-west pedestrian crossing dropped kerbs immediately north of Linnet Close/ Kite Way junctions. • Resurface the footpath on the northern side of Southern Way on eastern approach to subway and through subway itself if this is to be retained. • A short term measure to improve the appeal of the underpass on Southern Way for pedestrians could be to improve lighting and aesthetics on approaches and within the underpass, removing graffiti and providing CCTV. The overhanging trees on the eastern approach could also be cut back to create a less enclosed feel. However, it is still unlikely to be an attractive route for users during darker/overnight periods. • There are significant level differences either side of the underpass, so an at grade pedestrian crossing could not be provided in exactly the same location or to the east of the underpass, as pedestrians travelling along the southern side of Southfields would still need to negotiate steps. A potential option could be to close/ remove the underpass and provide an at grade pedestrian crossing (either dropped kerbs with tactiles and a refuge island or a zebra crossing) immediately west of the underpass. This would mean pedestrians do not need to use the underpass but some pedestrians may still be deterred during darker periods as they would still need to pass through the green space to the north of the underpass, which has limited surveillance/ overlooking. • Opportunity area to replace underpass if an at grade crossing can be provided. • Resting points/ benches could be considered in some locations along the route such as on the approaches to underpass on northern side of Southern Way (vandalism may be a potential issues), in the green area on the eastern side of the road, south of Firecrest and adjacent to the children's play area at Linnet Close. • Trim back vegetation on Jay Close – Kite Road pedestrian footpath link. Provide 'pedestrian footpath only, cyclists dismount' sign on southern approach.

				• Trim trees back on Kite Way west of Linnet Close, to prevent this from obscuring street lighting. • Consider finger post signs along route to promote as a connection to Standalone Farm.
U8	Norton Road from A507/ Tansey Avenue Roundabout- Green Lane junction	Norton Road north residential properties, Radwell Meadows, Bickerdikes Garden Centre, St Nicholas Church (Norton), Norton Road residential properties, Three Horseshoes Public House, St Nicholas Primary School. The Greenway/ NCN12/ Etonbury Green Wheel.	Young school children and parents, cyclists	• Norton Road pedestrian footway requires resurfacing in locations such as to the north of the Greenway/ NCN12 crossing point. Improvements could be delivered as part of any new vehicular junction for Site LG1. • Upgrade signage on approaches to NCN12/ Greenway crossing over Norton Road to include pedestrian/ cycle crossing ahead signs. Provide tactile paving at crossing point. • Explore options to consolidate signage at NCN12/ Greenway crossing point. Include Radwell Meadows as destination on sign. • Consider provision of a gateway feature on the eastern approach to Norton where the speed limit reduces from being derestricted to 30mph (east of Norton Bury Lane). This could include planters, a Letchworth Garden City sign, 30mph roundels and a please drive slowly sign. This would increase the perception of drivers approaching from the east that they are entering a built up area with a reduced speed limit. • Consider provision of a dropped kerb crossing point with tactile paving across Norton Road (Baldock arm) at the Norton Road/ Norton Road Baldock junction. Consideration should also be given to providing a short section of tarmac surfacing between the eastern side Norton Road (Baldock junction) and the permissive off-road pedestrian link at Norton Bury Lane. • Provide raised bus border at Church Lane bus stop. Consider widening footway in this location to ensure more capacity for bus users waiting to board a bus. • Provide raised bus boarder at Three Horseshoes westbound bus stop and consider widening waiting area to western side of stop, (subject to suitability of removing some grass verge). • Provide raised bus boarder at Three Horseshoes eastbound bus stop. • Provide dropped kerbs and tactile paving at eastern St Nicholas Primary School pedestrian crossing.

				• Clean school crossing patrol sign on northern side of Norton Road on eastern approach to school and install a second sign on the southern side of the road opposite the Church Lane bus stop. • Repaint line markings and upgrade red road warning surfacing and slow markings on approaches to St Nicholas Primary School pedestrian crossing. • Lobby HCC to deliver the proposed new pedestrian crossing on Norton Road east of the Green Lane junction. • Install tactile paving at pedestrian crossing point across Norton Hall Farm Private Road. • Resurface footway between Norton St Nicholas Primary School and Three Horseshoes westbound bus stop. • Ensure hedges are trimmed regularly on Norton Road southern footway east of Green Lane. • Provide signage for Radwell Meadows on Norton Road section east of Green Lane junction. • Install tactile paving at Norton Road/ Green Lane junction crossing.
U9	Non-motorised pedestrian/cycle link between Eastern Way and Paynes Close/ Cashio Lane	Community Orchard	Local residents, and leisure walkers/ cyclists, school children.	• Provide tactile paving at Eastern Way crossing point north of Danescroft that provides a connection to the pedestrian/ cycle link through to Cashio Lane. • Ensure vegetation along the route is cut back where overgrown, to help reduce the enclosed feel and increase coverage of street lighting. • Resurface footway along route. • Provide a finger post sign on Eastern Way to promote the route as a link to Norton/ Green Lane and the Community Orchard.
U10	Gaunts Way heading southbound to Wilbury Road (NCN12 route)	Provides access to The Grange Academy, Northfields Infants school, Pelican Way/ Southfields local amenities and services, Pelican Way/ Southfields local amenities, NCN12 cycle route	Residents, recreational users, The Grange Academy and Northfields Infants school children/ parents, people travelling to Pelican Way/ Southfields local amenities,	• Add finger post signs at key junctions along the route at Gaunts Way, Northfields, Southfields and Wilbury Road to promote the town centre, NCN12, adjacent destinations and destinations. These could be of a similar format to the signs within the new Fairfield Park development which include finger post signs of key destinations with access times in brackets. • At the southern end of the future LG1 development, at the entry to Gaunts Way a wayfinding map board/obelisk could be provided with a map detailing the pedestrian/ NCN12 route to the town centre, adjacent destinations, and contours with 10 minute walking and 20 minute cycle catchments. A similar

			nursery children and mobility impaired, commuters to town centre/ railway station	obelisk could also be provided at the Pelican Way Community Centre. These could potentially include braille and audio. • Maps could also be included in the potential LG1 community centre (if delivered) and if this includes a café, the café tables, could have a map surface similar to in the Standalone Farm café. • Resurface footway at certain sections of route such as on Gaunts Way adjacent to The Grange Academy, and along the footpath adjacent to the Pelican's Way children's multi-use sports pitch and community centre. • Repaint on road line markings where faded on Sparhawke outside the Grange Academy. • Install dropped kerbs and tactile paving on western side of Sparhawke at the Grange Academy vehicle crossover. • Consider NCN12 diversion along Whitehicks to improve cycle safety or promote diversion during school drop off periods. • Ensure Hedgerows outside the Grange Academy are well maintained. • Consider staggered arrival times to The Grange Academy, this would reduce peak on-street parking and user conflicts and reduce pressure on the western narrow western footway outside the school. • School could encourage parents to switch off engines during school drop off periods. • Sustainable access to be promoted to Academy in school travel plan. • Review potential feasibility for implementing a 20mph zone along Gaunts Way and Sparhawke and the potential for a Home Zone on Sparhawke. • Consider provision of cycle stands in key destinations along route and enhance provision of stands at Pelican Way neighbourhood centre. • Remove bollards at the northern Danescroft entry point to the segregated pedestrian/cycle path towards Pelican Way. • Repaint markings on segregated pedestrian/ cycle path sections of NCN12 on Grange Road and south of Danescroft – central white divider lines and pedestrian/ cycle logos to differentiate which sides of path should be used by each user. • Cut overhanging trees back and repair broken lighting on segregated pedestrian/ cycle path south of Danescroft.

				• Crossing at southern end of segregated footway/cycle path from Danescroft – either raise surface to footway level or provide tactile paving on dropped kerbs. • Wayfinding signage could be improved for the Pelican Way community facilities from Danescroft, the segregated footway/cycle path north of Pelican Way, Southfields and Middlefields. • Provide NCN12 finger post sign at southern end of segregated footway/cycle path north of Pelican Way. This may also reduce potential conflicts between cyclists and pedestrians on the footway to the south. • Benches could be considered in the grassed area adjacent to the segregated footway/ cycleway, north of Pelican Way. • Refurbish Pelican Way community garden and landscaping. • Improve lighting through the Pelican Way shopping parade passage. • Letchworth Cycling Strategy (2018) suggested installing a parallel pedestrian/ cycle crossing on Southfields at the Southfields/ Pelican Way junction. This could connect to a shared use pedestrian/ cycle footpath running along the Southfields pavement from opposite Pelican Way to the east-west pedestrian-cycle crossing at the northern end of Grange Road. • The pedestrian crossing outside the shops would be enhanced by resurfacing the whole of the northern Southfields footway, providing dropped kerbs with tactile paving at the crossing and repairing the road surface at the crossing point. Refuge could be lengthened to provide more space for pedestrians to wait in centre. • An alternative option to both the pedestrian and cycle crossing improvements above could be to create a raised table from the western side of the Pelican Way junction, to the eastern side of the Middlefields junction. Pedestrians/ cyclists would then have more priority in this area to cross Southfields. • Cut back weeping willow at southwestern corner of Southfields/ Grange Road junction. • Enhance pedestrian crossing facilities along Middlefields at junctions with Northfields and Southfields and all intermediate junctions including Pelican Way and Lindencroft. Dropped kerbs and tactile paving should be provided at all crossing points.

				• As outlined in the Letchworth Cycling Strategy (2018) the Stonnells Road and Lammas Way junction mouths could be revised to provide cycle track priority across these junction mouths. • Consider realigning the cycleway at the corner of Grange Road where it meets Wilbury Road to remove the blind corner. • Resurface highway at raised table crossing at Wilbury Road north of Norton Common and consider installing a parallel pedestrian/ zebra crossing in this location.
U11a	NCN 12 Wilbury Road southbound to Letchworth Garden City Train Station	Norton Common Local Nature Reserve, Letchworth Outdoor Pool, Norton Common Skate Park, Norton Common Bowls Club and Tennis Courts, Nevells Road Surgery, access to the Town Centre (amenities and services) and Letchworth Railway Station	Residents, recreational users travelling to Norton Common, a range of demographics using the Common, Skate Park and Outdoor Pool, people travelling to the Town Centre amenities, commuters travelling to Letchworth Railway Station	• Resurface highway at raised table crossing on Wilbury Road, north of Norton Common and consider installing a parallel pedestrian/cyclist zebra crossing in this location. • Introduce lighting for the footpaths through Norton Common to increase perceived safety for pedestrians and cyclists to allow them to use the route after dark. This will need to be done sensitively to minimise disturbance to wildlife. Low level LED lighting could be considered. • Upgrade NCN12 cycle finger post signs at northern end of Norton Common to provide times to local destinations in minutes. • Re-orientate Norton Common information board so it faces the west and can be viewed by users travelling in all directions. • Upgrade footway surfacing through Norton Common. Consider potential for converting to a segregated footway/ cycle path to avoid conflicts between pedestrians and cyclists. Ensure leaves are regularly removed during summer months. • Refurbish damaged NCN112 marker post signs through Norton Common. • Revise pedestrian/ cyclist crossing arrangements at the southern end of Norton Common where it meets Icknield Way, to remove the informal dropped kerb crossing point and upgrade the more formal pedestrian/ cycle crossing point further west to a parallel pedestrian/cyclist zebra crossing. • Provide additional map at the southern end of Norton Common to outline onward destinations. Provide finger post signs where the paths split at the southern end of Norton Common to provide direction to the skate park, tennis courts, playground area and the town centre.

				• Provide enhanced/ more easy to understand signage for cycle users at the southern end of The Quadrant where cyclists should join the carriageway from the footway. Provide cycle logos on the road surface. • Provide cycle route logos on the road surface along The Quadrant. • Consider reducing junction with and tightening turning radii at Quadrant/ Nevells Road junction to slow vehicle entry speeds to junction and increase cyclist safety. • Resurface footway on Nevells Road where poorly maintained and uneven due to adjacent large trees. • Letchworth Railway Station transport hub, interchange and cycle parking facilities are to be upgraded as part of station improvements scheme. • Repaint zebra crossing line markings on Station Place.
U11b	Broadway, Broadway Gardens and Spring Road	Town Centre (employment, leisure and retail destination), Broadway Gardens, Letchworth Railway Station, Letchworth Tennis and Sports Club, NCN 12 cycle route	Residents, people travelling to the Town Centre employment, retail and leisure destinations, commuters travelling to Letchworth Railway Station	• Consider increasing cycle parking levels at main town centre destinations. • Remove ambiguity of cyclist permission to cycle on central strip of Broadway by putting up signage to confirm that it is shared cyclist and pedestrian use. The width of the central strip and good sight lines along its length should minimise the potential for pedestrian / cyclist conflict. Nevertheless, signage should emphasise pedestrian priority, that cyclists are expected to defer to pedestrians, and maintain low speeds. • Repaint line markings and cycle logo on segregated off-road footway/ cycle path between Morrisons access and Broadway northern section. • Provide tactile paving across pedestrian crossing point to Broadway Gardens car park. • Consider provision of additional bollards with shared use signs along Western side of Broadway to remind users of the shared use nature of the path. • Provide dropped kerb crossing point with tactile paving at the point the Broadway southern arm joins Broadway Gardens to provide a more direct crossing to the Broadway Gardens central island. • Provided tactile paving on side arm pedestrian crossings on the Broadway south of Broadway Gardens. • Ensure vegetation trimmed regularly on Spring Road so it does not restrict street lighting coverage.

				• Reorientate 'Cycle Track Look Both Ways' sign outside St Francis's School northern crossover so it can be easily seen by approaching vehicles from road and school. Consider providing another sign on approaches to crossovers to warn cycles of vehicles crossing.
U12	Baldock Road/ Norton Way south junction northbound to Wilbury Road	Letchworth Par 3 Golf, Howard Park, town centres uses (employment, retail and leisure), Christian Worship Centre, Letchworth Veterinary Centre, Letchworth Outdoor Pool and Norton Common, Letchworth St. George's Church, GP Surgeries	Residents, commuters, recreational, leisure, and retail users, people travelling to Station Road	• Improve footway surfacing quality on the western side of Norton Way South just north of the junction with Baldock Road. • Consider introducing a segregated cycle lane along Norton Road South and North to ensure that cyclists feel confident cycling and not in conflict with vehicles or pedestrians. • Consider RTPI at mainbus stops. • Consider increasing cycle parking levels at main town centre destinations. • Introduce tactile paving at pedestrian crossings, across side roads along the route. • Consider upgrading pedestrian refuge islands on western and southern arms of Gernon Road roundabout to provide a larger waiting space on island, with island waiting space raised (with dropped kerbs and tactile paving) to make pedestrians feel more separated from traffic. • Introduce enhanced lighting beneath the rail bridge north of Station Road junction. • Resurface footway on western side of road north of rail bridge, south of Nevells Road. • Provide bus boarder at Norton Common bus stop. • Provide tactile paving at northern and southern pedestrian crossing islands at Station Road roundabout. • Provide tactile paving on all arms and refuge islands at Eastholm/ Norton Road junction.
U13	Cashio Lane heading southbound to Hampden Close	Residential properties, Cromwell Gardens and Common View connects to the Triangle Convenience Store and Norton Methodist Church	Residents accessing the shop and Church, recreational users, and people access the Letchworth Industrial Area.	• Resurface western footway on Cashio Lane. • Trim hedges on western side of Cashio Lane. • Provide tactile paving on dropped kerbs at Cashio Lane junction with Norton Road. • Resurface footpath link between Norton Road and Common View. Upgrade bollards at either end of footpath.

				• Trim hedges along Norton Road/Common View footpath. • Introduce tactile paving on dropped kerbs either side of Common view pedestrian crossing point to Cromwell Gardens. • Consider street lights along Cromwell Road to ensure pedestrians feel safe walking this route during darker periods. • Introduce resting points, Cromwell Gardens would benefit from a bench for pedestrians to rest. • Remove paving slabs and re-surface footway through Cromwell Gardens. • Introduce signage at Cromwell Gardens to redirect mobility impaired users to alternative routes. • Make Cromwell Road a shared surface area to remove level changes between road surface and footway and provide upgraded surfacing.
U14	Norton Road footpath to North Ave, continuing south via Common View and Hampden Close, crossing the rail bridge, Dunhams Lane and Ave One to Baldock Road/ North Herts Leisure Centre	Convenience store on North Avenue, residential properties, Letchworth industrial and retail areas and North Herts Leisure Centre.	Residents, recreational users, people accessing Letchworth industrial and commercial/retail areas	• Footpath link from Norton Road to North Avenue – provide new bollards at southern end of route where it connects to North Avenue. • Footpath link from Norton Road to North Avenue – ensure vegetation along route is regularly trimmed and ensure lighting is functional. • Provide dropped kerb pedestrian crossing point with tactiles on North Avenue to provide a connection between end of footpath link from Norton Road - North Avenue and footpath to south, running west of Norton Methodist Church. • Footpath link between North Avenue and Common Road, west of Norton Methodist Church – upgrade bollards at southern end. • Footpath link between Common View and Glebe Road –Provide tactile paving on dropped kerb at point footpath meets Glebe Road. • Footpath link between Common View and Glebe Road- Provide additional lighting and regularly trim vegetation. • Footpath link between Common View and Glebe Road - resurface footpath and regularly remove dead vegetation debris. • Hampden Close and Pascal Way – regularly trim adjacent vegetation to enhance footway width. • Provide new more attractive bollards at end of Hampden Close at entry point to pedestrian footpath link to Pascal Way. • At the end of the short pedestrian footpath connecting Hampden Close with Pascal Way the existing pedestrian footpath does not follow the desire line, and

				people regularly walk across the verge (worn servicing) to access Pascal Way which is very lowly trafficked. Consider replacing verge with footway, with dropped kerb with tactile paving providing access into Glebe Road. • Provide signage at entry points to footpath over railway line between Icknield Way and Works Road to advise cyclists and people with mobility impairments that it is not a suitable route and to use alternative routes. • Footpath route over rail bridge between Icknield Way and Works Road – Ensure lighting is functional and vegetation is regularly trimmed. Remove graffiti on footbridge and provide lighting on footbridge. • Footpath route over rail bridge between Icknield Way and Works Road – resurface footpath along whole route. • Provide crossing point with dropped kerbs and tactile paving on Works Road between rail line footpath and Dunhams Lane. • Dunhams Lane – provide dropped kerbs with tactile paving across vehicle crossovers. Resurface vehicle crossovers. • Dunham Lane – resurface eastern footpath (including surfacing at crossovers) and trim vegetation. • Sixth Ave/ Ave One – provide dropped kerb crossing points with tactile paving where these are not present on sign arm junctions. • Introduce more benches along route. • Provide enhanced signage of main destinations in locations along route.
U15	Ave One, Fourth Ave and Third Ave to Sainsbury's (Industrial Park)	Access to the industrial estate/ business park and Sainsbury's superstore on Third Ave.	• Employees, customers and delivery drivers accessing industrial/ business park	• Consider introducing raised bus boarder and RTPI at the Sainsbury's bus stop on Third Avenue • Ensure all vehicle crossover/ side road crossing points have dropped kerbs with tactile paving. • Provide tactile paving at crossing points on all arms of Ave One with Fourth Ave roundabout • Consider introducing benches in locations. • Provide pedestrian finger post signs for Sainsburys.
U16	Works Road from Green Lane heading east over	Access to the industrial estate/ business park uses. The eastern end of	Industrial estate users, residents accessing Baldock,	• Provide dropped kerbs at all vehicle crossovers. • Resurface crossovers on Works Road where they intersect footpaths.

	A1 bridge to Baldock	the route provides access to the A1 footbridge providing connection to Baldock, Avenue Park	recreational users, dog walkers and cyclists	• Replace metal utility covers on southern Works Road footway surface east of Jubilee Road to remove tripping hazards. • Provide additional lighting on footpath through wooded area at eastern end of Works Road on approach to A1 footbridge. Ensure vegetation is regularly trimmed. • Ensure that the footpath through the wooded area at the eastern end of Works Road is free from leaf litter to avoid slipping hazards. • Provide lighting on the footpath through the grassed area which forms the alternative connection to the A1 footbridge (as opposed to the wooded footpath) from Works Road. • Resurface footway on footpath link through grassed area at eastern end of Works Road which provides a link to A1 footbridge. Provide signage, or bollards with shared use signage to advise pedestrians and cyclists that both routes are shared use. • Consider introducing a bench near the bridge in grassed area. • Resurface footpath on Baldock approach to A1 footbridge and trim vegetation. • A1 footbridge – remove graffiti and consider providing lighting on footbridge. Provide lighting on eastern approach to footbridge. • Provide more destination finger post signs along the route for Baldock/ NCN12 and The Greenway.
U17	South of Works Road along western side of A1 (M) to B656 Letchworth Road	NCN12 Cycle route and the Greenway and provides a link between the industrial area and Baldock	Local residents, dog walkers, recreational users, cyclists	• Pedestrian/ cyclist track south from Works Road through wooded area to Hadrian Way – Provide lighting and trim vegetation. • Resurface footpath along Hadrian Way. • Hadrian Way - provide additional lighting along Hadrian Way and under A1 bridge arches including on old Letchworth Road. Consider introducing CCTV surveillance and remove graffiti. • Provide enhanced signage for NCN12 and Greenway at both ends of route. • Provide dropped kerbs with tactile paving at southern end of Hadrian Way where it connects with old Letchworth Road.
U18	Works Road heading north along Green Lane	Letchworth/ Flint Road industrial areas, residential uses, Norton	Residents, school children of the nearby primary	• Icknield Way/ Green Lane roundabout – provide dropped kerbs and tactile paving on Icknield Way arm. Replace poorly maintained tactile paving at crossing point on northern Green Lane arm.

	to Norton Road junction	Post Office (closed at present), St. Nicholas Primary School and St Nicholas Church on Norton Road, east of the junction with Green Lane	school on Norton Road, people travelling to Letchworth/ Flint Road industrial areas.	• Resurface footways between Works Road and Icknield Way. • Upgrade uneven tactile paving and resurface crossovers on section between Works Road and Icknield Way. • Provide raised bus borders at Blackhorse Road bus stop. • Replace uneven tactile paving across Kristiansand Way junction. • Provide tactile paving on dropped kerbs on Talbot Way eastern and western arms. • Provide tactile paving on dropped kerbs on Green Lane arm at Norton Road junction. • Consider provision of benches along route, such as on grassed area on western wide of road north of Blackhorse Road.
U19	From Green Lane, Norton Road heading west to Wilbury Hills Road	Residential properties, Norton Common and the various leisure facilities are accessible from the southern side of Wilbury Road	Local residents, recreational users, cyclists	• Resurface footways in areas of poor quality along route. • Provide tactile paving across Cashio Lane crossing point. • Repaint Slow markings on road surface along route • Provide tactile paving on all arms of Norton Road/ Eastholm roundabout. • Consider providing benches in the Westholm grassed area. • Repaint and provide additional on road slow markings and additional road signs on both approaches to raised table pedestrian crossings serving Norton Common, east of Grange Road to warn approaching vehicles or pedestrians and cyclists crossing the road. • Provide tactile paving on raised table crossing points to Norton Common. Resurface road surface at crossing point to Norton Common east of Grange Road. Consider installing a parallel pedestrian/ zebra crossing in this location. • Provide raised bus boarder at Longmead and Cowslip Hill bus stops. • Provide tactile paving across The Birches and Cowslip Hill crossing points. Resurface footway at Cowslip Hill crossing. • Provide tactile paving across Longmead, Kite Way and Standalone Farm, Furley Close crossing points. • Provide tactile paving on Bedford Road western arm of Wilbury Road/ Bedford Road mini roundabout. Raise central refuge island waiting area to above road level for pedestrians with dropped kerbs and tactile paving. • Provide tactiles on Stotfold Road arm dropped kerbs at Stotfold Road/ Bedford Road mini roundabout

				• Provide additional finger post signs along route to promote destinations including Norton Common. Enhance NCN12 finger post signs between Grange Road and Norton Common.
U20	Wilbury Hills Road - Icknield Way, Campfield Way, Highover Road to Hillbrow	Residential properties, Wilbury PH on Wilbury Hills Road, Fearnhill Secondary School on Icknield Way and Highfield School, Greenway cycle route		• Letchworth Cycling Strategy (2018) recommended scheme to re-route cyclists away from Wilbury Road/ Stotfold Road triple mini roundabouts (see cycling strategy for further details). • Ensure all side roads on Wilbury Hills Road have tactile paving and dropped kerbs. • Resurface footway where poorly maintained along Wilbury Hills Road. • Repaint all road markings outside Fearnhill School including keep clear markings, on road school children crossing markings and zebra crossing markings. • Repair Bursland bus stop to replace smashed panel and remove graffiti. • Provide tactile paving across Campfield Way junction. • Consider benches to provide resting points along Campfield Way. • Provide dropped kerbs and tactile paving at Campfield Way/ Highover Road junction. • Provide enhanced signage for the Greenway at Icknield Way/ Campfield Way junction and at Highover Road/ Campfield Way junction. • Remove uneven paving slabs and resurface all footways along Highover Road. • Introduce lighting across the rail bridge to ensure users feel safe using this route at night time. • Provide signs either side of rail footbridge to advise cyclists to dismount to reduce potential conflicts with pedestrians on footbridge. • Trim vegetation on footbridge. • Resurface footways along Chiltern Way and Hillbrow where poorly maintained.
U21	Stotfold Road from Wilbury Road to the A507	Wilbury Hills Cemetry, Two Chimney's PH, provides access to Fairfield Park (residential uses, retail uses, Fairfield Business Park, Fairfield	Residents/ business users of Fairfield Park, pedestrians/ cyclists connecting to the Etonbury Green Wheel	• Could provide a bus shelter or bus boarding area at the Two Chimneys bus stop and at the North Drive bus stop. • Ensure vegetation/ hedgerows are trimmed on the more rural sections as overgrown vegetation obscures the road signs and shared use path signs. • Provide pedestrian/ cycle signage on the section of Stotfold Road at the southern end of the Fairfield Park development to direct northbound

		Community Hall, Fairfield Bowls Club, Letchworth Garden City Cricket Club), Fairfield Park east of Stotfold Road.	walking and cycling route through Fairfield Park and continuing west into Arlesey	pedestrians/ cyclists on the western shared use path to divert into the development and use the internal footway/ cyclepath which runs parallel to Stotfold Road. • Once Site LG1 opens enhanced signage could be provided at the Fairfield Park southern roundabout to direct users to cross Stotfold Road and continue on the Etonbury Green Wheel towards Letchworth. This could include reference to the new development and the cycle time to the new development/ Letchworth. • Repair Etonbury Wheel map board at Dickens Boulevard junction with Stotfold Road. This shows the route alongside the Grange recreation ground and could be upgraded to include Site LG1 layout in the future. • Replace on surface cycle and pedestrians markings on the approaches to the A507 subway. • Remove graffiti at A507 subway
U22	Central east-west shared pedestrian/ cycle route through Fairfield Park from Stotfold Road to Heathcliffe Avenue	Fairfield Park (residential uses, retail uses, Fairfield Business Park, Fairfield Community Hall, Fairfield Bowls Club, Letchworth Garden City Cricket Club, Fairfield Park Community Orchard, Central Avenue South and North children's play areas)	Residents and recreational users, school children, children and parents	• Install bus boarder at Dickens Boulevard bus stop. • Consider increasing number of cycle stands along route. • Provide tactile paving at Heathcliffe Avenue raised table crossing. • Provide lighting along the path at the end of Heathcliffe Avenue to instil confidence in users of this path at night time.
U23	Cowslip Hill southbound to Letchworth Garden City Train Station	Residential properties, along Cowslip Hill and Letchworth Railway Station. The route is to the west of Norton Common which provides various recreational and leisure opportunities. Nevells Road Surgery, Access to town centre	Local residents, recreational users, workers and commuters. Individuals accessing Letchworth Town Centre and joining the NCN12 Cycle route	• Provide wayfinding signage along route to main destinations. • Consider introduction of additional benches along route. • Provide tactile paving either side of Cowslip Hill at the junction with Wilbury Road. • Resurface footpaths either side of Cowslip Hill between Wilbury Road and Hawthorn Hill. Resurface road at Hawthorn Hill pedestrian crossing point. • Ensure adjacent hedges and vegetation is trimmed to maintain footway widths particularly north of Hawthorn Hill. • Install dropped kerb on southern side of Hawthorn Hill and tactile paving on both sides of crossing.

		employment, retail and leisure amenities		• Enhanced management of on-street parking on the eastern side of Cowslip Hill. Consider measures to reduce the length of cars continuously parked and provide dedicated cyclist space pull in areas between sections of parked cars to try and reduce the need for cyclists to stop and wait for extended periods. • Provide east west crossing point with dropped kerbs and tactile paving for pedestrians using the Norton Common east-west pedestrian route. • Provide wayfinding signage where Norton Common east-west pedestrian route joins Cowslip Hill. • Provide tactile paving on all side road crossings. At Nevells Road junctions provide tactile paving on northern side dropped kerb and tactiles in central refuge island. • Bridge Road/ Station Way/ Station Place mini roundabout – provide new dropped kerb crossing with tactiles on Bridge Road arm. Provide new dropped kerb crossing with tactiles and central pedestrian refuge island with tactiles on eastern arm to provide a crossing point which is more on the desire line to the bus stop for users approaching junctions from the west and north.
Routes to Western Letchworth Secondary Schools – The Highfield School and Fernhill School				
U24	Station Way – Highfield School (please refer to Audit routes U10 and U11a for onward connection to Site LG1 north of Station Way).	This route serves local residents, pedestrians and cyclists accessing the town centre and secondary school age children travelling to The Highfield School.	Residents, recreational users, commuters accessing the town centre/ railway station, shoppers accessing town centre and Morrisons, and secondary school age children accessing The Highfield School.	• Consider feasibility of providing a pedestrian crossing point on Bridge Road north of the Station Way roundabout. • Add finger post signs at important junctions such as Station Way to improve wayfinding to town centre and shops. • Ensure vegetation is trimmed along off-street footway/ cycle route (adjacent to Morrisons) connecting Station Way with Broadwater Avenue. Provide lighting along the route. • Install dropped kerbs with tactile paving on Broadwater Avenue side roads. • Consider further rationalisation of on-street parking on Broadwater Avenue to provide cyclists with more passing opportunities during busier parking periods. • Improve Broadwater Avenue crossing point (including refuge island) at Spring Lane junction to improve alignment of dropped kerbs with island and install tactile paving. • Improve pedestrian crossing point across Spring Road at junction with West View to provide tactile paving.

				• Install improved dropped kerbs with tactile paving on West View side roads. • Ensure tree canopies are trimmed along West View to avoid canopies impacting street lighting coverage. • Provide a demarcated dedicated pedestrian crossing point outside the school potentially including a zebra crossing with a raised table. A dedicated crossing will encourage students to cross at more of a defined location and increase awareness of school children crossing the road. This could also include advanced signage of the crossing point and "SLOW" markings on the road surface. • Improve footway surfacing on Highfield outside the school and at some adjacent drive crossovers. • School could encourage parents to switch off engines during school drop off periods. • Sustainable access to be promoted to The Highfield School in school travel plan to reduce car trips. • West View and Highfield – consider further rationalisation of on-street parking to provide more circulation space for cyclists. Consider potential alternatives to speed bumps such as kerb buildouts to reduce vehicle speeds. Consider potential 20mph speed limit on streets surrounding The Highfield School. • Benches could be considered in the grassed area adjacent to the Broadwater Avenue/ Station Way junction.
U25	The Highfield School – Sollershott W – Broadway (please refer to Audit routes U10, U11a and U11b for onward connection to Site LG1)	This route serves local residents, pedestrians and cyclists accessing the town centre and secondary school age children travelling to The Highfield School.	Residents, recreational users, commuters accessing the town centre/ railway station, shoppers accessing town centre and secondary school age children accessing The Highfield School.	• This route is likely to be used more by pedestrians and cyclists travelling between Site LG1 and The Highfield School as it provides a quicker/ more direct connection to Broadway which has better pedestrian and cycle facilities than the U24 audit route which uses more residential streets. NCN12 runs along the Broadway together with the shared off road/ pedestrian/ cycleway along the western side of Broadway. • Install tactile paving at The Highfield School vehicle access crossovers. • School could encourage parents to switch off engines during school drop off periods. • Sustainable access to be promoted to The Highfield School in school travel plan to reduce car trips.

				• Ensure tree canopies are trimmed along Sollershott W to avoid canopies impacting street lighting coverage. • Ensure Sollershott W hedgerows adjacent to footpath are regularly trimmed. • Add finger post signs at important junctions to improve wayfinding to NCN12 town centre and shops.
U26	Hawthorn Hill – Fearnhill School (please refer to Audit route U10 for onward connection to Site LG1)	This route serves local residents, secondary school age children (pedestrians and cyclists) travelling to Fearnhill School.	Residents, recreational users, and secondary school age children accessing Fearnhill School	• Install upgraded dropped kerb with tactile paving opposite Hawthorn Hill entrance on northern side of Wilbury Road. Upgrading this crossing would also benefit pedestrians accessing the Grange Road bus stop on the southern side of Wilbury Road. • Improve footway surfacing on pedestrian only link between Hawthorn Hill and Wilbury Road. • Trim vegetation at pedestrian access point to Hawthorn Hill from Wilbury Road to ensure street lighting coverage is unimpeded and there are direct site lines uninhibited by low overhanging vegetation. • Install upgraded dropped kerbs with tactile paving at crossing points on Hawthorn Hill. • Improve footway surfacing in places along Hawthorn Hill. • Install dropped kerbs with tactile paving at crossing on Hawthorn Hill arm at junction with Cowslip Hill. • Enhanced management of on-street parking on the eastern side of Cowslip Hill. Consider measures to reduce the length of cars continuously parked and provide dedicated cyclist space pull in areas between sections of parked cars to try and reduce the need for cyclists to stop and wait for extended periods. • Install a dropped kerb with tactile paving crossing point for pedestrians wishing to cross Cowslip Hill between Hawthorn Hill and Redhoods Way E. The best location for this could be where the Norton Common footpath crosses Cowslip Hill as it would also benefit these users and improve that pedestrian route. • Install dropped kerbs with tactile paving at crossing on Redhoods Way W arm at junction with Icknield Way. • Install upgraded dropped kerbs with tactile paving across Spring Road. • Repaint line markings on Icknield Way zebra crossing to east of Fearnhill School and repaint advanced on carriageway warning markings.

				• School could encourage parents to switch off engines surrounding school during school drop off periods. • Sustainable access to be promoted to Fearnhill School in school travel plan. • Consider potential for benches on Cowslip Hill and in grassed areas such as Redhoods Way W junction with Icknield Way.
U27	Icknield Way east of Redhoods Way W to Norton Common (Alternative route to access Fearnhill School). Please refer to Audit route U10 for onward connection to Site LG1 and Audit route U26 for Icknield Way west of Redhoods Way W.	This route serves local residents, secondary school age children (pedestrians and cyclists) travelling to Fearnhill School and also accessing Norton Common.	Residents, recreational users, and secondary school age children accessing Fearnhill School	• Install dropped kerbs with tactile paving at Bedford Road roundabout. • Provide tactile paving at Icknield way petrol station access points. • Consider footway surfacing improvements in vicinity of Bedford Road and Cowslip Hill roundabouts and along the southern side of Icknield Way east of Cowslip Roundabout. • Consider finger posts signs to promote as route to NCN12 and Norton Common.

Table 5-3: Key destinations, users and improvement options for all Non-Urban routes

Route No	Route Name	Key Destinations	Users	Improvement Options
NU1	Greenway - Standalone Farm to the start of the Grange Recreation Ground	Letchworth Garden City Greenway and also includes the PROW and the Etonbury Green Wheel route where it joins the Greenway west of Site LG1	Leisure users of the Greenway and provides a link for pedestrians and cyclists from the Grange Estate area/recreation ground to Standalone Farm, Etonbury Green Wheel.	• Consider replacing the kissing gate with a width limiting gate north of Standalone Farm. Width limiting gates are provided on the Greenway at the Grange recreation ground. • Repair finger post signs at point Etonbury Green Wheel (leading to Fairfield) connects with Greenway west of the Grange recreation ground. The finger post sign could be upgraded in this location to outline maindestinations and associated cycle times. The Etonbury Green Wheel should also be promoted on the sign. • Upgrade surfacing on the Etonbury Green Wheel connection to Fairfield west of the Greenway. • Ensure vegetation is regularly trimmed on the Greenway connection to Western Way. • Provide finger post signs on Western Way at the point it is joined by the Greenway to promote the Greenway. • Consider widening the width of the path connecting Western Way with the Greenway- to allow cyclists to pass one another and accommodate large recumbent cycles.
NU2	Eastern side of Grange Recreation Ground to Radwell Meadows	Garden City Greenway cycle network, the NCN 12 and Etonbury Green Wheel route between the Grange recreation ground and Norton Road/ Radwell Meadows Park. It initially passes along the eastern side of the Grange recreation ground.	Recreational users, pedestrians and cyclists and dog walkers, local residents. NCN12 cyclists	• Provide clear signage (fingerposts) at the Grange Recreation Ground for cyclists and pedestrians joining the Greenway/ NCN12/ Etonbury Green Wheel route. Also provide enhanced directional signage within Radwell Meadows. • As the new LG1 development will be located on the alignment of this link at the Grange recreation ground

				and to the north of this, consideration is being given to providing an additional Greenway section along the currently permissive routes further to the west of the Grange Recreation Ground and then reconnecting with the existing Greenway section that passes through LG1 north of the proposed LG1 development. This would maintain the continuity of the Greenway and allow Greenway users to avoid the LG1 development. The design stage of the LG1 development should consider the best locations to provide connections to the Greenway route. An efficient signage and wayfinding strategy will be required within the new development. • Provide tactile paving where the Greenway/ NCN12 crosses Norton Road.
NU3	Public footpath 26 Church Lane to Green Lane	Residential properties, St. Nicholas Primary School and St. Nicholas Church.	Pupils/ parents of St. Nicholas Primary School and to access St Nicholas Church. Local residents and dog walkers – cyclists and horse-riders are not permitted	• Enhance signage on Church Lane to promote public footpath, potential new school link and future LG3 site (once delivered). • Remove rutting along the route where present west of Church Lane connection. • As the future LG3 development site proposes a connection to Footpath 26 and there is currently no direct connection to the southern side of St. Nicholas Primary School a new pedestrian connection should be explored between Footpath 26 and the rear of the school. • Resurface length of footpath between potential new school connection and Green Lane, to provide a similar surfacing to the Greenway. • Trim vegetation back where overgrown to achieve a wider footpath – between proposed LG3 site and Church Lane.

				• Explore potential for providing low level lighting between the potential new school connection and Green Lane.
NU4	Public footpath 31 Croft Lane Norton Road to Grange Recreation Ground	Grange recreation ground (and Greenway/ Etonbury Wheel/ NCN12), and the Community Orchard.	Recreational users and residents, some cyclists, and dog walkers	• Provide Clear signage (fingerpost) on Norton Road near to the junction with Croft Lane to promote the route and main destinations such as the Grange and Community Orchard. • Consider providing tactile paving at Croft Lane pedestrian crossing point. • Consider introducing signage along the route indicating travel time and distance from Grange recreation ground. • Consider upgrading whole of route surfacing to use similar surfacing to the Greenway. • Repair wooden gate east of Community Orchard and improve surfacing to stop water pooling in wet conditions. • Consider repairing kissing gate at Community Orchard or replace with width limiting gate. Improve surfacing at gate to stop water pooling and surface becoming muddy.
NU5	Greenway west of Hillbrow	Fearnhill Secondary School, Highfield Secondary School, residential road (Hillbrow), recreation ground, children's play area and the Greenway.	Recreational users, pedestrians and cyclists, dog walkers, horse riders, local residents	• Remove graffiti on the rear of the buildings on the northern side of the Greenway path, opposite Hillbrow recreation ground. Trim overhanging vegetation and consider introducing lighting on this initial section.
NU6	Etonbury Green Wheel and links around outside of Fairfield Park	Residential properties, retail uses, Fairfield Business Park, Bannatyne Health Club, Fairfield Community Hall, Fairfield Bowls Club, Letchworth Garden City Cricket Club, Fairfield Park Community Orchard, Central	Recreational users, cyclists, dog walkers, horse riders, local commuters to Fairfield Park, Lectworth and Arlesey Railway Station. Etonbury Green Wheel users.	• Introduce clear signage (finger posts) to promote the Etonbury Green Wheel shared use path section that runs within the development on the western side of Stofold/Hitchin Road. This is required to advise to direct cyclists heading north on Stotfold Road to use the route.

		Avenue South and North children's play areas)		• Consider introduction of lighting through green space area east of Middlemarch and trim back some of lower overhanging tree branches to make pedestrians/ cyclists feel safer during darker periods. • Refurbish Etonbury Green Wheel map information board on Dickens Boulevard as weather damaged and ensure future Site LG1 is included on routing once delivered. • Consider providing gravel surfacing along the unmade section of the route between Livingstone Way and Franklin Place.
NU7	Footpath connecting Fairfield Park to Arlesey	Pedestrians and cyclists travelling from the Grange Estate westwards through Fairfield Park and continuing west to Arlesey.	As it is more a PROW it is more likely to be used by pedestrians, dog walkers and leisure users. Initial Etonbury Green Wheel section also used by cyclists and horse riders.	• Introduce finger post wayfinding signs at Fairfield Park and Hitchin Road ends of the route. • Ensure vegetation trimmed through wooded area and part of route adjoined by fields.
NU8	Eatonbury Green Wheel – Fairfield Park to Arlesey	Pedestrians and cyclists from the western side of Fairfield Park to Arlesey.	Recreational users, pedestrians, cyclist, horse riders, local commuters to Fairfield Park and Arlesey (including train station), dog walkers.	• Provide additional finger post signs on eastern side of the West Drive/ Hitchin Road junction identifying the route along West Drive as part of the Etonbury Green Wheel, with blue cyclist finger post sign, with cycle time to Fairfields. The latter is present on the western side of the road but can be easily missed. • Resurface central section of route where tarmac surfacing is very poor quality.
NU9	PROW running to the west of proposed Site LG1.	PROW running to the west of the Grange Estate providing access to Stotfold to the north, Greenway and the Etonbury Green Wheel leading west to Fairfield Park	Recreational users, pedestrians, cyclists and dog walkers	• Conversion of the Greenway north west of Site LG1 (to provide a rural Greenway route option as opposed to passing through LG1) will require upgrade of the existing PROW to provide wider gravel surfaced paths. Associated wayfinding signage will also be required.

				• The north- south running PROW up to the Norton Road cul-de-sac (adjacent to 72 Norton Road) could also be upgraded to a wider path with gravel surface to provide another option for access Stotfold. Upgrade surfacing at connection with cul-de-sac.

6 Emerging Site LG1 Access Strategy, Opportunities and Constraints

Introduction

6.1 This Chapter provides an overview of the emerging multi-modal transport strategy for Site LG1 including the background studies, opportunities and constraints that are influencing the proposed approach.

6.2 The initial conceptual layout of the site is illustrated in **Figure 6-1**. This will be developed further during the Strategic Masterplan study to create an Illustrative Masterplan, following a review of the constraints and opportunities.

Figure 6-1: Conceptual Site Layout

6.3 The overarching objective is that LG1 development will be sustainable, accessible and well-integrated with Letchworth Garden City and the surrounding transport networks. It will support modal shift and minimise greenhouse gas emissions by encouraging travel by sustainable and active transport modes including public transport, walking, and cycling and embracing new mobility/technology concepts.

6.4 A fundamental imperative is that the development will be seeking to provide opportunities for linkages from the Grange Estate and proposed Site LG1 into the Letchworth town centre and employment/ retail/ leisure areas, and from the site to other surrounding locations including

Baldock, Stotfold, Fairfield Park and Arlesey and future development sites, whilst protecting the amenity and living conditions of existing local residents.

6.5 The emerging Masterplan design will be based on the following principles:

Access

- Minimise residual impacts of the development on local roads and existing residents.
- Prevent LG1 construction traffic utilising the Grange estate for access.
- Reduce car dependence including:
  - the provision of safe, direct walking and cycling routes throughout the development and the surrounding area and town centre;
  - the promotion of an electric car club scheme;
  - travel support and advice for residents implemented through an effective and robust Travel Plan.
- Provide adequate car parking capacity to minimise disruptive on-street parking within the development, prevent overspill car parking and facilitate mode shift.
- Embrace emerging technologies.
- Ensure appropriate bus provision for LG1 and existing residents.

Internal Masterplan Design

- Prioritising pedestrians, cyclists and public transport over private vehicle use in line with HCC's Road User Hierarchy. Provision of high-quality infrastructure for all modes.
- Accord with HCC's Design Requirements set out in the *'Roads in Hertfordshire Highway Design Guide' (HCC, 2011)* and the emerging HCC Design Guide once released.
- Reflect Letchworth Garden City design principles, including tree lined corridors and verges to reflect early Garden City layouts.
- Well designed on-site car parking layouts.
- Inclusion of electric vehicle charging spaces and an on-site car club.
- Development of a neighbourhood centre incorporating a community facility, school and local retail along with a transport interchange for buses, cyclists and pedestrians serving occupiers of the new development alongside existing residents within the Grange Estate.
- A sustainable travel hub located in close proximity to the proposed school and neighbourhood centre.
- Discourage rat-running through layout and design.
- A 20mph speed limit throughout.
- Protect existing hedgerows and trees wherever possible and incorporate swales and sustainable drainage measures with the road network.
- Creation of a car free zone around the proposed school.

Walking and Cycling

- Improve access from the site to Letchworth town centre, station and employment areas, with an emphasis on the most sustainable modes of travel.
- Maintain and enhance the Greenway, NCN12 and Etonbury Green Wheel.
- Provide connections to the wider rights of way network, including the Etonbury Green Wheel and routes to Arlesey and Stotfold.
- Provide a catalyst for more sustainable travel for existing residents of The Grange and areas north of the Letchworth Garden City Rail Station.

6.6 Further details on aspects of the above are provided subsequently in this Chapter.

North Hertfordshire Local Plan Representation

6.7 As part of the North Hertfordshire District Local Plan process, NHC were required by the appointed Planning Inspector to demonstrate that the land allocated for housing within Site LG1 is deliverable.

6.8 Cottee Transport Planning (CTP) were initially instructed to review potential access solutions to serve the development. In their initial analysis they recommended access from Western Way to serve the development site and ruled out vehicular access further east along Gaunts Way due to inadequate road widths within that part of the Grange Estate.

6.9 In their assessment CTP concluded that although the Grange Estate had the technical capacity subject to some local improvements, to accommodate the development, environmental conditions were such that there would be a deterioration of conditions for the Grange residents. It was therefore, recommended that an additional access should be considered, as well as the proposed route via Western Way. This approach also addressed the potential significant disturbance that could arise from construction traffic in order to avoid this passing through the residential parts of the town and the Grange Estate in particular.

6.10 In order to respond to this, the LGCHF considered two second vehicle access options (from Hitchin Road/ Fairfield Park to the west and Norton Road to the north), in addition to a proposed access from Western Way, within the Grange Estate. Following this review the Norton Road northern option was considered preferable due to the extent of development within the Fairfield Park area, possible additional congestion issues, the length of road required and its subsequent visual impact on the landscape to the west of Site LG1.

6.11 Therefore, representations to the Local Plan Public Examination in 2017 were based on a vehicular access strategy comprising of two vehicle access points serving the site: one via Western Way and a second to link to Norton Road to the north. In addition, pedestrian and cycle routes were proposed via the existing footpath on to Western Way and through the existing Grange Recreation Ground. This was part of representations made by the LGCHF, NHC, HCC and CBC.

6.12 HCC as Highways Authority confirmed at the Local Plan Examination that they were satisfied with the proposed access solutions.

6.13 In 2020, the LGCHF requested an independent health check on the proposed access and transport strategy by Markides Associates, which concluded that the preferred approach is sound.

6.14 The emerging access strategy for Site LG1 has therefore, been predicated on this.

Vehicle Access

6.15 The proposed vehicle access strategy assumes a primary vehicle access from Norton Road to the north and a potential secondary vehicle connection from Western Way.

6.16 The primary vehicle access to the north connecting with Norton Road, will ensure the development has a vehicle connection to one of the main distributor roads in Letchworth and

provides close links to Stotfold, the A507 and A1 (M) (and onward connections to the strategic road network) to the north, Baldock to the east and western parts of Letchworth to the southeast including Letchworth Business Park. A primary access onto Norton Road, would also help to reduce the likelihood of high vehicle flows passing through the Grange Estate residential area and associated congestion impacts, as Norton Road is of a design which is better able to accommodate higher traffic flows, particularly during the peak flow.

6.17 The Norton Road northern access would also provide the benefit of serving as the main construction vehicle access, with its close location to the A1(M) strategic route meaning that construction vehicles could avoid more populated residential areas within Letchworth and also avoid passing Norton Primary School.

6.18 A Norton Road Access Study was originally undertaken by Steer in April 2019 including an initial conceptual design for the Site LG1/ Norton Road junction and this report is included in **Appendix J1**.

6.19 Due to visibility and land ownership constraints the proposed Norton Road access junction has been subsequently moved further eastwards so it is now located c200m to the east of the Greenway (north-south running section). Updated designs been submitted to HCC and their highways consultants WSP who have agreed to the proposed location/design in principle subject to updated trip generation assessments/ capacity modelling and a Road Safety Audit. The designs, which currently show a ghost island priority junction were issued to HCC/ WSP on 29 August 2023 with their review comments provided on 8 September 2023. As the development cannot be bound by a design requiring a TRO to be implemented, the designs initially assume a 60mph speed limit on Norton Road as a worse case. Both the designs and review comments are provided in **Appendix J2**.

6.20 The next stage for the Norton Road north and Western Way access points is to hold discussions with HCC and NHC to identify the additional studies/ assessments required to agree each junction form.

6.21 An important consideration will be whether it is feasible to reduce the de-restricted speed limit in the vicinity of the Norton Road junction down to at least 50mph. An application was made to the HCC Speed Management Group (including HCC Highways Safety Teams and the Police) for reducing the speed limit down to 50mph. This was approved on Monday 22 January 2024. A full Traffic Regulation Order (TRO) submission will still be required which will be subject to stakeholder consultation).

6.22 The secondary vehicle access from Western Way is initially proposed from the western side of Western Way utilising the car parking court to the north of the settle flats. The existing settle resident's car park in this location includes 20 car parking spaces.

6.23 This location has been identified for the following reasons:

- There is a natural gap through this area which does not include any significant infrastructure/housing, which could accommodate a vehicle access, unlike the remainder of Western Way and Gaunts Way. An access in this location would be close to the Northfields junction (c. 50 metres) meaning that any additional flows on Western Way/ Gaunts Way could be minimised. It would be unattractive to add Site LG1 vehicle flows to an extended section of these roads, due to their local residential road access function, associated design and on-street parking.

- It would not be possible to accommodate a vehicle access from the existing Grange Estate Recreation Ground or further east on Gaunts Way for the following reasons:
  - An access in the location of the existing Grange Estate Recreation Ground entrance would require an internal access road connection which would have severe adverse impacts on the Grange Recreation Ground and car park by either passing through and severing the recreation ground, or passing around the edge.
  - An access further east on Gaunts Way would require a Compulsory Purchase Order (CPO) and demolishing at least four properties. This would be protracted and would also impact on adjacent properties. The construction works and associated vehicles would also have an additional impact on local properties and residents. LGHCF are against the principle of demolishing existing dwellings via CPO in order to provide access in this location. Following careful assessment, LGCHF have dismissed access options via east of the site and the Standalone Estate.
  - Both alternative options would require routing of vehicles along a longer section of Western Way/ Gaunts Way, which would not be able to sustain higher flows due to the narrower road widths and on-street parking, without adversely impacting residents. Significant highway improvements would be required. Additional traffic flows along Gaunts Way would be unpopular with residents for the above reasons and could also lead to rat-running along roads such as Sparhawke and Burley to access Northfields, which are quiet, lowly trafficked residential roads. It could also lead to potential conflicts with school children accessing The Grange Academy (Sparhawke) and Northfields Infants & Nursery School (Burley).

6.24 A previous study was undertaken by Steer in 2018 to review the potential for a potential third development access (in addition to Norton Road and Western Way). The study concluded that this would not be feasible for the above reasons. The associated Technical Note is included in **Appendix K**.

6.25 A conceptual layout for the potential Western Way secondary access is illustrated in **Appendix L**. This could be in the form of a priority junction with Western Way, which could potentially include a raised table either at the junction itself or continuing through to the junction with Northfields to enhance the environment for pedestrians and cyclists. The junction improvement could also provide the opportunity to upgrade the green space either side of Western Way and the Northfields junction to enhance the landscaping/ planting and provide benches. The junction has been designed to accommodate a bus, a 10m rigid vehicle and a refuse vehicle and associated swept path analysis is included in **Appendix L**.

6.26 The exact form of the junction is conceptual at this stage. Further discussions are currently being held with HCC and NHC in relation to junction form with additional design work ongoing. Further discussions are also ongoing with settle with regard to a preferred layout that facilitates vehicle access but also provides the most attractive environment for pedestrians and cyclists.

6.27 As settle own the car park any access where the junction will need to be delivered, further detailed discussion will be required with them and an agreement reached to safeguard the access route, which is a potential constraint. As settle are looking to redevelop this site it might also provide a potential opportunity.

6.28 It is proposed to retain a vehicle access to the Grange Estate Recreation Ground car park from Gaunts Way, but this would not include a vehicular access to the wider development.

6.29 An existing issue within the Grange Estate relates to current on-street parking forming pinch points within the Grange Estate which disrupt traffic flows and bus access. Further discussions will be undertaken with HCC Highways in relation to this.

Potential for Rat Running

6.30 An important consideration resulting from the provision of two vehicle access points to the development will be how to prevent rat-running through the development.

6.31 Further discussions are ongoing with HCC and NHC in relation to future assessments of the potential for rat-running and potential mitigation options. However, it is considered unlikely that rat running would occur based on the revised location of the Norton Road northern access, now located c 200m east of the Greenway and therefore the preference would be to have a more convoluted primary route through the site, with internal traffic calming measures and the 20mph speed limit, as opposed to a physical constraint such as a bus gate. There is also potential to monitor the number of through trips once the development is operational and provide mitigation should significant rat running be observed.

6.32 Further consideration will be given to this in consultation with NHC, HCC and CBC.

Existing Grange Estate Vehicle Trip Distribution

6.33 Automatic Number Plate Recognition (ANPR) Surveys have been undertaken on the cordon of local highways surrounding the site within both North Herts and Central Bedfordshire to review the distribution of trips entering and exiting the Grange Estate and whether this could be used to inform the future distribution of Site LG1 trips via the proposed Site LG1 Norton Road primary access and Western Way secondary access points.

6.34 These surveys were undertaken on Saturday 15 October and Tuesday 18 October 2022 and an overview of these results is provided in the Site LG1 ANPR Survey – Technical Note in **Appendix M**.

Public Transport Access

Bus Access

6.35 A significant factor towards supporting mode shift will be providing bus access to Site LG1, however a number of challenges will need to be overcome and opportunities explored.

6.36 Across the whole of Letchworth there are only the following bus routes which run at least hourly between 08:00-18:00 Mondays to Fridays:

- **Bus route 53** - operated by Landmark Coaches which has route variants running between Letchworth and Lordship Estate/ Wilbury Hills and Beech Hill. This route passes along Bedford Road and also serves Letchworth Garden City Rail Station.
- **Bus route 55** - operated by Arriva which runs between central Stevenage, Lister hospital, central Letchworth (The Broadway and Letchworth Garden City Rail Station), Sainsburys, and the Grange Estate.
- **Bus route 97** – operated by Arriva between Hitchin and Stotfold, via Fairfield Park including stops at Letchworth Letchworth Garden City Rail Station and town centre. This passes along Stotfold Road west of Site LG1.

- **Bus route 98** – operated by Arriva which runs between Hitchin and Baldock, including Letchworth Garden City Rail Station and town centre.

6.37 The only other route of relevance is Bus Route 96/ 96A operated by Centrebus which is a circular route between Arlesey and Stotfold which passes along Norton Road northeast of Site LG1. This operates less than hourly with nine buses per day Monday to Fridays.

6.38 Full details of the frequencies of these routes are provided in **Table 3-2**.

6.39 Of the above, bus route 55 operated by Arriva is the only bus route that currently serves the Grange Estate, immediately south of Site LG1. The closest bus stop to Site LG1 is 'Heathermere', located on Western Way 120m (a one-minute walk) to the south of the potential Site LG1 vehicle access on Western Way. Bus stops 'Kimberley' and 'Whitehicks' on Northfields are the closest ones to the pedestrian and cycle access on Gaunts Way, 670m and 580m away respectively.

6.40 It should be noted that the above distances are only to the Site LG1 access points and would therefore, be significantly further to residential properties within the site particularly those to the north of Site LG1. As a general rule all residential properties within the site should be within 400m of a bus stop.

6.41 As detailed in Chapter 3, the current situation post Covid is that the Grange Estate is only now served by two buses an hour during the weekday peak and off-peak period, which has reduced from three buses per hour during some hours of the AM and PM peaks pre-Covid.

6.42 The hours of service are quite restrictive for commuters to/from London, who have no alternative public transport options when travelling to the station prior to 06:25 and from the station after 19:26. The Arriva 55 also has a fundamental weakness of not providing a there-and-back service between the Grange (north of Northfields) and the Pelican Way shops and community centre.

6.43 Therefore, the practical options to enhance access to the site would be to either:

- Create a new bus route, which is highly unlikely to be sustainable commercially unless it could serve a variety of other destinations in addition to Site LG1.
- Re-routing one or more of the existing bus routes described above into the site, which will require significant diversions and an increase in route frequencies to make the buses attractive at peak times particularly for commuters to Letchworth Garden City Rail Station and other main employment destinations.
- Potential extension of a demand responsive bus service to serve the development, which would require an extension of the operating period.
- A hybrid option including diversion of one or more of the existing bus routes into the development and a demand responsive service serving the development.

6.44 NHC and CBC have raised that they would like potential bus connections between Site LG1 and Central Bedfordshire destinations to also be explored. Further discussions will be held with the HCC and CBC Passenger Transport Units, NHC and bus operators.

6.45 Steer has previously produced a Public Transport Strategy Report (July 2019) which reviewed the potential for diverting an existing bus service into Site LG1, and associated opportunities and constraints. This is included in **Appendix N**.

6.46 An important consideration is also potential bus access points to the development to connect with an internal high quality bus interchange, which would include shelters and RTPI. The bus interchange could form part of the Mobility Hub within the centre of the site to the north of the Grange Recreation Ground.

6.47 If Arriva bus route 55 were diverted into the site it would form important connections to the rail station, town centre and Sainsbury's within Letchworth, and Lister Hospital and central Stevenage further afield.

6.48 However, the most viable option for any bus route accessing the site from the south would be via the Western Way access, with buses entering and exiting the site via this location. However, this routing has the psychological effect of adding an "in and out" leg onto the existing one-way loop particularly for Bus route 55, for example:

- a southbound existing passenger boarding along Southern Way would be diverted into and out of the LG1 centre before continuing their journey into Letchworth and beyond; and,
- a northbound existing passenger heading for the eastern end of Northfields will experience the diversion into and out of the LG1 centre just before they get off the bus.

6.49 This is likely to be unattractive to existing passengers. It is also unlikely that this route diversion could be achieved within five minutes.

6.50 Bus access to the site from the Western Way vehicle connection is considered to be the preferred option as it would share the same access point as the proposed vehicle access from Western Way, so the considerations outlined previously in terms of an access in that location are also applicable to bus access. A bus access via the Grange Recreation Ground vehicle entrance would be very unattractive due to the severe adverse impacts on the recreation ground and the challenge of accommodating buses along Gaunts Way due to unrestricted kerbside parking.

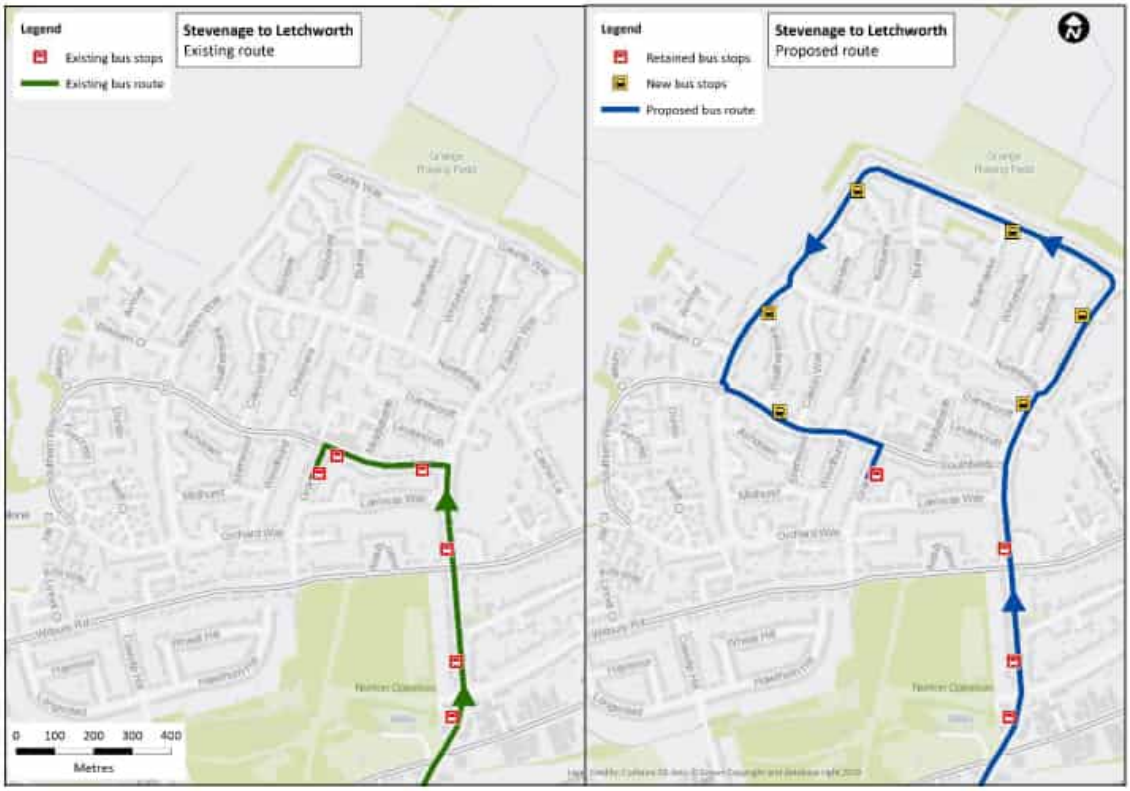
6.51 Steer have previously undertaken a Bus Routing Study which explored the following potential options for diverting the Arriva 55 bus route along Gaunts Way:

- **Option 1 - Eastbound Buses Only on Gaunts Way** - the extension of Arriva bus route 55 'Letchworth to Stevenage' clockwise via Gaunts Way, as shown in **Figure 6-2**. This option would require buses to continue northbound along Western Way and turn right into Gaunts Way rather than travelling along Northfields. Buses would then continue eastbound along Gaunts Way before turning right at Eastern Way and re-joining the existing bus route.

- **Option 2 – Two-way Bus Service on Gaunts Way** - the extension of Bus Route 55 'Letchworth to Stevenage' as set out in Option 1 (refer to **Figure 6-2**) as well as an extension of the service in the opposite direction, i.e. 'Stevenage to Letchworth' anticlockwise via Gaunts Way, as shown in **Figure 6-3**. Therefore, under this option, buses would serve Western Way - Gaunts Way - Eastern Way in both directions (two-way service).

Figure 6-2: Arriva 55 Bus Route Letchworth to Stevenage Existing Route (left) and Potential Extension (right)

Figure 6-3: Arriva 55 Bus Route Letchworth to Stevenage Existing Route (left) and Potential Extension (right)



6.52 **Table 6.1** below sets out changes to the length of the Arriva 55 bus route and number of bus stops to be removed / provided along the extended route if the above options were progressed further.

Table 6-1: Key Changes to Bus Routes and Stops to Facilitate Arrive 55 Bus Route Diversion Options Along Gaunts Way

	Option 1	Option 2
No. existing bus stops removed	2	4
No. proposed bus stops	3	9
Length of extension of 'Letchworth to Stevenage' bus	720m	720m
Length of extension of 'Stevenage to Letchworth' bus	-	2km

6.53 The above demonstrates that to facilitate the above diversion of the Arriva 55 route, a number of existing bus stops would need to be removed within additional bus stops proposed. The extension of the route length would also increase the route journey times.

6.54 The above changes explored would just include a bus service passing along Gaunts Way and not into the site and therefore, even if additional bus stops were installed along Gaunts Way, the only pedestrian connection point into Site LG1 would be via the Grange Recreation Ground entrance, so not all properties within the site would be within 400m of a bus stop.

6.55 The other challenge identified by the study is how buses could be accommodated on Gaunts Way. Gaunts Way and most of the roads in the Grange Estate are c4.9m wide with unrestricted kerbside parking further reducing the carriageway width, which would make it hard for buses to circulate. We understand that this is the reason that bus route 55 was previously revised, taking services away from Gaunts Way.

6.56 Providing inset more formalised car parking bays along Gaunts Way would require the loss of grass verges which may lead to concern from residents and more detailed studies would be required. Restricting kerbside parking along the roads would help mitigate delays to bus journey times, however it is considered that this would have a detrimental impact on existing residential and visitor parking which could influence the viability of the scheme.

External Bus Infrastructure

6.57 The Accessibility Audit in **Chapter 5** reviewed the quality of bus stop infrastructure on the audit routes. Consideration should be given to upgrading the bus stops on Western Way and Northfields closest to Site LG1 to ensure these all have RTPI, high quality bus shelters, bus boarders and up-to-date timetable information displayed.

Demand Responsive Bus

6.58 The LGCHF is currently exploring the potential for a demand responsive bus service into Site LG1, with a bus stop provided within the site, linking into the town centre/ rail station. HCC is currently trialling demand responsive bus services called 'Herts Lynx'.

6.59 As discussed in **Chapter 3,** this operates from a free-floating travel zone to designated locations in nearby Hub Towns: Stevenage, Bishop's Stortford, Royston, Baldock, Hitchin and Letchworth.

6.60 The service operates from 07:00 – 19:00 Mondays to Saturdays and 10:00 – 16:00 on Sundays and public holidays but the service period would require extending if a demand responsive bus service were to be an option to support commuter journeys to/ from Letchworth Garden City Rail Station. It is envisaged that in addition to a bus stop being provided within Site LG1, a bus stop could also be located centrally within the Grange Estate. An associated bus stop on Southfields/ Pelican Way would ensure that the demand led system would also benefit existing residents in the Grange Estate.

6.61 A demand responsive service has the following advantages:

- Flexible service which is not fixed to specific routes and frequencies can be increased when needed, but will include stopping options within the Grange (Southfields) to enhance services for existing residents as well as the LG1 development.
- Will provide a shuttle service to Letchworth Garden City Rail Station that links into bus and rail services.
- Could be booked in advance or in real time prior to a journey either online, by phone or potentially by an app.
- Fares are based on mileage.
- Overall, this service would have a far reduced impact on existing Grange Estate residents, as the vehicle would be smaller and would therefore require less interventions such as parking controls and loss of verges, with a lowered impact overall than additional traditional sized buses.

6.62 A demand responsive service would have the following disadvantages than a standard bus service:

- Lower availability at shorter notice.
- Low peak-time capacity as a shuttle service (16 seats per bus versus 44 seats on a single-decker plus standing space).
- High operating costs (due to the low ratio of passengers to driver; DRT-specific overheads; and shorter lifespan of mini- and midi-buses).

6.63 Further discussions will be held with HCC to understand the results of the Herts Lynx trial and the feasibility of a demand responsive service to link the LG1 Site to the town centre.

School Buses

6.64 It is understood that school buses used to serve secondary school age children within the Grange Estate and Norton Road area, however, these have been discontinued. Further discussions will be held with the HCC and CBC Passenger Transport units to explore the feasibility of re-introducing these for "entitled" secondary school age pupils (aged 8 and over) who should get free transport to schools inside or outside of Hertfordshire if their distance from home to school is greater than three miles.

Site LG1 Passenger Transport Meeting – 23 November 2023

6.65 A meeting was held with the HCC and CBC Passenger Transport Teams, NHC and HCC officers and Arriva and Centrebus representatives on 23 November 2023 to discuss the above further and future bus access to Site LG1.

6.66 A potential opportunity that was discussed at the meeting was that Site LG1 could potentially be served by an extension of the Arriva 55 Service but also to potentially divert the Richmond Coaches 90/ 91 service (which operates a 20-25 seat solo bus) into Site LG1. The 90/ 91 service runs from Royston to Letchworth via Baldock, Ashwell, Newnham and Bygrave and passes directly through the future Baldock masterplan site into Letchworth centre where there is a 30 minute layover. It is considered that this 30 minute period could potentially be sufficient to divert the service into Site LG1.

6.67 This potential opportunity will be explored further in the future as the existing bus network could change significantly between now, determination of the planning application and the point the Site LG1 development is implemented (a currently anticipated c 9 year build out period). However the following approach to the Strategic Masterplan and subsequent Planning Application has initially been agreed:

- By Site LG1 Strategic Masterplan signoff the masterplan and primary internal highway link design specifications should safeguard bus access, identify bus stops and include a bus turn around location.
- At the planning application stage, the designs will need to accommodate the above. The application will also need to outline what the existing bus provision is and set out an indicative bus access strategy proposal, identifying main principles for a bus route (design, locations served, indicative frequencies) to serve Site LG1 and provide indicative cost / funding estimates for implementing a minimum viable service (shuttle to the centre of Letchworth/ the railway station).

- It is envisaged that a HertsLynx-esque service will serve the development from the outset until the point a standard bus service can be introduced.
- The bus service will form an important part of the future transport and Travel Plan strategy.

Rail Access

6.68 The proposed Site LG1 is located c. 2km to the north of Letchworth Garden City Rail Station. The Station is centrally located and serves as a transport interchange providing significant cycle parking, taxis and bus stops, with RTPI. Whilst this is within a walkable distance for some commuters it is likely to be beyond the typical initial/final mode walking distance for some commuters. Current journey times to the station by mode include:

- Walk: approximately 25 minutes;
- Cycling: approximately 10 minutes;
- Bus: approximately 12 minutes; and
- Car: approximately 6 minutes.

6.69 As a result, it is considered likely that many residents of Site LG1 will seek to drive to the station unless cycle and bus connectivity can be significantly improved.

6.70 A key challenge with buses is having a suitable bus service to support the development, which also ties in with the AM and PM peak commuter train services operating as the station.

6.71 The future transport strategy will need to ensure there are sufficient connections to the railway station by bus, walking and cycling to deter car trips, as another consideration will also be the potential impact of LG1 car trips on car parking demand surrounding Letchworth Garden City Rail Station, which already exceeds capacity and results in cars parking on nearby residential streets. Further to this, opportunities to enhance the amenity of existing local residents will also be considered.

A total of 107 car parking spaces (including three disabled spaces) are available at Letchworth Garden City Rail Station. Parking is accessible on a 24-hour basis however parking charges apply. Long-stay car parking within Letchworth is also available at Hillshott car park and Garden Square Multi-storey car park, 475m and 670m from the rail station respectively where commuters can also park as shown in **Table 6-2**.

Table 6-2: Letchworth Town Centre Long-stay Car Parking

Location	Number of Spaces		Parking Charges				
	Standard	Disabled	1 Hour	2 Hours	3 Hours	3+ Hours	24 Hours
Hillshott Car Park	67	4	£0.70	£1.40	£2.40	£4.90	-
Letchworth Station Car Park	107	3	£1.20	-	£3.80	-	£8.00
Garden Square Multi-storey Car Park (closed in evenings).	244	6	£0.70	£1.40	£2.40	£4.90	-
Broadway Gardens	47	2	0.20	0.50	2.00	4.00 (up to 12 hrs)	-

6.72 Commuters could also potentially drive to Hitchin or Arlesey for rail services to/from London, as both stations have large station car parking facilities. A total of 360 car parking spaces are provided at Hitchin Rail Station and 105 spaces are provided at Arlesey Rail Station. All parking is available on a 24-hour basis.

6.73 As detailed in **Chapter 3** there are current proposals to enhance the railway station interchange including bus stops and cycle parking. However, the full scheme details are not available at this stage.

Walking and Cycle Access

Internal Walking and Cycling Connections and Site Access Points

6.74 An important consideration with the future LG1 masterplan design will be maximising connectivity and links to existing walking and cycling routes that pass through the current site as well as links to external walking and cycling routes leading to important destinations.

6.75 As detailed in **Chapter 3** and **Figure 3-1** the existing walking and cycling routes which directly serve the site are:

- The Greenway
- The Etonbury Green Wheel
- NCN12
- Footpath 32a
- Permissive footpaths

6.76 It is proposed to retain the alignment of the existing pedestrian/ cycling routes through the LG1 masterplan as well as the existing pedestrian/ cycle access points to the site, with the following additional measures:

- The existing pedestrian and cycle access point from Gaunts Way would be upgraded with enhanced surfacing and footways.
- The new access proposed from Western Way would also include a pedestrian/ cycle access point as well as vehicle access. This will include high quality pedestrian/ cycle facilities. Further discussions will be held with HCC to agree the most attractive design for this location, which could also integrate with upgrades to the Northfields/ Western Way junction including public realm enhancements.
- To provide an alternative option for users of the Etonbury Green Wheel and the Greenway which will continue to run along the western side of the Grange Recreation Ground through the development, it is also proposed to convert the existing permissive footpath which runs parallel to this route to the west outside the development to an additional section of the Greenway/ Etonbury Green Wheel. This would connect to the retained Greenway/ Etonbury Green Wheel section that will pass through the development immediately to the north of the masterplan. This additional route would provide users of the Etonbury Green Wheel/ Greenway with the options of either passing through the development or remaining on the rural section.
- The section of the existing Etonbury Green Wheel/ Greenway that runs between the north of Footpath 32a and the western side of the Grange Recreation Ground is proposed to be upgraded to form a linear park. The linear park concept will be developed by the project team working in tandem with the local community.

- A new pedestrian/ cycle link is also proposed into the site from the Avocet residential area to the southwest of the site. This will provide a connection to Stonehill School and enhance the accessibility of Site LG1 from the southwest. An initial conceptual design for this link is illustrated in the Drawing in **Appendix O**. The route could be provided as a green tree lined avenue.
- The feasibility of a new north-south pedestrian/ cycle path is being considered across the Grange recreation ground to provide a more direct connection from Gaunts Way to the onward NCN12/ Greenway connection that leads northwards to Norton Road.
- The feasibility of a new north/ south pedestrian link is being considered along the western side of the Community Orchard to provide a link between the southeast corner of Site LG1 and the existing footpath connection that links Eastern Way and Croft Lane.

External Walking and Cycling Network Enhancements – Accessibility Audit Improvements

6.77 The Accessibility Audit undertaken in Chapter 5 identified a range of potential improvements to the walking and cycling network on the audit routes. These were presented in **Tables 5-2 and 5-3.**

6.78 Discussions will continue to be held with HCC, NHC and CBC to identify which of the potential improvements should be brought forward by them as a package of measures to support the delivery of Site LG1, linked to existing funding sources and Section 106 pooled contributions from this and other developments.

NCN12 Route to Town Centre Improvements

6.79 An important connection that will need enhancing is the NCN12 route between Site LG1 and the town centre. Potential improvements along this link are identified in the accessibility audit assessments for routes U10 and U11 in **Table 5-2** of **Chapter 5**.

Pelican Way and Western Way Redevelopment Integration

6.80 The emerging Site LG1 Masterplan will also need to integrate fully with the proposed Pelican Way redevelopment being promoted by settle.

6.81 Important considerations will be to ensure:

- The two sites are well connected by walking and cycling routes including NCN12.
- The Pelican Way redevelopment scheme includes high quality internal pedestrian and cycle connections which integrate with the external routes, including retention of NCN12 through the development.
- High quality cycle parking is proposed at key land uses with the Pelican Way development.
- Suitable car parking levels are proposed that balance overspill car parking prevention with encouraging modal shift.
- Suitable improvements can be agreed on Southfields including the Grange Road, Middlefields and Pelican Way junctions to create a high-quality public realm environment for walkers, cyclists (including NCN12 cyclists) and bus users including high quality crossing facilities. Potential improvement options were included in the Letchworth Garden City Cycling Strategy (Steer, 2018) (refer to **Appendix C**) with further discussion of potential improvement measures included in the U10 accessibility audit route assessment in **Table 5-2**.

6.82 The LGCHF and settle will work closely to deliver these measures and ensure integration is maximised between the future Pelican Way redevelopment and Site LG1.

6.83 Discussions will also be held in relation to settle's proposals for their Western Way redevelopment and the potential integration of the secondary vehicle access within their development.

Letchworth Garden City Cycling Strategy Schemes

6.84 The schemes identified in the Letchworth Garden City Cycling Strategy (Steer, 2018) (see **Appendix C**) will all significantly improve cycle access within Letchworth and to the Site LG1.

6.85 All of these schemes have been carried forward into the Letchworth STT – Outline Plan which is included in **Appendix E**.

Standalone Farm Connections

6.86 Recent surfacing enhancements have been undertaken along the Greenway between Site LG1 and Standalone Farm and the recent planning permission for Standalone Farm includes the provision of additional cycle parking facilities.

6.87 There is also an access point into Standalone Farm from the Greenway to the north which is currently closed. It is unlikely that opening this would be viable as it would present potential security, vandalism and anti-social behaviour issues at the farm. It would be operationally challenging to supervise the access by staff for a small number of visitors.

6.88 If it were feasible to open this connection it would enhance access between proposed Site LG1 and Standalone Farm along the Greenway. An alternative on-street route would involve travelling along – Southern Way, Jay Close, Kite Way/ Linnet Close and Wilbury Road. Potential improvement measures along this route are outlined in the U10 route assessment in **Table 5-2** in **Chapter 5**.

Future Development Signage and Wayfinding

6.89 A comprehensive wayfinding and signage strategy should be developed for proposed Site LG1, to promote important local destinations and the walking and cycling routes that can be used to access these.

6.90 The strategy could involve the following:

- Provision of wayfinding map boards/obelisks at the access points to Site LG1 to promote relevant destinations within Letchworth/ Central Bedfordshire and associated walking and cycling access routes (including Greenway, Etonbury Green Wheel and NCN12. The maps could also include walking and cycling catchment contours to identify journey times. Additional maps/ obelisks could also be added/ updated in important locations such as on Norton Common, Radwell Meadows, the town centre and Fairfield Park to include Site LG1.
- Maps could also be included in the potential LG1 community centre if this were ultimately delivered. If this includes a café, the café tables, could include a destinations and transport facilities map surface similar to that in the Standalone Farm café.
- Enhancing signage along the NCN12 route. In many locations this is either limited to stickers on lamp columns such as at the Gaunts Way/ Sparhawke junction or small finger post signs which can easily be missed. These could potentially be upgraded to include more comprehensive finger post signs including cycle times to main destinations at specific junctions along the route. The signage within the Fairfield Park development is a good example of this is illustrated in **Figure 6-4**.

- Upgrading/ replacing damaged/ poorly maintained road name signs in the Grange Estate.

Figure 6-4; Example of Cycle Route Signage with Journey Times in the Fairfield Park Development

New Technologies

6.91 Consideration will be given to embracing emerging technologies where feasible including:

- Incorporating electric vehicle charging infrastructure.
- Fast broadband connections to promote home working.
- Integrated ticketing and fares.
- Freight consolidation.
- Accommodating autonomous vehicles.
- Investigating opportunities for on demand taxi hailing.
- On demand mini-buses.
- Developing car clubs and encouraging car sharing.
- Dockless cycle and scooter hire.
- E-bikes and E- scooters.
- Drone based deliveries.
- Domestic waste management.

LG1 Sustainable Mobility Hub

6.92 It is proposed that the neighbourhood centre within Site LG1 will include a Sustainable Mobility Hub which could potentially include the following:

- A high-quality bus interchange area linking to the town centre transport interchange which will be enhanced as part of the Letchworth Garden City Rail Station improvements.
- Car club vehicles – research published by CoMoUK in their 'Car Club Annual Report – Great Britain 2020' has identified that each car club vehicle has the potential to remove 18.5 cars from the roads in the UK.
- Car share spaces.
- Electric vehicle charging points (in addition to those provided around the wider Masterplan).

- A community cycle workshop including cycle repair facilities, stands and pumps and a bike washing area.
- Vending machines – supplying food and bike parts.
- A café/ cycle café.
- Electric bike charging points.
- Shared bikes, e-bikes and e-scooters for use on short-term basis.
- Brompton bikes.
- E-cargo bike rental.
- Centralised parcel lockers to centralise deliveries, to reduce the deliveries on the local masterplan access roads.
- Bike leasing scheme offering a monthly subscription rental option to residents, removing the hassle of maintenance and insurance that come with bike ownership.

6.93 These options will be explored further as the masterplan and scheme proposals evolve.

6.94 The sustainable transport hub facilities would complement wider car parking and cycle parking facilities on-site for individual dwellings.

6.95 The potential sustainable transport hub including cycle facilities could be closely linked with a possible Standalone Farm cycle hub and other future cycle hubs located at strategic locations within the town, including a potential cycle hire arrangement.

On-site Car Parking Strategy

6.96 Agreeing a suitable level of on-site car parking will be an important consideration as a fine balance will need to be achieved between providing adequate car parking capacity on-site, to prevent overspill car parking in the Grange Estate (the subject of concern during community consultation) whilst at the same time promoting mode shift to sustainable modes. Car parking will also need to be sensitively designed to ensure that it does not dominate the masterplan layout over facilities for sustainable transport modes. Market testing will also form part of the review of car parking options to determine the most appropriate strategy from a commercial perspective.

6.97 The potential car parking strategy options available are as follows:

- Traditional – NHC policy compliant car parking as per the parking standard set out in **Chapter 2**.
- Lower provision below NHC standards.
- Low on plot provision with off plot car lots.
- Re-purposing car parking lots/land in the future.
- House types with convertible garages for reduced car ownership.

6.98 Policy T2 'Parking' of the emerging *'North Hertfordshire Local Plan 2011-2031'*. states that reductions below the standards will be considered where there is relevant evidence submitted by the applicant that supports a reduction in the standard which considers existing and future car ownership and the likely visitor demand.

6.99 Although the standards do not set an exact requirement for electric vehicle charging spaces a suitable level of provision will be identified and opportunities for car clubs and car share spaces will also be explored.

6.100 Decisions concerning car parking will be considered against viability and commercial considerations. This will include future proofing for new technologies, particularly related to electric vehicles.

6.101 Based upon this the proposed approach is to be policy compliant in terms of car parking provision with consideration as to how this can best be achieved, reducing risk of overflow parking on to the Grange Estate, with consideration of possible options for re-use of parking provision should they not be needed in the future.

6.102 This may for example include street parking and garages that can be converted into habitable accommodation, although these will need to be designed from the outset to include sufficient insulation to allow future conversion.

6.103 The future car parking strategy will be a matter of future discussion with NHC and HCC.

Transport Impact Assessments

6.104 The following sections outlines the initial transport impact assessments that have previously been undertaken.

LG1 Trip Generation Assessment and Sustainable Mode Share Reduction

6.105 An initial high-level trip generation assessment was undertaken for Site LG1 back in November 2018 to inform the strategic modelling process (see subsequent section). This included trips for the proposed 900 residential units plus primary school staff. The total forecast multi-modal trips for Site LG1 resulting from this assessment are presented in **Table 6-3**. The full calculation methodology is included in **Appendix P**.

Table 6-3: Forecast LG1 Multi-Modal Trip Generation – Excluding Sustainable Mitigation (November 2018 Assessment)

Mode	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
Car Driver	127	474	602	291	128	419	1,913	2,022	3,935
Car Passenger	12	43	54	26	12	38	172	182	354
Bus/coach	7	27	34	17	7	24	109	115	224
National Rail	12	51	63	31	13	44	203	214	417
Taxi	0	1	1	1	0	1	4	5	9
Motorcycle	2	6	8	4	2	5	25	26	51
Bicycle	6	23	29	14	6	20	92	98	190
Walk	24	76	100	47	22	68	311	329	640
Other	1	3	4	2	1	3	12	13	25
Total	**191**	**704**	**895**	**432**	**191**	**623**	**2,842**	**3,003**	**5,844**

6.106 The above trips do not include an associated reduction to account for sustainable transport mitigation measures at the site. However, an initial high-level assumption has been made that the package of sustainable transport measures outlined earlier in this Chapter, plus a comprehensive Site Travel Plan could reduce the car mode share by 10%. This 10% mode share

is higher than the total reduction in car trips experienced in the Darlington (-4% to -6%) and Peterborough (-1%) Sustainable Travel Towns[4].

6.107 As this initial assessment was undertaken in 2018, an updated trip generation assessment will be undertaken for the proposed planning submission, as the TRICS database is likely to include a range of additional survey sites and updates. The proposed trip generation methodology for this will be set out in a Trip Generation Scoping Note which will be submitted to HCC, NHC and CBC for approval.

AECOM Strategic Highway Model Impact Assessment (2019)

6.108 Strategic level highways modelling was undertaken by AECOM on behalf on HCC to review the potential strategic highways impact of Site LG1. The assumptions and results of this are included in the AECOM COMET Model Report - Site LG1 (AECOM, February 2019) included in **Appendix Q**.

6.109 This modelling assessment incorporated all of the development schemes proposed in North Hertfordshire, and background growth associated with developments located in Central Bedfordshire that were known at the point of assessment in 2019. The forecast initial trip generation for Site LG1 (assuming no sustainable mode reduction) described in the previous section was also included.

6.110 The modelling assessment assumed a 2031 assessment year and assessed the strategic highways impact with and without proposed Site LG1. The findings of the modelling were:

- C. 99% of Site LG1 vehicle trips will use the Norton Road access.
- The highest background flows on the highway network and development trip impact would be during the AM peak.
- Delays are forecast on A507 and Norton Road in 2031 without Development which are then exacerbated by Site LG1.
- A minor increase in delays (15 sec to 1min) are forecast at the A507/ Norton Road junction and A507/ Stotfold Road, Church End Road junction.

6.111 The full impact assessment is included in **Appendix Q**.

6.112 The modelling assessment identified that in the AM and PM peak, a large proportion of traffic (c 99%) would be likely to use the new access to the north via Norton Way, with less movements using the Western Way access and the Grange Estate during the morning and evening peak. The modelling confirmed that the proposed development would not have a substantive impact on the main junctions linked to the Norton Road access, but some of those already under some strain, may benefit from improvement.

6.113 As the HCC model is a strategic model it is less focused at a localised scale particularly in distributing trips by access point.

6.114 Steer undertook a separate high-level appraisal of the potential distribution of development trips which identified that during the AM peak circa 80% of trips would use the Norton Road access with 20% using the Western Way access. This is considered to be a more logical

[4] Table 5 in the Published Project Report PPR776 – Sustainable Travel Towns; An evaluation of the longer term impacts (TRL July 2016).

assumption for the AM and PM peak trip distribution. This analysis is included in **Appendix R**. The ANPR surveys undertaken in October 2022 (see **Appendix M**) have also analysed existing distributions of vehicle trips entering/ exiting the Grange Estate and whether these can be used to inform the distribution of future LG1 trips. Further, more detailed trip distribution assessments will be undertaken on the future to identify the likely distribution of Site LG1 development trips by access point. These will be fully scoped with HCC and CBC.

6.115 Although background highway traffic flows (without Site LG1) and the overall trip generation of the proposed LG1 development are likely to be highest during the weekday AM and PM peaks, the proportional split of trips by access point could vary during the off-peak or weekend periods, with greater emphasis placed on the Western Way access, in response to more localised trips being made for leisure, educational or retail purposes. However, the local highway network will have greater capacity at these times to accommodate greater usage of the southern access. Further consideration will be given to this to understand the potential impact.

6.116 As the proposed modelling assessment was undertaken in 2019 it is envisaged that the strategic COMET modelling assessment will need to be updated to capture updates to background development assumptions and traffic growth, to assess the potential for rat-running and inform the final site access junction layouts.

6.117 As the highways impacts of the development will be on both HCC and CBC roads and each Highway Authority have their own strategic transport model, discussions are currently ongoing between the HCC and CBC Highway modelling teams to review the consistency between models (forecast background development and background transport scheme interventions) and to identify a proposed approach for the future strategic modelling assessment.

6.118 National Highways will need to be consulted as part of these discussions due to potential impacts on the A1 (M) junction and they may also have their own models for this.

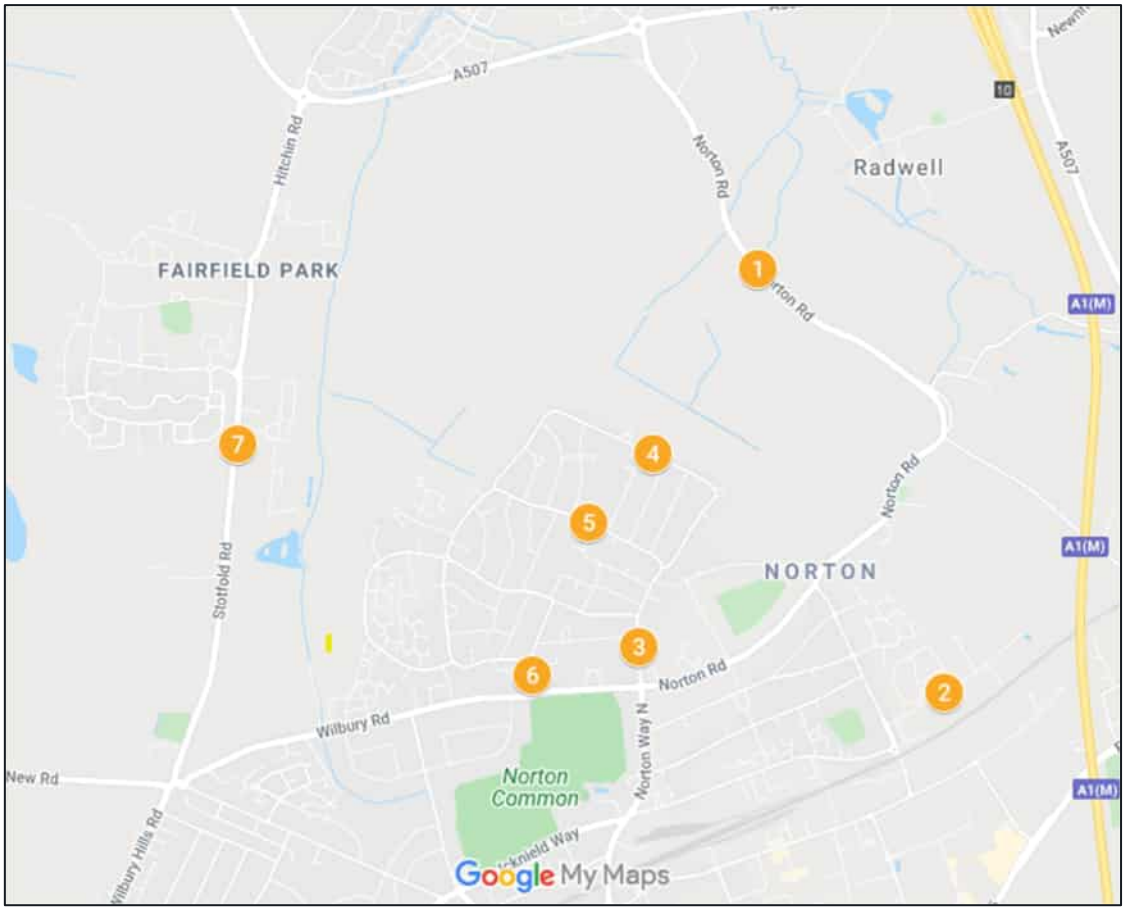
2020 Baseline Traffic Surveys and Junction Capacities

6.119 In February 2020 a comprehensive programme of traffic surveys were undertaken on the surrounding highway network comprising:

- Automatic Traffic Counts (ATC's) to record traffic flows and speeds on seven relevant highway links over a seven-day period from 4 February 2020 – Monday 10 February 2020.
- Classified junction turning counts at 17 junctions on Tuesday 4 February 2020 to record vehicle turning movements at the junctions during the AM (07:00 – 10:00) and PM (16:00 – 19:00) peaks.

6.120 The ATC locations are shown **in Figure 6-4** and **Table 6-4** and the junction turning count locations are show in **Figure 6-6** and **Table 6-5**.

Figure 6-5: ATC Locations

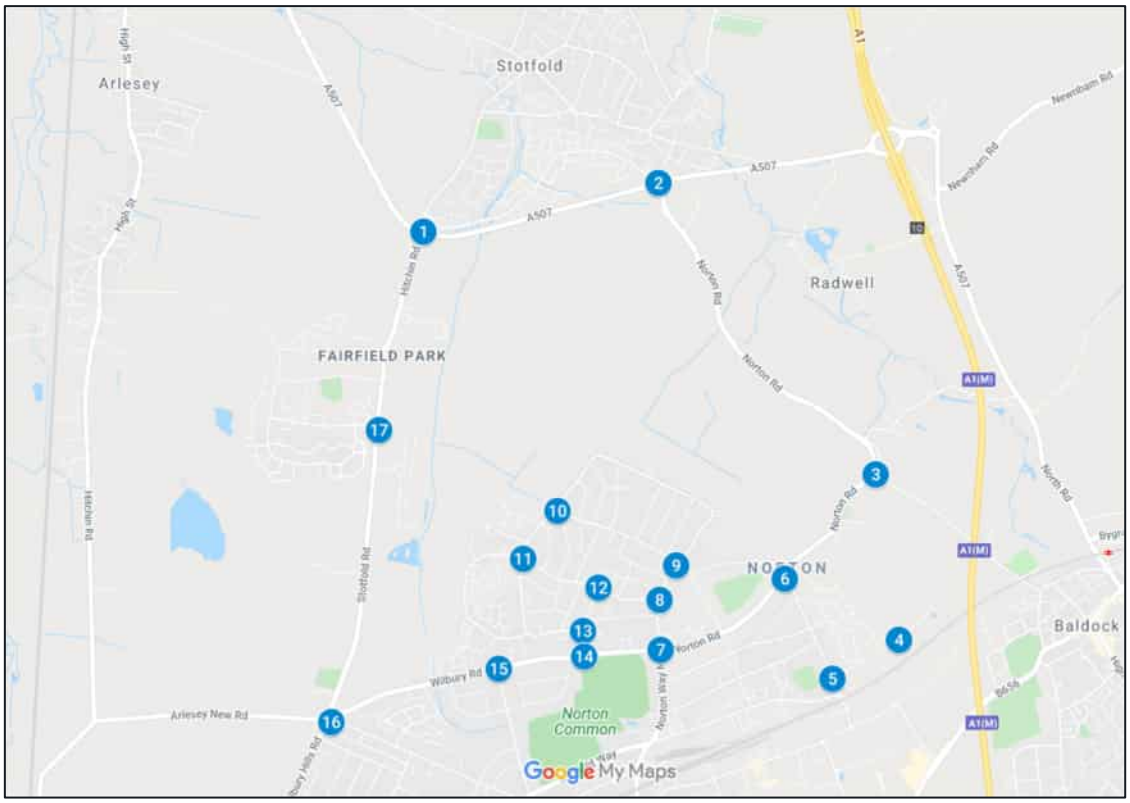


Source: Google My Maps

Table 6-4: ATC locations

Reference Number	Location
1	Norton Road
2	Blackhorse Road
3	Eastholm
4	Gaunts Way
5	Northfields
6	Grange Road
7	Stotfold Road

Figure 6-6: Junction Turning Count Locations



Source: Google My Maps

6.121 The traffic surveys were undertaken prior to the Covid-19 outbreak in the UK and are therefore considered to be reflective of 'normal' traffic conditions, prior to the lockdown occurring.

6.122 These traffic counts have been used to gain a detailed understanding of existing traffic flow conditions and junction capacities across the highway network.

Table 6-5: Junction Turning Count Locations

Reference Number	Location
1	Hitchin Road / A507
2	Norton Road / Tansy Avenue / A507
3	Norton Road / Norton Road
4	Blackhorse Road / Flint Road
5	Blackhorse Road / Green Lane
6	Norton Road / Green Lane
7	Wilbury Road / Norton Way North / Norton Road / Eastholm
8	Eastern Way / Southfields
9	Eastern Way / Northfields
10	Western Way / Northfields
11	Southern Way / Southfields / Western Way
12	Southfields / Grange Road
13	Grange Road / Orchard Way
14	Wilbury Road / Grange Road
15	Cowslip Hill / Wilbury Road
16	Stotfold Road / Bedford Road / Wilbury Road / Arlesey New Road / Wilbury Hills Road
17	Dickens Boulevard / Hitchin Road / Stotfold Road

6.123 Junction capacity assessments were undertaken of the above junctions using junction capacity software with Ratios of Flow to Capacity (RFC's), Levels of Service (LOS) and queue lengths identified.

6.124 Level of Service (LOS) – LOS is based on the average delay experienced by each vehicle on each approach arm of the junction, with thresholds as set out in **Table 6-6**.

Table 6-6: Junction Level of Service Thresholds

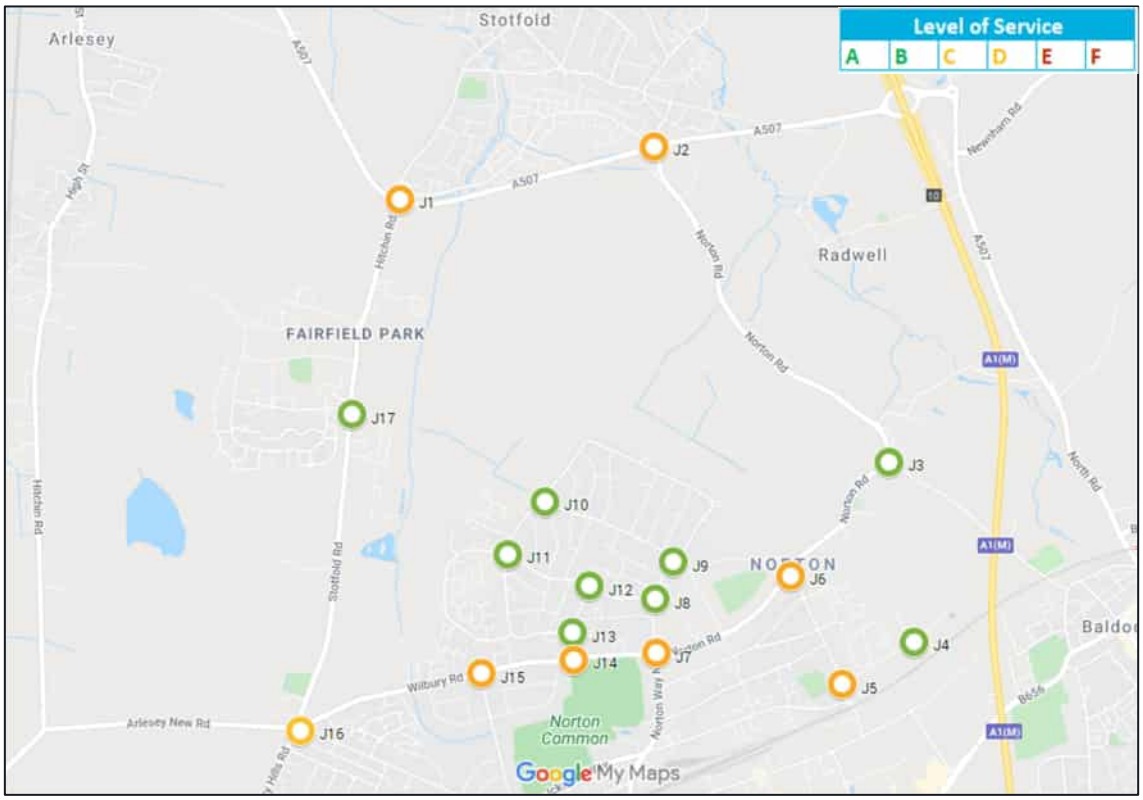
LOS	Average vehicle delay (secs)
A	≤10 sec
B	10–15 sec
C	15–25 sec
D	25–35 sec
E	35–50 sec
F	>50 sec

6.125 At un-signalised junctions, the junction LOS is based on the worst performing arm. Based on this average delay LOS values are expressed as follows:

- LOS values of A and B indicate free flow conditions, the arm is performing with low levels of delay and spare capacity.
- LOS values of C and D indicate the performance of the arm is beginning to deteriorate as it approaches its practical operating capacity with more significant levels of delay.
- LOS values of E and F indicate the arm is operating at or over capacity with unstable and significant levels of delay as a result.

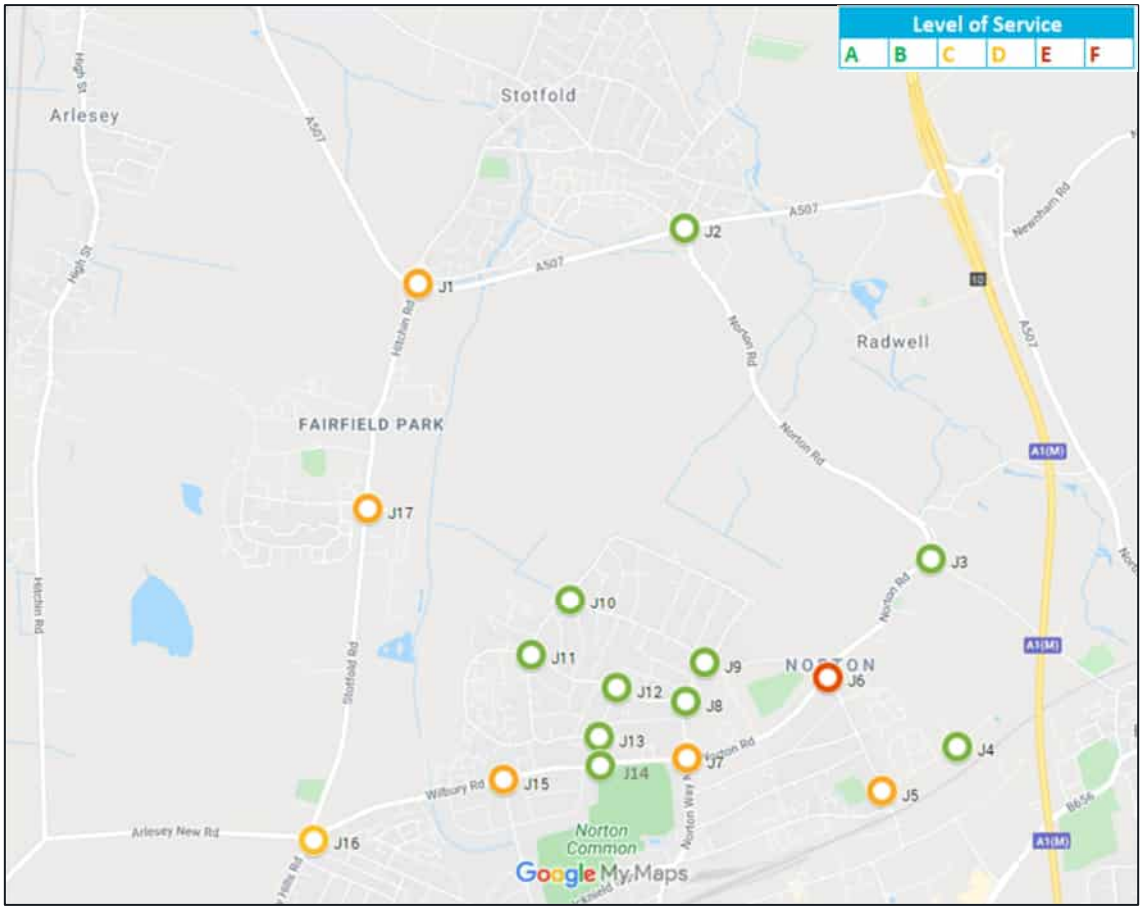
6.126 A summary of the LOS at the junctions assessed are illustrated in **Figure 6-7** for the AM peak and **Figure 6-8** for the PM peak.

Figure 6-7: AM Peak Levels of Service



Source: Google My Maps

Figure 6-8: PM Peak Levels of Service



Source: Google My Maps

6.127 Overall, the majority of junctions currently operate within capacity.

In the AM peak hour eight junctions are approaching capacity (LOS of C or D):

- Hitchin Road / A507 (Junction 1)
- Norton Road / Tansy Avenue / A507 (Junction 2)
- Blackhorse Road / Green Lane (Junction 5)
- Norton Road / Green Lane (Junction 6)
- Wilbury Road / Norton Way North / Norton Road / Eastholm (Junction 7)
- Wilbury Road / Grange Road (Junction 14)
- Cowslip Hill / Wilbury Road (Junction 15)
- Stotfold Road/ Arlesey New Road (Junction 16)

6.128 In the PM peak hour six junctions are approaching capacity (LOS of C or D):

- Hitchin Road / A507 (Junction 1)
- Blackhorse Road / Green Lane (Junction 5)
- Wilbury Road / Norton Way North / Norton Road / Eastholm (Junction 7)
- Cowslip Hill / Wilbury Road (Junction 15)
- Stotfold Road/ Arlesey New Road (Junction 16)
- Dickens Boulevard / Hitchin Road / Stotfold Road (Junction 17)

6.129 Also, in the PM peak, one junction is at capacity (LOS of E or F):

- Norton Road / Green Lane (Junction 6)

6.130 The full capacity assessment results at each individual junction are included in **Appendix S**.

6.131 Scoping discussions will be held with HCC, NHC, CBC and National Highways to identify the junctions for which localised traffic capacity modelling needs to be undertaken for Site LG1 Transport Assessment that will be undertaken to support the future planning application.

6.132 It should be noted that the February 2020 surveys did not include a count of the A1 (M) junction. Therefore, discussions will need to be undertaken with National Highways to identify whether they have available counts and a model for this junction or whether an additional survey and modelling will need to be undertaken.

Travel Plan, Delivery and Servicing Plan and Construction Logistics Plan

6.133 Outline Travel Plan and Delivery and Servicing Plan documents will be produced to support the future planning application for the site.

6.134 The Travel Plan will set out the long-term management strategy for the sustainable movement of both people and goods to the site. A focus of this will be to encourage walking and cycling as an alternative to car and public transport use and to help achieve this the travel plan will include associated objectives, mode share targets to facilitate mode shift and a comprehensive package of sustainable transport measures including:

- Site and resident's information and welcome packs to provide information to residents/ site users on multi-modal transport access options and focusing on sustainable modes (walking, cycling, public transport). This information could be provided in welcome packs on notice boards or as real-time journey information provided through a website or smartphone application.
- Offer Personalised Travel Planning to site users to help them plan their journeys.
- Ensuring promotion and usage of high-quality cycle facilities and the Sustainable Transport hub.
- Offering cycle training to residents, such as Bikeability.
- Creation of a bike user group to discuss cycling issues and encourage the use of local services and facilities.
- A Transport Forum to discuss any site access issues and potential improvements.
- Promotion of the health benefits of walking and cycling.
- A Travel Plan launch event.
- Subsidising initial car club membership for residents.
- Potential subsidising of bus fares for an initial period.
- Ensuring residents and users have access to high quality broadband.

6.135 A Travel Plan co-ordinator would be appointed to manage and promote the Travel Plan which will be a living document. Multi-modal Travel Plan surveys would be undertaken within 6 months of occupation, and a 3 years and 5 years post occupation, which would be used to review progress against the Travel Plan mode share targets.

6.136 An Outline Delivery and Servicing Plan (DSP) will also be submitted to outline the proposed delivery and servicing strategy for the site and the management of delivery vehicle access to ensure deliveries can be managed efficiently and sustainably.

6.137 Both the Outline Travel Plan and DSP will be secured as pre-occupation conditions, with Detailed documents submitted to HCC/ NHC for approval prior to occupation of the development.

6.138 An Outline Construction Logistics Plan (CLP) will also be submitted as part of the planning application to set out the construction transport requirements, access strategy and associated mitigation measures. A Detailed CLP will be secured by means of a pre-commencement condition.

Challenges and Responses Summary

6.139 Table 6-7 below provides a high-level summary of the challenges and responses as detailed above.

Table 6-7: Opportunities and constraints

Category	Constraints	Opportunities
Vehicle Access	• Ensuring a suitable Grange Estate interface and minimising impacts on local residents. • Norton Road northern access location requires careful design to ensure safety and further discussions with HCC and NHC on the design requirements. • Further studies/ assessments are required to review final Norton Road north and Western Way junction forms and locations based on land take, land ownership requirements, and ecological and tree surveys. • The Western Way access requires use of third party settle owned land. Agreement is required with settle.	• Vehicle access points from Norton Road north and Western Way • Opportunity to provide a high quality design that ties in and provides a gateway to Site LG1 – design discussions are ongoing with HCC/ NHC. • Discussions are ongoing with HCC, NHC and settle in relation to providing a high quality access design at the Western Way access that accommodates sustainable modes and ties in efficiently with both the Site LG1 and settle masterplans.
Site Design	• Site layout design has spatial constraints. • Agreement of acceptable parking levels are required within the site to prevent overspill car parking and to formulate an effective parking strategy/ management around the school and recreation ground. • Rat running – further studies required of potential impacts and mitigation measures. • Mitigating impacts on hedgerows, ecology and archaeology.	• Opportunity to design site to meet HCC road user hierarchy requirements – pedestrians, cyclists, buses, vehicles • Provision of safe direct, walking and cycle routes and inter connected streets. • 20mph speed limit within the site to benefit sustainable modes. • Sensitive public realm design and hedgerow retention.

		• Opportunity to ensure design reflects Letchworth Garden City core design principles. • Well-designed parking layouts, no parking around school, retention of recreation ground car parking. • Inclusion of an internal mobility hub to promote new mobility technologies and sustainable transport options. • Land use planning to reduce internal car trips and delivery and servicing trips. • Site Travel Plan strategy to play an important role in facilitating sustainable access. • Opportunities to discourage rat running – bus gate, signs, design.
Walking and Cycling	• Parts of the Grange Estate walking and cycling infrastructure requires improving. • There is a need to link Site LG1 with existing routes serving key destinations. • Further discussions required with settle to ensure high quality connections to the Pelican Way redevelopment.	• Improved external links to the Grange Estate Letchworth town centre, station and employment areas and to Arlesey, Stotfold and Baldock • Opportunity to maintain and enhance access to the Greenway, NCN12 and the Etonbury Green Wheel. • Implementation of Accessibility Audit mitigation measures and Letchworth Cycling Strategy Scheme strategies will significantly enhance the surrounding area and benefit pedestrians and cyclists. • High quality wayfinding strategy could be developed to benefit the wider area and associated destinations. • Discussions with settle to ensure integration with Pelican Way masterplan and high-quality pedestrian/ cycle links.
Bus Access	• Only current access to the Grange Estate is via Arriva route 55 • Arriva 55 experiences service frequency/ period constraints . • Funding for standard bus services may be a barrier to connectivity with standard bus services. • There are currently no school buses to secondary schools.	• Opportunity for a potential demand-based bus service with an interchange provided within Site LG1 linked to Pelican Way and the town centre. • Enhancements could be delivered to local bus stops within the Grange Estate. • Discuss opportunities with HCC to provide buses to secondary schools.

Rail Access	• Bus connections, walking (25-30 mins), Cycling (10 mins)	• Opportunities to provide a bus connection and enhanced walking and cycle links to Letchworth Railway Station which would benefit residents of the Grange. • Potential to integrate Site LG1 scheme with Letchworth railway station improvements scheme.
Traffic Impacts	• Need to minimise traffic impacts associated with Site LG1 on Grange residents, wider highways and A507. • Achieving an appropriate balance for onsite car parking to ensure no overspill car parking impacts on the Grange and surrounding areas. • Construction impacts will require careful management. • Existing on-street parking within the Grange disrupts the current Arriva 55 bus route and vehicle flows.	• Reduce car dependence and promote sustainable access • Site design – prioritising sustainable modes • Agree appropriate external highways mitigation. • Letchworth Sustainable Travel Towns initiatives, Sustainable Travel Plans and journey planning to be used to reduce vehicle access and promote sustainable modes. • Appropriate car parking provision can minimise overspill impacts. Potential opportunities for monitoring demand and reallocating spaces to landscaping in future as car mode share levels reduce. • Norton Road north main access provides the ideal route for construction traffic due to close links to the A1(M). The use of this access minimises impacts on residential areas including the Grange. • Construction Logistics Plan to provide mitigation measures to minimise construction vehicle impacts. • Encourage HCC to consider improvements to address on-street parking issues within the Grange Estate which disrupt bus access and vehicles flows.
Developer Contributions	• An appropriate level of financial mitigation needs to be agreed.	• Agree appropriate level of developer contributions and S106, with contributions shared with other development sites in North Herts and Central Bedfordshire.

7 Next Steps

7.1 This Letchworth Site LG1 Transport & Accessibility Report has been prepared by Steer on behalf of the LGCHF to examine the proposed location of Site LG1 within the wider setting in relation to main destinations, other future development sites and the multi-modal transport networks.

7.2 Understanding this strategic context is critical to developing the emerging Transport Strategy and design for Site LG1 to ensure the development is well integrated with the wider community, nearby destinations and transport networks.

7.3 The report has considered the transport policy context for the site, reviewed existing baseline transport conditions and existing travel trends within the Grange Estate and Letchworth, assessed the quality of existing walking, cycling, public transport and vehicle connections to the site and has set out the emerging Site LG1 access strategy, the rationale behind the approach to date and the opportunities and constraints.

7.4 This document combined with other studies undertaken by the multi-disciplinary project team acting on behalf of the LGCHF will inform the development of the Site LG1 Strategic Masterplan.

7.5 As part of the development of the Transport Strategy, LGCHF will undertake market testing of the various options. This is to ensure that any measures enhance the attractiveness of the development and do not have a harmful impact on its commerciality. Therefore, all measures will be tested to demonstrate their deliverability and viability, whilst meeting the values and principles included in LGCHF's adopted vision for the site.

7.6 Further discussions will be held with the NHC, HCC and CBC to inform the development of the strategic masterplan to ensure it is well integrated with the surrounding area and future development sites, and to scope the methodology for the Transport Assessment and highway modelling studies that will be required to support the future planning application for the site.

7.7 The following outstanding matters will also subsequently require further consideration:

- Forecast mode shares, based on trip generation scenarios, and proposed targets.
- Motor vehicle trip split between access points (as this heavily influences the Site LG1 access designs).
- Assessment of a potential vehicle access route from Norton Road to the south-east, either as a third point of access or instead of an access to the north (which could nevertheless serve as an access for construction via a temporary haul road).
- Potential for reducing traffic speeds on Norton Road through design changes and a reduction in the posted speed limit. A proposal to reduce the speed limit to 50mph has been supported by the HCC Speed Management Group, but this will ultimately be subject to a TRO application.
- Norton Road access design.

- Western Way access design.
- Agreement on construction traffic access arrangements from Norton Road.
- Review of access against commercial expectations.
- Options for alignment of primary roads through LG1 based on the new preferred location of the Norton Road junction, in particular where roads break through established hedgerows.
- Interaction of primary road alignments with drainage, ecology, heritage and archaeology.
- Modal filter vs friction on primary access road: whether required, options and justifications.
- Bus service provision, in particular for residents in the northern and eastern parts of the site.
- Review of development phasing against the delivery of transport infrastructure and services to meet commercial requirements and embed sustainable travel choices from first occupation.
- Further engagement with CBC regarding impacts on A507.
- Engagement with National Highways relating to impacts on the A1(M) Junction 10.
- Discussion with HCC Highways and local community regarding addressing existing on-street parking issues within the Grange Estate.
- Community engagement on possible Grange Estate transport improvements.
- Car parking to serve the Grange Recreation Ground.

Appendices

A – Local Cycling and Walking Infrastructure Plans (June 2022)

B – Letchworth Personal Injury Collision Map

C – Letchworth Garden City Cycling Strategy (October 2018)

D – Highover Farm Sustainable Transport Link drawings (January 2022)

E – Sustainable Travel Towns Outline Plan (April 2021)

F – Local Insight profile for ‘Letchworth Grange’ Area (March 2022)

G – Journey to work mode share maps

H – Journey to work origin and destination maps by mode

I – Accessibility Audit Assessment sheets

J1 – Land to the North of Letchworth Garden City- Norton Road Access Study (July 2020)

J2 – Updated Norton Road Access Design and HCC Agreement in Principle

K – Site LG1: Third Access Feasibility Technical Note (August 2018)

L – Potential Western Way Access Arrangements and Swept Path Analysis (April and September 2019)

M – Letchworth Site LG1 – ANPR Surveys Technical Note

N - Land to the North of Letchworth Garden City- Draft Public Transport Strategy (July 2019)

O – Avocet Link- Proposed Site Plan (April 2019)

P – LG1 Land to the North of Letchworth Garden City- Trip Generation Methodology (November 2018)

Q – AECOM North of Letchworth Development Test (February 2019)

R – Vehicle Distribution Methodology (November 2018)

S – Letchworth Garden City, Baseline Traffic Modelling Report (July 2020)

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QUALITY SYSTEM CERTIFICATION
DNV·GL
ISO 9001:2015

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Appendix L

Flood risk assessment

Letchworth Heritage Foundation

LG1 - Land to the north of the Grange Estate

Flood Risk Assessment and Drainage Strategy

FRA001
JANUARY 2023

PUBLIC

Letchworth Heritage Foundation

LG1 - LAND TO THE NORTH OF THE GRANGE ESTATE

Flood Risk Assessment and Drainage Strategy

PUBLIC

PROJECT NO. 70092164

OUR REF. NO. FRA001

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CONTENTS

1. INTRODUCTION 1

1.1. APPOINTMENT AND BRIEF 1
1.2. OBJECTIVE OF STUDY & METHODOLOGY 1

2. EXISTING SITE 3

2.1. SITE LOCATION 3
2.2. SITE DESCRIPTION 4
2.3. NATURAL DRAINAGE CATCHMENTS 5
2.4. GEOLOGY AND HYDROGEOLOGY 5
2.5. GROUND INVESTIGATIONS 6
2.6. SOURCE PROTECTION ZONES / AQUIFER MAPPING 7
2.7. GROUNDWATER VULNERABILITY 7
2.8. EXISTING WATERCOURSES 8
2.9. EXISTING SEWERS/ DRAINAGE 8
2.10. ARTIFICIAL WATERCOURSES 8
2.11. EXISTING FLOOD DEFENCES AND OTHER STRUCTURES 9

3. THE PROPOSED DEVELOPMENT 10

3.1. SUMMARY 10
3.2. VULNERABILITY CLASSIFICATION 10
3.3. SEQUENTIAL TEST 11
3.4. EXCEPTION TEST 12

4. FLOOD HAZARD 14

4.1. SOURCES AND MECHANISMS OF FLOODING 14
4.2. FLUVIAL AND TIDAL FLOODING 14
4.3. GROUNDWATER FLOODING 15

4.4. SEWER FLOODING 15
4.5. SURFACE WATER FLOODING 15
4.6. ARTIFICIAL SOURCES OF FLOODING 16
5. PLANNING POLICY AND GUIDANCE 18
5.2. NATIONAL PLANNING POLICY FRAMEWORK 18
5.3. PLANNING PRACTICE GUIDANCE - FLOOD RISK AND COASTAL CHANGE 18
5.4. SUSTAINABLE DRAINAGE SYSTEMS WRITTEN STATEMENT HCWS161 (DECEMBER 2014) 19
5.5. DEFRA SUSTAINABLE DRAINAGE SYSTEMS NON-STATUTORY TECHNICAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS (MARCH 2015) 19
5.6. BRITISH STANDARD 8582:2013 CODE OF PRACTICE FOR SURFACE WATER MANAGEMENT FOR DEVELOPMENT SITES (NOVEMBER 2013) 20
5.7. FLOOD AND WATER MANAGEMENT ACT (FWMA) (2010) 20
5.8. CIRIA – THE SUDS MANUAL (C753) (2015) 20
5.9. NORTH HERTFORDSHIRE DISTRICT COUNCIL - NORTH HERTFORDSHIRE LOCAL PLAN 2011-2031 (2017) 20
Policy NE9 Water Quality and environment: 20
Policy SP11: Natural resources and sustainability 21
Policy SP8: Housing 21
Policy SP15: Site LG1 – North of Letchworth Garden City 21
5.10. HERTFORDSHIRE COUNTY COUNCIL – PRELIMINARY FLOOD RISK ASSESSMENT (PFRA) (2011) 22
5.11. HERTFORDSHIRE LOCAL FLOOD RISK MANAGEMENT STRATEGY 2 (LFRMS2) (2019-2029) 23
5.12. NORTH HERTFORDSHIRE DISTRICT COUNCIL, STRATEGIC FLOOD RISK ASSESSMENT (SFRA) UPDATE (2016) AND SFRA (2008) 24
HERTFORDSHIRE COUNTY COUNCIL - NORTH 26
5.13. HERTFORDSHIRE DISTRICT SURFACE WATER MANAGEMENT PLAN (SWMP) (2017) 26
5.14. SUDS DESIGN GUIDE FOR HERTFORDSHIRE (MARCH 2015) 26
5.15. LLFA SUMMARY GUIDANCE FOR DEVELOPERS, MANAGEMENT OF SURFACE WATER DRAINAGE (AUGUST 2021) 27

6. CLIMATE CHANGE 28

6.1. BACKGROUND INFORMATION 28
6.2. DEVELOPMENT LIFESPAN 28
6.3. IMPACT OF CLIMATE CHANGE ON THE PROPOSED DEVELOPMENT 29

7. FLOOD RISK MITIGATION MEASURES 30

7.2. SITE LEVELS 30
7.3. FLOOD COMPENSATION AND DISPLACEMENT 30
7.4. FLOOD RESILIENCE MEASURES FOR CONSIDERATION 30
7.5. FLOOD WARNINGS/ EVACUATION PLAN/ FLOOD PROOFING 30
7.6. ACCESS AND EGRESS 30
7.7. GENERAL COMMENTS 30
7.8. RESIDUAL FLOOD RISK 30

8. SURFACE WATER DRAINAGE STRATEGY 32

8.1. DESIGN CONSIDERATIONS 32
SUDS ADOPTION 32
GENERAL PRINCIPLES FOR PROPOSED SURFACE WATER DRAINAGE 32
8.2. DISCHARGE LOCATION 32
8.3. SUDS FEATURES 33
8.4. GREENFIELD RUN-OFF 34
8.5. DEVELOPMENT CATCHMENT AREAS, URBAN CREEP AND DISCHARGE RATES 35
8.6. SURFACE WATER STRATEGY 36
8.7. WATER QUALITY 37
8.8. OPERATION AND MAINTENANCE 38

9. FOUL WATER DRAINAGE 40

9.1. PROPOSED FOUL WATER DRAINAGE STRATEGY 40

10. OFFSITE EFFECTS 41

10.1. INTRODUCTION 41
10.2. PUBLIC DRAINAGE NETWORK 41
10.3. FLUVIAL AND TIDAL EFFECT 41
11. CONCLUSIONS 42

TABLES

Table 3-1 – Extract from Annex 3: Flood Risk Vulnerability Classification 10
Table 4-1 - Degree of risk from each source of Flooding Source Risk 14
Table 8-1 - SuDS Drainage Hierarchy 32
Table 8-2 – SuDS Feasibility 33
Table 8-3 - Greenfield Run-Off Rates 35
Table 8-4 - Site Run-Off Assessment 36
Table 8-5 - Site Attenuation Requirements 37

FIGURES

Figure 2-1 - LG1 Site Location Plan 3
Figure 2-2 - Map taken from Hertfordshire County Council Flood Risk Management Viewer showing Ordinary Watercourses (site boundary in red) 4
Figure 2-3 - BGS Bedrock Geology Map 5
Figure 2-4 - BGS Superficial Deposits Map 6
Figure 2-5 - Source Protection Zone Designation 7
Figure 2-6 - Groundwater Vulnerability Zones 8
Figure 3-1 – EA Flood Map for Planning 12
Figure 4-1 – EA's Risk of Flooding from Surface Water Map 16
Figure 4-2 – EA's Risk of Flooding From Reservoirs 17

APPENDICES

APPENDIX A

SITE MASTERPLAN

APPENDIX B

TOPOGRAPHICAL SURVEY

APPENDIX C

GROUND INVESTIGATION RESULTS

APPENDIX D

EA CORRESPONDENCE

APPENDIX E

LLFA CORRESPONDENCE

APPENDIX F

ANGLIAN WATER RECORDS

APPENDIX G

GREENFIELD RUNOFF RATES

APPENDIX H

DRAINAGE STRATEGY

APPENDIX I

MICRODRAINAGE RESULTS

EXECUTIVE SUMMARY

	ITEM	COMMENT
1	Development Description	Residential Development with community centre, retail units and a school
2	Location	Easting – 522200 Northing – 234840
3	Scale of Development	47 hectares (ha)
4	Current Land Use	A Greenfield Site comprising of predominantly open agricultural land
5	Site Levels	The Site is divided into two natural catchment areas with a high point dividing the southwestern corner and the remainder of the site. The southwestern section of the Site generally falls south from high points of approx. 79.8mAOD to low points of approx. 63.4mAOD in the existing watercourses on the sites western boundary. The remainder of the site generally falls north, with high points of 83.6mAOD at its southeast corner and low points of 62.5mAOD along the northern boundary.
6	Allowance for Climate Change	100 Year + 40% Climate Change
7	Flood Risk Summary	Fluvial – Negligible Groundwater – Negligible Surface water – Low Sewer – Negligible Other – Reservoirs - Negligible Other – Canals - Negligible Other – Culverts - Negligible
8	Surface Water Drainage	The site will be divided into three proposed catchments, utilising the existing topography, draining to attenuation basins where flows will be attenuated for all events up to and including the 1 in 100 year storm event plus a 40% allowance for climate change, which will in turn discharge to existing watercourses at greenfield rates. These will be supplemented by a SuDS treatment train providing required pollutant mitigation in line the CIRIA SuDS guide and an adoptable sewer network.
9	Foul Water Drainage	The site will drain via a gravity sewer network to two pumping stations that will discharge via proposed rising mains on the south-western region and northern central region to the Anglian Water foul water sewer network. Anglian Water have confirmed available capacity
10	Conclusion	Based upon information provided within this report, it is concluded that the site is presented as sustainable in terms of flood risk and compliant with the criteria set out in the NPPF. The Site and its occupants will not be at undue risk of flooding, and flood risk off site will be reduced post development.

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1. INTRODUCTION

1.1. APPOINTMENT AND BRIEF

1.1.1. WSP have been appointed by Letchworth Garden City Heritage Foundation (LGCHF) to undertake a Flood Risk Assessment (FRA) and Outline Drainage Strategy (ODS) to support the outline planning application for a proposed residential led development (hereafter referred to as the 'Proposed Development') at Land to the north of the Grange Estate (LG1), Letchworth Garden City, Hertfordshire. This report relates solely to the above Site.

1.1.2. The proposed development consists of some 900 homes and associated community provision (including a community centre, retail and a school site), open space and associated infrastructure.

1.1.3. This report is intended for the sole benefit of the parties named above and shall not be capable of assignment. WSP shall not be liable for any use of the report for any reasons other than that for which the report was originally prepared and provided.

1.1.4. Although this report was prepared using the degree of skill and care ordinarily exercised by engineers practicing under similar circumstances, please note that WSP cannot take responsibility for errors in the information provided by third parties.

1.2. OBJECTIVE OF STUDY & METHODOLOGY

1.2.1. This report investigates flood risk on Site and in the area and establishes the mitigation measures required to ensure the sustainability and safety of the Proposed Development over its lifetime. It also includes an outline drainage strategy to sustainably manage surface water, to comply with relevant local and national flood risk policy and guidance.

1.2.2. The report has been produced in line with the requirements of the NPPF and the Environment Agency (EA) Standing Advice, as well as through consultation with the EA, Anglian Water (AW) and Hertfordshire County Council (HCC) as the Lead Local Flood Authority (LLFA).

1.2.3. The following documents and policies have been reviewed to inform this report:

- Hertfordshire County Council – North Hertfordshire District Surface Water Management Plan (SWMP) (2017);
- North Hertfordshire District Council – Strategic Flood Risk Assessment (SFRA) Update (2016) and SFRA (2008)
- Hertfordshire County Council – Preliminary Flood Risk Assessment (PFRA) (2011);
- LLFA – Hertfordshire Local Flood Risk Management Strategy 2 (LFRMS2) (2019-2029);
- LLFA - SuDS Design Guide for Hertfordshire (March 2015)
- LLFA -Summary Guidance for Developers, Management of surface water drainage (August 2021)
- Greenhatch Group – Topographical Survey (May 2017);
- Anglian Water Asset Records and Historic Sewer Flooding Records;
- British Geological Society (BGS) Online Viewer, 1:50,000 Bedrock and Superficial deposits;
- DEFRA's online Magic Map; and
- GOV.UK's online Long Term Flood Maps.

1.2.4. In undertaking this study, the local policies discussed in **Section 5** have also been considered.

1.2.5. This report makes use of third party information and contains EA information © Environment Agency.

1.2.6. The insurance industry applies its own assessments to properties in terms of determining premiums and the insurability for flood risk. Those intending to undertake development in areas which may be at risk of flooding are advised to contact their insurers or the Association of British Insurers (ABI) to seek further guidance prior to commencement.

1.2.7. WSP does not warrant that the advice in this flood risk assessment will guarantee the availability of flood insurance either now or in the future.

2. EXISTING SITE

2.1. SITE LOCATION

2.1.1. The LG1 Proposed Development comprises a total of approximately 47 hectares and currently consists of pasture fields, separated by hedgerow boundaries and tree belts. The LG1 Site is located on the northern outskirts of Letchworth, Hertfordshire. The OS Grid Reference for the approximate centre of the Site is 522200, 234840. An approximate postcode for the Site is SG6 4PN. Refer to **Figure 2-1** for a Site Location Plan.

2.1.2. The Site is bound by:

- To the north, open pasture fields and then Norton Road;
- To the east, open pasture fields;
- To the south, the Grange Recreation Ground and residential properties located on Gaunts Way and Western Way
- To the west, by open pasture fields and by the Pix Brook.

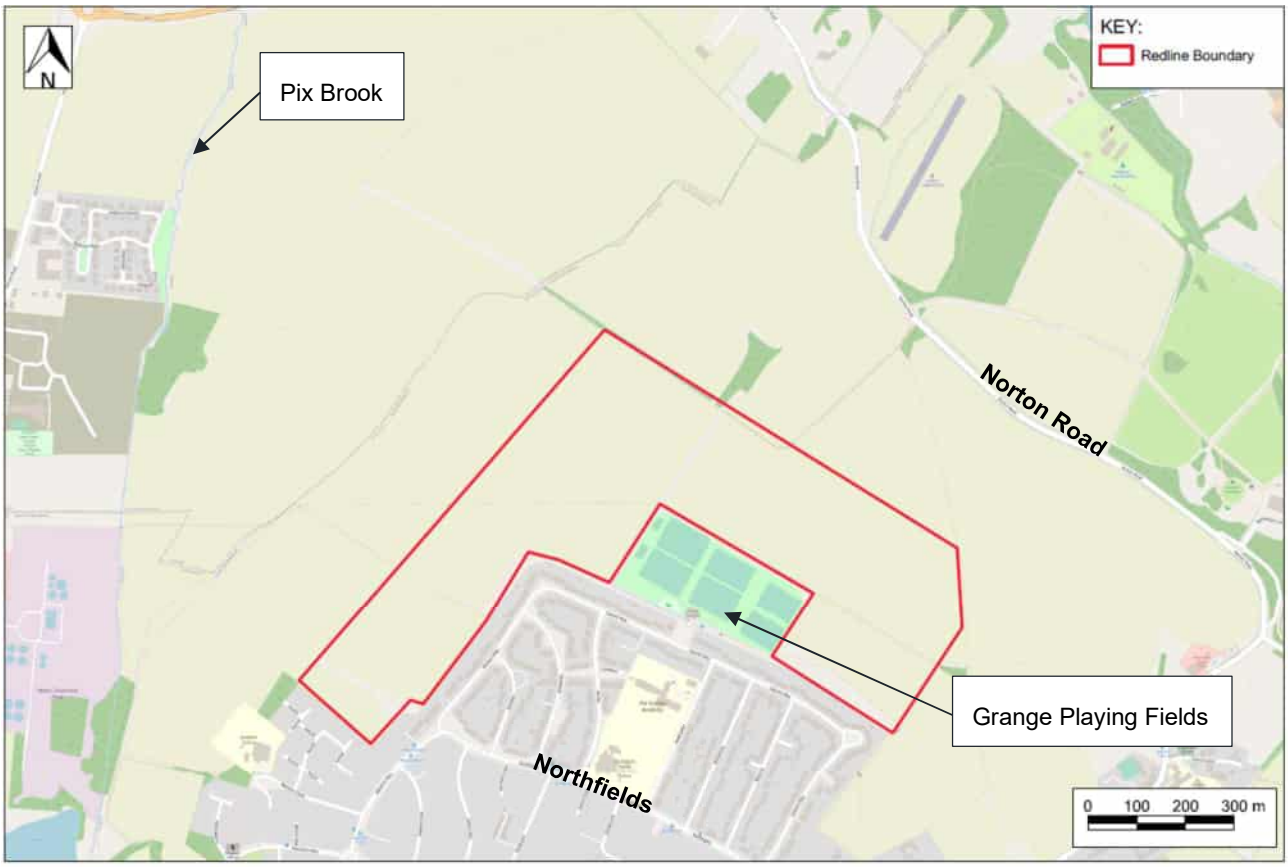

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Figure 2-1 - LG1 Site Location Plan

2.2. SITE DESCRIPTION

2.2.1. The Site currently comprises pasture fields, separated by hedgerow boundaries with some small areas of existing vegetation to the south-east and south-west.

2.2.2. The Site topography divides the site into two broad catchment areas with a high point dividing the southwestern corner and the remainder of the site. The southwestern section of the Site generally falls south from high points of approx. 79.8mAOD to low points of approx. 63.4mAOD in the existing watercourses on the sites western boundary. Gradients vary between approx. 1 in 70 at the top of the catchment to approx. 1:15 towards the bottom of the catchment/watercourse. The remainder of the site generally falls north, with high points of 83.6mAOD at its southeast corner and low points of 62.5mAOD along the northern boundary. Gradients are variable between approx. 1 in 80 towards the southern highpoint of the catchment to approx. 1:20 towards the lower areas around the watercourse.

2.2.3. An additional topographical survey was performed north of the Site in November 2022, to pick up the areas where the proposed basins will be located. This survey confirms invert levels for the ordinary watercourse connecting to the River Ivel, along with top of bank and vegetation extent. Details of this survey are presented in **Appendix B**.

2.2.4. **Figure 2-2** showing the ordinary watercourses previously mentioned, with the site redline boundary overlaid onto it. The location of Pix Brook, River Ivel and the Hertfordshire County Council boundary can also be seen. A Site Masterplan showing the LG1 development areas is located in **Appendix A**.

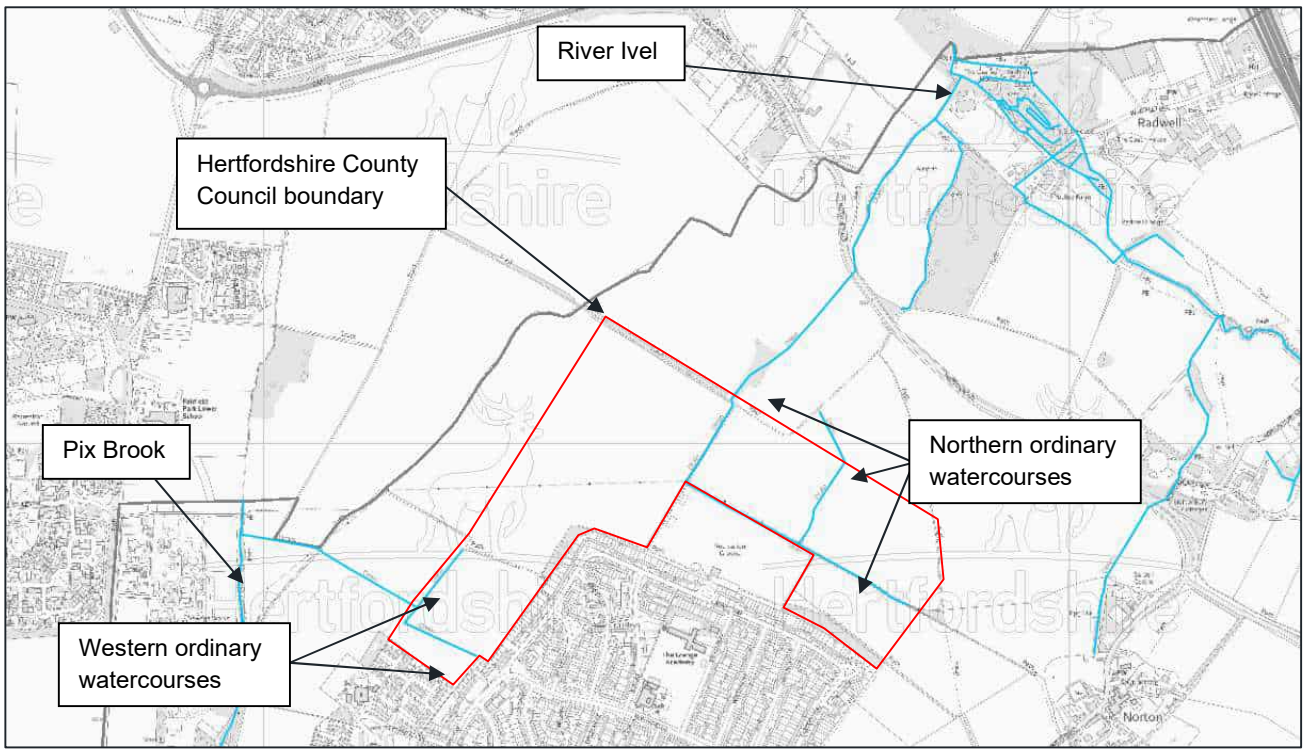

Figure 2-2 - Map taken from Hertfordshire County Council Flood Risk Management Viewer showing Ordinary Watercourses (site boundary in red)

2.3. NATURAL DRAINAGE CATCHMENTS

2.3.1. There is no evidence of any part of the Site being drained into the existing Anglian Water public drainage network.

2.3.2. The northern catchment naturally drains to the north through ordinary watercourses towards Norton Road and then on into the River Ivel located approximately 1km away. The southwest catchment drains west to join the Pix Brook, located approximately 0.5km away.

2.4. GEOLOGY AND HYDROGEOLOGY

2.4.1. The British Geological Survey (BGS) online Geology of Britain Viewer indicates that the site is underlain by Zig Zag Chalk Formation- Chalk or Holywell Nodular Chalk Formation and New Pit Chalk as its Bedrock, as seen in **Figure 2-3.**

Figure 2-3 - BGS Bedrock Geology Map

2.4.2. In terms of superficial deposits**,** the site is predominantly Lowestoft Formation (Diamicton) (made up of chalky till with sands, gravels, silts and clays). Additionally, the areas adjacent to the watercourses on the northern and southwestern boundary have deposits of Head, Clay, Silt, Sand and Gravel and Glaciofluvial Deposits, Mid Pleistocene - Sand And Gravel (to the southwest only), as seen in **Figure 2-4.**

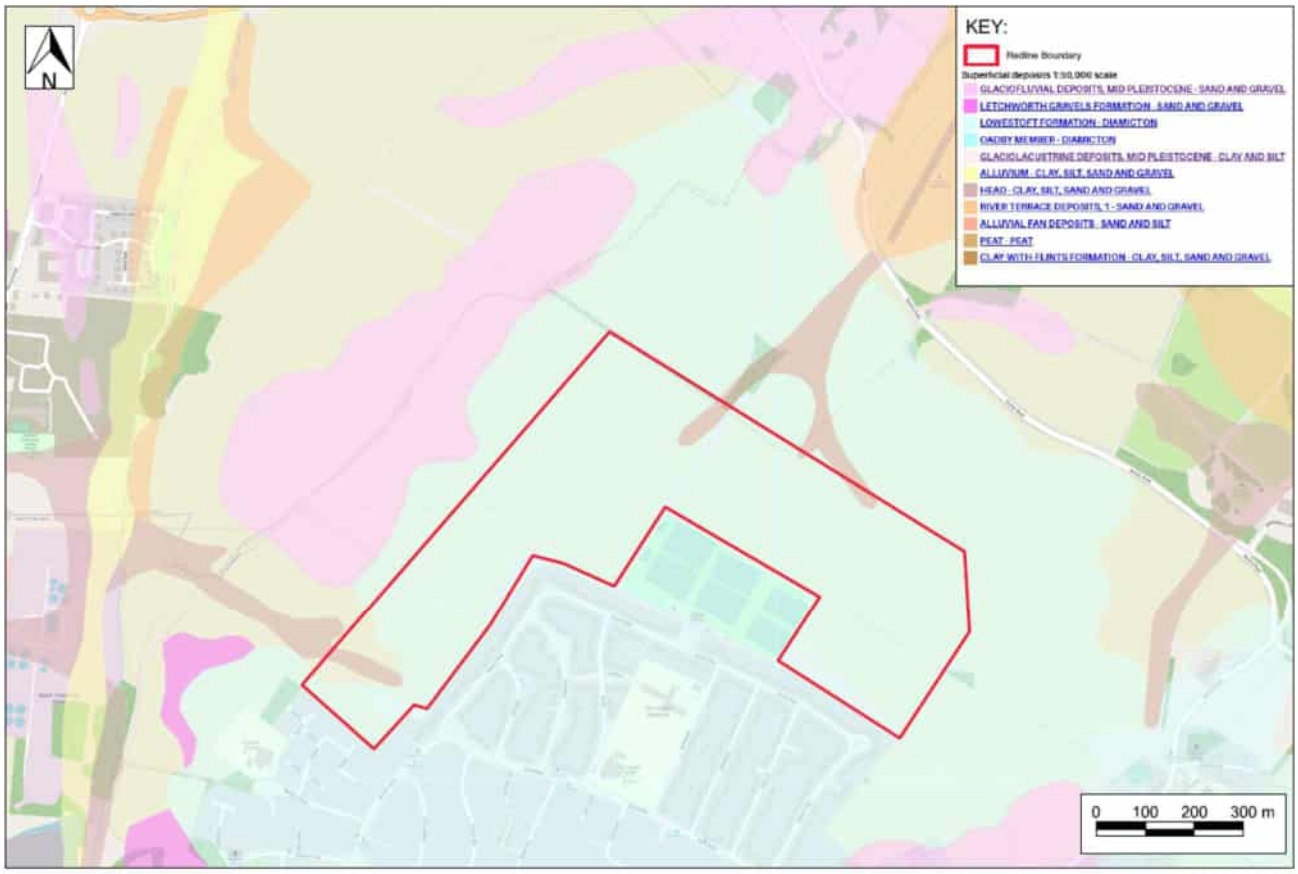

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Figure 2-4 - BGS Superficial Deposits Map

2.5. GROUND INVESTIGATIONS

2.5.1. Site infiltration tests were conducted on the 21st and 22nd of September 2022 by specialist company SUBADRA. Infiltration testing was performed at 4 different locations within the site boundary, across 5 soakaway pits (TP001 to TP005). Additionally, trial pits were dug next to the soakaway pits to locate the top of the chalk (TP006 to TP009). Refer to **Appendix C** to see Infiltration test results.

2.5.2. The report by SUBADRA provides the following conclusions:

- *'A thin layer of topsoil, to a maximum depth of 0.3m, overlying Lowestoft Formation (clay with gravels, as shown in the PDS analysis) which was present in all trial pits to base. A maximum 0.4m layer of sand was present below the topsoil in TP001 through TP005. Trial pits next to each of the test pits showed that chalk is >3.0m below ground level across the site.*
- *Infiltration testing was carried out in test pits TP001 through TP005. None of the test pits completed a single fill over the two-day period. BRE guidance requires: The soakaway should discharge from full to half empty in a 24hour period; none of our test pits achieved this criteria.*
- *Based on our test results, the use of standard soakaways is unlikely to be a viable drainage solution at the depths and locations tested.'*

2.5.3. Based on these findings, infiltration is not considered a viable means of surface water discharge.

2.6. SOURCE PROTECTION ZONES / AQUIFER MAPPING

2.6.1. According to the DEFRA'S online Magic Map for Groundwater Source Protection Zones as depicted in **Figure 2-5**, the Site is situated within Groundwater Source Protection Zone 3 (SPZ3) which is classified as 'Total Catchment' SPZ. This is defined as the area around a supply source within which all the groundwater ends up at the abstraction point.

2.6.2. In terms of potential discharge to ground, within SPZ3 the EA generally permits the discharging of surface water to soakaways subject to the use of suitable pollution control measures.

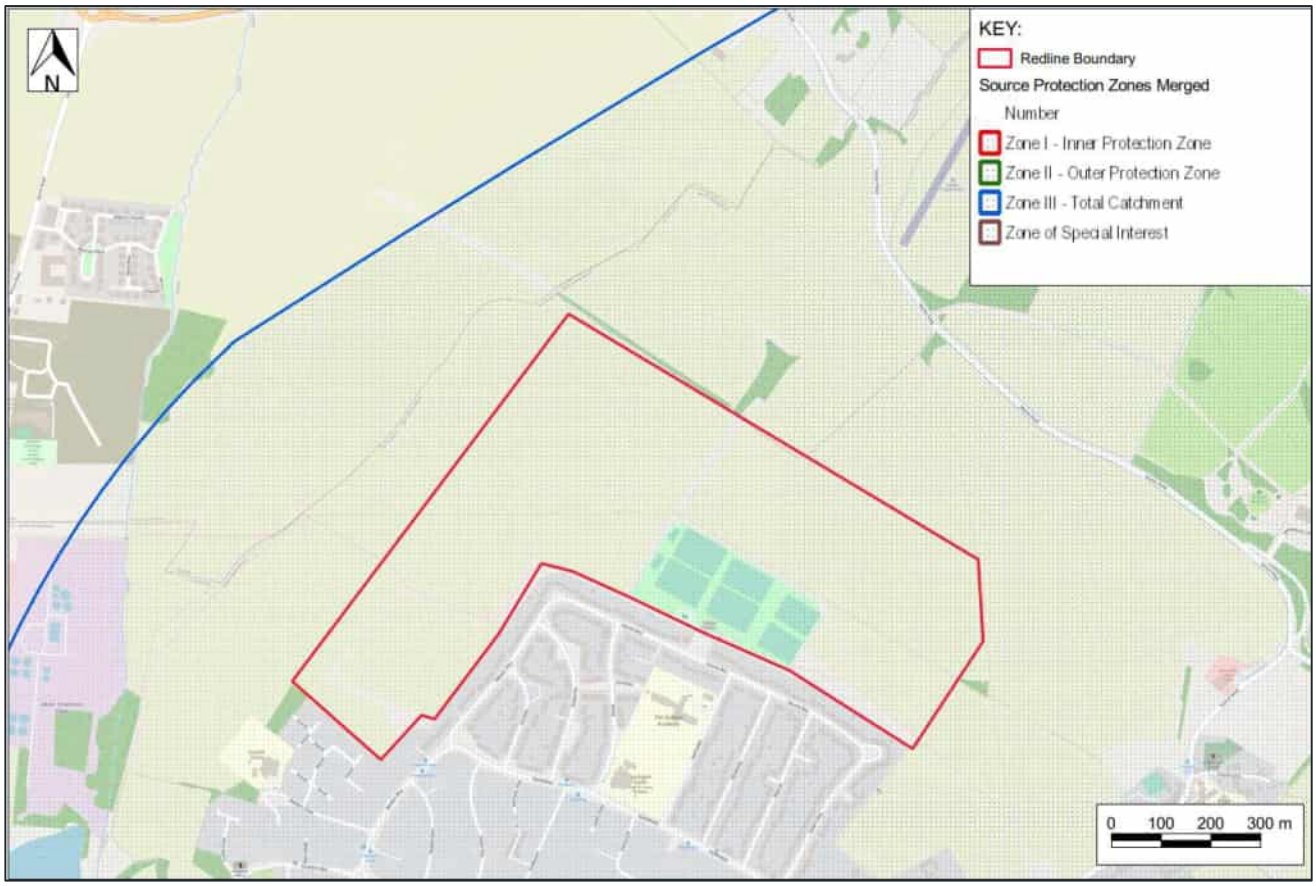

Figure 2-5 - Source Protection Zone Designation

2.7. GROUNDWATER VULNERABILITY

2.7.1. Based on the EA's online Groundwater Vulnerability Zones Map depicted in **Figure 2-6**, the Site is primarily situated within an area of medium or medium-high vulnerability. As such, the land is moderately to highly susceptible to pollutants being discharged at ground level. This information will be taken forward in the drainage strategy to ensure the appropriate treatment and handling of pollutants.

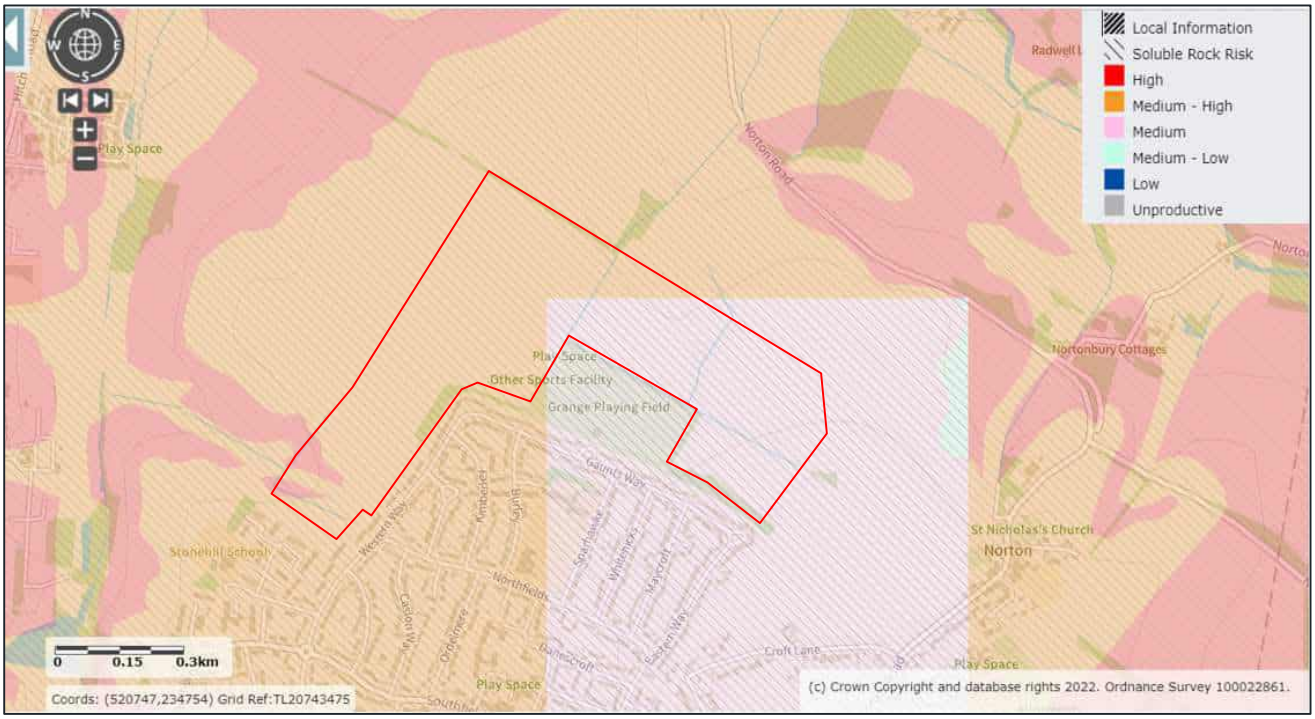

Figure 2-6 - Groundwater Vulnerability Zones

2.8. EXISTING WATERCOURSES

2.8.1. There are two identified networks of ordinary watercourses running through the site, the southeast ordinary watercourses drain north through a ditch on the north central edge of the Site, which in turn discharges to the River Ivel. The southwest ordinary watercourse drains to the west, joining Pix Brook. Refer to **figure 2-2** for a map of the HCC ordinary watercourses on Site.

2.8.2. The River Ivel is an EA Main River and is located approximately 3km north of the site and flows in a westerly to north-westerly direction.

2.9. EXISTING SEWERS/ DRAINAGE

2.9.1. Sewer records provided by Anglian Water (2022) provides existing drainage information. Refer to **Appendix E** for sewer records.

2.9.2. Records show an existing Anglian Water surface water sewer with pipe diameter 375mm, this pipe runs east to west under the existing footpath from southeast of Grange Playing fields, bordering the pasture fields and continuing into the Site following the footpath at the southwestern boundary.

2.9.3. An existing Anglian Water foul water sewer with pipe diameter 375mm runs along the entire southern edge of the Site and crosses the southern edge of Grange Playing Field. This pipe then runs parallel to the surface water sewer into the south-western edge of the Site following the existing footpath.

2.10. ARTIFICIAL WATERCOURSES

2.10.1. There are no known artificial watercourses in the vicinity of the Site.

2.11. EXISTING FLOOD DEFENCES AND OTHER STRUCTURES

2.11.1. There are no known flood defences or other structures present in the vicinity of the Site.

3. THE PROPOSED DEVELOPMENT

3.1. SUMMARY

3.1.1. The proposed Indicative Block Plan is shown in **Appendix A**. Included is an allowance for the construction of 900 residential dwellings, a sustainable transport hub, a community centre, a retail space, a school, public open spaces, incidental landscaping, SuDS features and estate roads.

3.2. VULNERABILITY CLASSIFICATION

3.2.1. The NPPF classifies the Flood Risk Vulnerability of various land uses in Annex 3 (extract shown in **Table 3-1** below) within the 'Flood Risk and Coastal Change' chapter of the Planning Practice Guidance (PPG) (last updated August 2022). The PPG sets out the government's planning polices for England and how these are expected to be applied. The more vulnerable classification encompasses usages such as hospitals and buildings used for dwellings whereas less vulnerable classification applies to buildings used for general industry, storage, and distribution.

Table 3-1 – Extract from Annex 3: Flood Risk Vulnerability Classification

Essential Infrastructure	▪ Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. ▪ Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including infrastructure for electricity supply including generation, storage and distribution systems; including electricity generating power stations, grid and primary substations storage; and water treatment works that need to remain operational in times of flood. ▪ Wind turbines. ▪ Solar farms.
Highly Vulnerable	▪ Police stations, ambulance stations and fire stations and command centres and telecommunications installations required to be operational during flooding. ▪ Emergency dispersal points. ▪ Basement dwellings. ▪ Caravans, mobile homes and park homes intended for permanent residential use. ▪ Installations requiring hazardous substances consent (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as "essential infrastructure")
More Vulnerable	▪ Hospitals. ▪ Residential institutions such as residential care homes, children's homes, social services homes, prisons, and hostels. ▪ Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs, and hotels. ▪ Non–residential uses for health services, nurseries, and educational establishments. ▪ Landfill and sites used for waste management facilities for hazardous waste. ▪ Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.
Less Vulnerable	▪ Police, ambulance, and fire stations which are not required to be operational during flooding.

	▪ Buildings used for shops, financial, professional, and other services, restaurants and cafes, hot food takeaways, offices, general industry, storage and distribution, non–residential institutions not included in “more vulnerable”, and assembly and leisure. ▪ Land and buildings used for agriculture and forestry. ▪ Waste treatment (except landfill and hazardous waste facilities). ▪ Minerals working and processing (except for sand and gravel working). ▪ Water treatment works which do not need to remain operational during times of flood. ▪ Sewage treatment works if adequate measures to control pollution and manage sewage during flooding events are in place. ▪ Car parks
Water-Compatible Development	▪ Flood control infrastructure. ▪ Water transmission infrastructure and pumping stations. ▪ Sewage transmission infrastructure and pumping stations. ▪ Sand and gravel working. ▪ Docks, marinas, and wharves. ▪ Navigation facilities. ▪ Ministry of Defence installations. ▪ Ship building, repairing, and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location. ▪ Water-based recreation (excluding sleeping accommodation). ▪ Lifeguard and coastguard stations. ▪ Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. ▪ Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

3.2.2. Considering the scale of the Site and as depicted within **Table 3-1**, the Proposed Development will have uses which are classified as ‘more vulnerable’.

3.3. SEQUENTIAL TEST

3.3.1. As stated in the NPPF, a sequential risk-based approach to determine the suitability of land for development in flood risk areas should be applied at all stages of the planning process giving precedence to low flood risk areas wherever possible.

3.3.2. Based on the EA’s Flood Map for Planning, as depicted within **Figure 3-1**, the Site is located within Flood Zone 1, an area with a low probability of river or sea flooding and so does not benefit from flood defences. To the west of the Site is Pix Brook and to the north of the Site is the River Izel, both with adjacent land in Flood Zone 3, but these are sufficient distance from the Site to result in flood risk to the Site.

3.3.3. Since the proposed Site is solely located within Flood Zone 1, the development is considered appropriate and therefore automatically satisfies the requirements of the Sequential Test.

Figure 3-1 – EA Flood Map for Planning

3.4. EXCEPTION TEST

3.4.1. The NPPF classifies the Flood Risk Vulnerability and Flood Zone Compatibility in Table 2 of the Planning Practice Guidance (PPG). Typically, the overall aim is to steer new development into Flood Zone 1. Where there are no reasonably available sites within Flood Zone 1, local planning authorities allocating land and in local plans or determining planning applications for development at any particular location should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Zone 2, applying the Exception Test if required.

3.4.2. The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available. There are two parts to the exception test:

- show that the development will provide wider sustainability benefits to the community that outweigh flood risk; and
- and that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.

3.4.3. Following review of the Flood Risk Vulnerability and Flood Zone Compatibility in Table 2 of the PPG, it shows that 'more vulnerable' land uses are acceptable with a Flood Zone 1 classification, therefore an exception test is not required, and the development is considered appropriate.

3.4.4. This FRA identifies the appropriate flood risk mitigation measures to be implemented at the Site, including an outline drainage strategy to sustainably manage surface water, to comply with relevant local and national flood risk policy and guidance. Based on the proposed design measures, as detailed within **Section 7**, the Proposed Development satisfies the exemption test criteria relating to flood risk.

4. FLOOD HAZARD

4.1. SOURCES AND MECHANISMS OF FLOODING

4.1.1. This chapter assesses the risk of flooding to the Site from all current and future potential sources of flooding.

4.1.2. **Table 4-1** below summarises the findings of the assessment. A more detailed explanation of the flood risk issues on the Site and determination of Flood Risk Ratings are presented in **Sections 4.2 to 4.6**.

Table 4-1 - Degree of risk from each source of Flooding Source Risk

Source	Risk
Fluvial	Negligible
Groundwater	Negligible
Surface water	Low
Sewer	Low
Water mains	Negligible
Other – Reservoirs	Negligible
Other – Canals	Negligible
Other – Culverts	Negligible

4.1.3. The Flood map for planning service from the EA has been used in this section of the report to identify the risk of fluvial, tidal, reservoir, and surface water flooding. This flood map can be located at: https://flood-map-for-planning.service.gov.uk/

4.2. FLUVIAL AND TIDAL FLOODING

4.2.1. Based on the EA's Flood Map for Planning, the Site is located in Zone 1 where the probability of river or sea flooding is equal to or less than 0.1% (1 in 1000) chance in any given year. refer to **Figure 3-1.**

4.2.2. In the EA's Flood Risk Consultation Response (dated 7th February 2022), a precautionary allowance was given for potential climate change impacts on peak 'design' (i.e. 1% annual probability) fluvial flood level. Pix Brook's level is 450mm while Rivel Ivel's allowance is 500mm. See **Appendix D** for EA correspondence. However, due to the Site's topography in relation to the identified flood zones together with the distance away from any flood zones, this precautionary allowance is unlikely to affect the Site.

4.2.3. Hertfordshire County Council (HCC) has been approached (as the Lead Local Flood Authority) for information relating to flood risk in the area of the proposed development. The HCC LLFA have not yet responded to this request at time of compiling this report. Refer to **Appendix E** for the HCC LLFA correspondence.

4.2.4. Based on the available information, the probability of fluvial and tidal flooding is considered to be **negligible** for the proposed Site.

4.2.5. Historical records of flooding within the Letchworth Garden City area from the SFRA indicate that there has been flooding along the Pix Brook due to restricted hydraulic capacity of culverts along its length, but this is not within the vicinity of the site and is largely restricted to a couple of isolated locations at Norton Common and Rushby Mead (Letchworth Garden City). Neither of these locations impact on the Proposed Development.

4.3. GROUNDWATER FLOODING

4.3.1. In the EA flood Risk Consultation Response, no data was provided regarding groundwater flooding.

4.3.2. Based on the historic floodings recorded by the 2016 Update to the 2008 SFRA, no groundwater flooding has been recorded within proximity of the Site.

4.3.3. The site specific infiltration tests show that no groundwater was found in any of the test pits. Trial pits were extended to 3.5m below ground level and did not encounter water strikes.

4.3.4. Based on the available information, the probability of groundwater flooding is considered to be **negligible** for the proposed Site.

4.4. SEWER FLOODING

4.4.1. The sewer records provided by Anglian Water show surface water sewers and foul water sewers within the south-west boundary of the Site, as well as surface water and foul water sewers in the close proximity of the southern boundary from east to west.

4.4.2. Based on the 2008 SFRA for North Hertfordshire, no historic sewer floodings have been recorded in the vicinity of the Site.

4.4.3. Based on the information available the probability of sewer flooding impacting the Site can be assessed as **low.**

4.5. SURFACE WATER FLOODING

4.5.1. Surface water flood risk is provided by the EA, identifying areas that may experience ponding during each of a 1 in 30 year (3.3% annual probability), 1 in 100 year (1% annual probability) and 1 in 1000 (0.1% annual probability) year return period storms. The EA Risk of Flooding from Surface Water (RoFSW) Map (refer to **Figure 4-1**) indicates that the majority of the site is at low risk or very low risk of surface water flooding.

4.5.2. There are isolated areas of medium and high risk associated with the ordinary watercourses previously mentioned in **section 2.8** of the report. The mapping indicates these areas of flooding originate on-site. This will be mitigated by the proposed drainage strategy whereby all run off will be captured and attenuated prior to discharging to ordinary watercourses. There may be a minor volume of offsite flood water generated on Western Way which could flow to Site. Such flood water will be managed in the drainage strategy by having a swale routing towards the ordinary watercourse connecting to Pix Brook.

4.5.3. A review of published policy and guidance documents relating to flood risk for the Hertfordshire area (refer to **Section 5** for an overview of all the Planning Policy and Guidance) has also been undertaken and no further risk of surface water flooding has been identified.

4.5.4. Based on the available information the probability of surface water flooding impacting the Site can be considered as **low**.

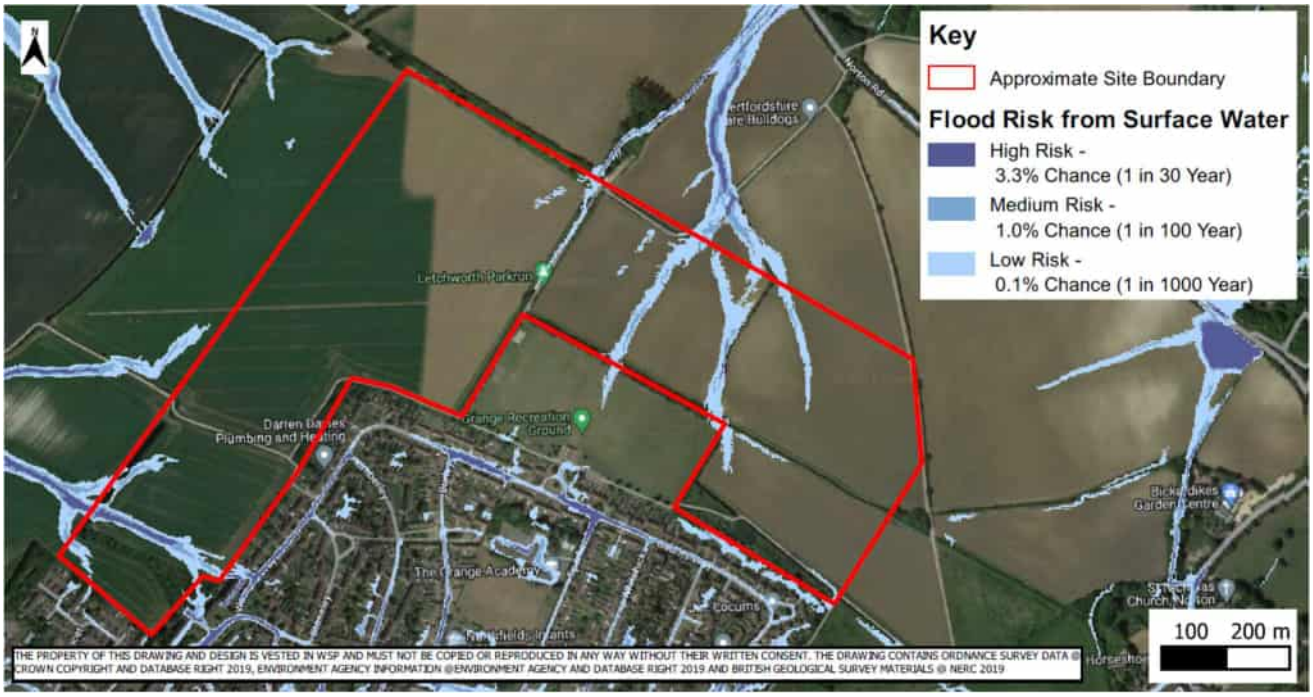

Figure 4-1 – EA's Risk of Flooding from Surface Water Map

4.6. ARTIFICIAL SOURCES OF FLOODING

4.6.1. Non-natural or artificial sources of flooding can include reservoirs, lakes, canals, culverts etc. The potential effects of flood risk management infrastructure and other structures also needs to be considered.

4.6.2. EA Reservoir Flood Mapping shows no risk of flooding from reservoir failure to the Site area (**Figure 4-2**). No canals or culverts have been identified within the vicinity of the Site. There is a risk of flooding from culvert blockage on the Pix Brook but no folding has been recorded within the site vicinity.

4.6.3. Based on the available information, the probability of flooding from all artificial sources can be assessed as **negligible.**

Figure 4-2 – EA's Risk of Flooding From Reservoirs

5. PLANNING POLICY AND GUIDANCE

5.1.1. This section of the report summaries local policy and guidance relevant to this Flood Risk Assessment and Outline Drainage Strategy for the Site.

5.2. NATIONAL PLANNING POLICY FRAMEWORK

5.2.1. The National Planning Policy Framework (NPPF) was published in February 2019 (updated in July 2021) with the aim of protecting the environment and to promote sustainable growth. There is an overarching presumption in favour of sustainable development that should be the basis of every plan and every decision.

5.2.2. The following paragraphs/policies within the NPPF are considered relevant to this assessment:

- Paragraph 159: Requires that "Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.";
- Paragraph 162: Explains that "The aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source"; and
- Paragraph 167: Explains that "When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere […];
- Paragraph 169: Recommends that "major development should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:

    a) take account of advice from the lead local flood authority;
    b) have appropriate proposed minimum operational standards;
    c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and
    d) where possible, provide multifunctional benefits".

- Annex 3: Provides information on flood risk vulnerability classification.

5.2.3. The guidance further states that local planning authorities should "Where appropriate, applications should be supported by a site-specific flood-risk assessment."

5.2.4. Allocation and planning of development must therefore be considered against a risk based search sequence as provided by the guidance.

5.2.5. This FRA serves as the site-specific flood-risk assessment and demonstrates that the proposed development is safe for its lifetime without increasing flood risk elsewhere.

5.3. PLANNING PRACTICE GUIDANCE - FLOOD RISK AND COASTAL CHANGE

5.3.1. The PPG sets out the government's planning polices for England and how these are expected to be applied.

5.3.2. The Flood Risk and Coastal Change chapter of the PPG (published 2014, last updated August 2022) advises how to take account of and address the risks associated with flooding and coastal change in the planning process.

5.4. SUSTAINABLE DRAINAGE SYSTEMS WRITTEN STATEMENT HCWS161 (DECEMBER 2014)

5.4.1. The Secretary of State for Communities and Local Government laid a Written Ministerial Statement in the House of Commons on 18 December 2014 setting out changes to planning that will apply for major development from 6 April 2015. This confirms that in considering planning applications, local planning authorities should consult the relevant LLFA on the management of surface water; satisfy themselves that the proposed minimum standards of operation are appropriate and ensure through the use of planning conditions or planning obligations that there are clear arrangements in place for ongoing maintenance over the lifetime of the development.

5.4.2. Therefore, from 6 April 2015 local planning policies and decisions on planning applications relating to major development are required to ensure that sustainable drainage systems (SuDS) are used for the management of surface water.

5.4.3. Major development is development involving any one or more of the following:

- The winning and working of minerals or the use of land for mineral-working deposits.
- Waste development.
- The provision of 10 dwellings or more.
- The provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more: or
- Development carried out on a site having an area of 1 hectare or more.

5.5. DEFRA SUSTAINABLE DRAINAGE SYSTEMS NON-STATUTORY TECHNICAL STANDARDS FOR SUSTAINABLE DRAINAGE SYSTEMS (MARCH 2015)

5.5.1. This document sets out non-statutory technical standards for sustainable drainage systems. It should be used in conjunction with the National Planning Policy Framework and Planning Practice Guidance.

5.5.2. For greenfield developments, the peak runoff rate from the development to any highway drain, sewer or surface water body for the 1 in 1 year rainfall event and the 1 in 100 year rainfall event should never exceed the peak greenfield runoff rate for the same event.

5.5.3. Where reasonably practicable, for greenfield development, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event should never exceed the greenfield runoff volume for the same event.

5.5.4. Where it is not reasonably practicable to constrain the volume of runoff to any drain, sewer, or surface water body in accordance with the above, the runoff volume must be discharged at a rate that does not adversely affect flood risk.

5.5.5. The drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur on any part of the site for a 1 in 30 year rainfall event.

5.5.6. The drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur during a 1 in 100 year rainfall event in any part of: a building (including a basement); or in any utility plant susceptible to water (e.g., pumping station or electricity substation) within the development.

5.5.7. The design of the site must ensure that, so far as is reasonably practicable, flows resulting from rainfall in excess of a 1 in 100 year rainfall event are managed in exceedance routes that minimise the risks to people and property.

5.6. BRITISH STANDARD 8582:2013 CODE OF PRACTICE FOR SURFACE WATER MANAGEMENT FOR DEVELOPMENT SITES (NOVEMBER 2013)

5.6.1. In the absence of specific local guidance on the management of surface water run-off, BS 8582 should be considered as best practice guidance for the development of surface water drainage strategies for new development sites.

5.7. FLOOD AND WATER MANAGEMENT ACT (FWMA) (2010)

5.7.1. The FWMA (2010) was first proposed as the legislative vehicle to implement the European Floods Directive, however due to delays in the bill, it was not implemented within the timeframe set out by the Floods Directive, hence the implementation of the Floods Directive and the FWMA was delayed until 2010.

5.7.2. The FWMA provided the legislative basis for a number of recommendations in the Pitt Review. In October 2010, Section 9 of the FWMA came into force requiring all LLFAs in England to develop, maintain, review, update as well as apply and monitor the application of a strategy for local flood risk in their area. This is known as a Local Flood Risk Management Strategy (LFRMS).

5.8. CIRIA – THE SUDS MANUAL (C753) (2015)

5.8.1. This guidance covers the planning, design, construction, and maintenance of Sustainable Drainage Systems (SuDS) to assist with the effective implementation within both the new and existing developments. It looks at how to maximise amenity and biodiversity benefits and deliver the key objectives of managing flood risk and water quality. There is also supported information covering topics such as materials, landscape design, maintenance, community engagement and costs and benefits.

5.8.2. It provides a compendium of good practice, based on existing guidance and research both in the UK and internationally, and the practice and experience of the authors, project steering group and industry.

5.9. NORTH HERTFORDSHIRE DISTRICT COUNCIL - NORTH HERTFORDSHIRE LOCAL PLAN 2011-2031 (2017)

5.9.1. A new local plan was submitted for examination on 9 June 2017, this is to replace the 1996 Local Plan. The Inspector's Report was received 8 September 2022. The Inspector's Report concludes that subject to a number of main modifications, set out in the Appendix to the report, the North Hertfordshire Local Plan 2011 – 2031 is sound, legally compliant, and capable of adoption.

The policies relating to water resources, drainage and flood risk are outlined below:

Policy NE9 Water Quality and environment:

Planning permission for development proposals will be granted provided that where they make appropriate space for water, including (as applicable):

a. Maintaining a minimum 9 8 metre wide undeveloped buffer zone from all designated main rivers;

b. Maintaining a minimum 5m wide undeveloped buffer zone for ordinary watercourses; and

c. River restoration and resilience improvements where proposals are situated close to a river or considered to affect nearby watercourses.

Policy SP11: Natural resources and sustainability

This Plan seeks to meet the challenges of climate change and flooding. We will:

b) Take a risk based approach to development and flood risk, directing development to areas at lowest risk in accordance with the NPPF and ensuring the provision of Sustainable Drainage Systems (SuDS) and other appropriate measures;

c) Support the principles of the Water Environment (Water Framework Directive) Regulations 2017 and seek to protect, enhance and manage the water environment;

d) Give consideration to the potential or actual impact of land contamination and support proposals that involve remediation of contaminated land; and

e) Work with utilities providers, East Hertfordshire District Council and relevant agencies to ensure additional wastewater treatment capacity is delivered without harm to protected European sites.

Policy SP8: Housing

Over the period 2011-2031, housing growth will be supported across the District. We will:……..

c. Deliver these homes through the sites and allowances identified in this Plan that will support approximately.

i.5,100 homes from completions and permissions achieved since 2011 and other allowances;

ii. 7,700 homes from six Strategic Housing Sites delivering approximately 5,560 of these by 2031:

- *…….*
- *LG1 - North of Letchworth for 900 homes (approximately 600 by 2031);*
- *……*

Policy SP15: Site LG1 – North of Letchworth Garden City

Land to the north of Letchworth Garden City, as shown on the Proposals Map, is allocated as a Strategic Housing Site for a new neighbourhood of approximately 900 homes.

A comprehensive and deliverable Strategic Masterplan for the entire allocation is to be prepared and agreed between the landowner/developer and the Council. This should follow and implement Garden City principles. Any planning application/s should be preceded by and consistent with an agreed Strategic Masterplan.

Where applications have already been submitted to the Council a Strategic Masterplan should be agreed prior to the or as part of the grant of planning permission.

Any application on part of the site will be assessed against its contribution to the Strategic Masterplan and must not prejudice the implementation of the site as a whole.

Development proposals should provide the following planning and masterplanning requirements:

a) The most appropriate points of vehicular access considering landscape and traffic impacts;

b) How comprehensive integration into the existing pedestrian and cycle, public transport and road networks will be secured

c) An appropriate education solution which delivers a new 2FE primary school on-site;

d) Measures required to address nearby heritage assets including the Scheduled Ancient Monument at Radwell Lodge and the Croft Lane and Norton Conservation Areas;

e) The approach to existing trees and hedgerows around and within the site, with the presumption that trees will be retained and any hedgerow losses kept to a minimum;

f) Neighbourhood-level retail and community facilities providing around 900m^2 (net) of retail and food and beverage floorspace and a GP surgery;

g) At least 9 serviced plots for self-build development;

h) Provision of an appropriate site for a care home for older people in Use Class C2 in accordance with the locational criteria in Policy HS4 subject to up-to-date assessment of likely future needs and existing supply;

i) Incorporate ordinary watercourses (and any appropriate measures) within comprehensive green infrastructure and / or SUDs approach;

j) Structural planting to create a sense of place, integration into the surrounding landscape and a long-term, defensible Green Belt boundary, particularly to the north-west and east;

k) Diversion and / or re-provision of the Letchworth Greenway to provide a revised route around the new urban edge; and

l) Undertake a detailed odour assessment to demonstrate no adverse impact on future residents and occupants of non-residential buildings.

5.10. HERTFORDSHIRE COUNTY COUNCIL – PRELIMINARY FLOOD RISK ASSESSMENT (PFRA) (2011)

5.10.1. This report gives an overview of local flood risk in Hertfordshire based on a review of historic records of flooding and data derived from modelling of potential future flooding. It has been prepared by Hertfordshire County Council as part of a submission to meet the requirements of the Flood Risk Regulations (2009). The Regulations together with the related Flood Risk Management Act 2010 identify Hertfordshire County Council as Lead Local Flood Authority (LLFA) and require the council to

develop a Preliminary Flood Risk Assessment (of sources of local flood risk - surface water, ordinary watercourses and groundwater) and subsequently a strategy for the management of local flood risk.

5.10.2. Records were reviewed that had been collated from a range of sources including water companies, district councils, the Highways Agency and local authorities. They showed that flooding has occurred in Hertfordshire from a range of sources, at various times and at locations across the county. However as there has been no standardised methodology for recording information about flooding it is not possible to map flood extents or determine the consequences of the majority of the past events.

5.10.3. Data provided by the Environment Agency, produced to a national methodology determined by Defra, was used to assess future flood risk and for the review and identification of Flood Risk areas.

5.10.4. The PFRA is a high-level screening exercise and must therefore consider floods which have significant harmful consequences for human health, economic activity, the environment and cultural heritage. The PFRA identifies such areas and if they are considered to be nationally significant, as defined by Defra, they are highlighted as 'Flood Risk Areas'. Flood Risk Areas warrant further examination and management through the production of flood risk and flood hazard maps and flood risk management plans.

5.10.5. The aim of this PFRA is to develop a strategic assessment of local flood risk across Hertfordshire based on information from past floods and modelling of the potential impact of future flooding. The process will inform the development of a strategy for the management of local flood risk.

- Records of historic flooding from surface runoff, groundwater and ordinary watercourses will be collated and assessed to help with understanding past forms of flooding.
- Data sources that will help with mapping potential future flood risk will be identified.
- A PFRA report which satisfies the requirements of the Flood Risk Regulations 2009 will be produced.
- The national assessment of indicative Flood Risk Areas will be reviewed and if applicable additions and amendments will be suggested and justified in the light of local circumstances.

5.10.6. The Local Flood Risk Management Strategy should collate and consolidate information from the PFRA and the Strategic Flood Risk Assessments (SFRA) to cover flood risks from all sources of flooding and establish a methodology for managing the risks within the partnership framework.

5.11. HERTFORDSHIRE LOCAL FLOOD RISK MANAGEMENT STRATEGY 2 (LFRMS2) (2019-2029)

5.11.1. Following flooding in 2007, the government commissioned a review (The Pitt Review, 2008), which recommended urgent changes in the way the country is adapting to the increased risk of flooding. A principal change was to establish greater clarity in the roles and responsibilities and an increased focus on addressing surface water flood risk through the enactment of the Flood and Water Management Act (2010).

5.11.2. As Lead Local Authority (LLFA), Hertfordshire County Council has to "develop, maintain, apply and monitor" a Local Flood Risk Management Strategy for Hertfordshire. The Strategy will be produced in consultation with local partners and will focus on local sources of flooding from surface runoff, groundwater and ordinary watercourses. Interactions between different forms of flooding will be done

in conjunction with the EA which has responsibility for managing flood risk from main rivers, reservoirs and the sea.

5.11.3. The Strategy will be the means by which the LLFA will discharge its general duty to provide leadership and to co-ordinate Flood Risk Management (FRM) on a day to day basis. The Strategy will be the focal point for integrating a range of flood risk related actions across Hertfordshire.

5.11.4. The strategy must:

- Set out the roles and responsibilities of the various Risk Management Authorities (RMAs) in the area;
- Define what is considered to be 'locally significant' flood risk;
- Specify the objectives for managing local flood risk;
- Identify and describe the measures (actions) proposed to deliver the objectives;
- Where relevant, provide details of the costs and benefits related to any actions, and identify a means or process as to how these may be paid for;
- Identify how the Strategy will contribute to wider environmental objectives;
- Describe and establish a review process and timetable for the Strategy.

5.11.5. The Strategy must assess and define what locally significant flood risk is. This will require the development of criteria to ensure that significance will need to be assessed on a number of different ways depending on the situation, for example through the setting of thresholds that will trigger investigations, the assessment of the effect that structures ad features have on flood risk and how potential flood risk management schemes will be prioritised for funding.

5.11.6. High level objectives proposed in the Strategy include:

- To reduce the potential impact and costs of flooding in the country;
- To better understand local flood risk and make best use of available information;
- To develop greater personal involvement in flood risk management amongst residents of Hertfordshire;
- To secure improvements to the water environment of Hertfordshire through the undertaking of actions associated with flood risk management.

5.12. NORTH HERTFORDSHIRE DISTRICT COUNCIL, STRATEGIC FLOOD RISK ASSESSMENT (SFRA) UPDATE (2016) AND SFRA (2008)

5.12.1. In 2008 a Strategic Flood Risk Assessment (SFRA) was undertaken by WSP, it was both a Level 1 and Level 2 Study for the district. Due to the age and accuracy of the mapping information used in the 2008 document, alongside changes in the way flood risk is managed and regulated since that date, an update to the SFRA was required. The SFRA was updated in 2016.

5.12.2. The new SFRA produced is based on more up to date Environment Agency modelling within the study area and also has more detailed information on surface water and other sources of flooding. Surface water and other sources of flooding are more of an issue in North Hertfordshire than fluvial flooding.

5.12.3. The update provides up to date information to accompany the emerging Local Plan by way of a sequential test which can be used by developers as potential development sites come forward. However, it is indicated that the SFRA Update should be read in conjunction with the 2008 SFRA as much of the 2008 SFRA is still relevant

5.12.4. Key sections of the SFRA that relate to the LG1 include:

- Section 5.12.1: Details several potential opportunities for strategic flood mitigation that have been identified. One of these is for Letchworth Garden City (North). The mitigation proposed includes "*Pix Brook Flood Storage Reservoir, located to the north of Letchworth Garden City, provides the potential for expansion of an existing strategic flood storage facility. This expansion would provide additional storage capacity for an increase in surface water from new developments in the area. The scheme could facilitate future development on the northern fringe of Letchworth Garden City; this would be achieved by allowing downstream flows to be regulated by flood gates thus safeguarding areas downstream along the Pix Brook at Stotfold in the Mid Bedfordshire District.";*
- Section 5.14.6: Outlines the unsuitability of the ground conditions in terms of permeability and appropriateness for infiltration-based SuDS on the LG1 site. This is later reinstated in Appendix H of the SFRA, which displays a SuDS Viability Plan based on superficial and bedrock geology data from BGS mapping.
- Section 5.16: Outlines the impact of future grown upon sewage treatment works capacity and receiving watercourses. This indicates that Letchworth Sewage Treatment Works (STW)has:
  - Estimated population equivalent increase over the East of England Plan period (2006 – 2021) of 4,630 which represents growth of 11%;
  - Capacity available to accommodate predicted growth period; there are no proposals at the current time to apply for an increase in discharge consent at this site; and
  - Potential for expansion of the Works exists at its current location subject to capital works funding.
- Section 5.17.6: According to Anglian Water, the Letchworth STW have the spare capacity to cope with additional development within the Letchworth Garden City and Baldock area for approximately 5,000 dwellings. The current capacity of Letchworth has a 42,000 population equivalent; and
- Section 6.1: Summarises the appropriateness of potential growth areas in North Hertfordshire based on an assessment of flood risk from existing watercourses and other sources. This indicates that the proposed growth in Letchworth Garden City (North), including LG1, is appropriate in terms of flood risk (subject to a detailed FRA, demonstration that surface water runoff from the development will pose no detrimental impact to off-site areas and ratification by the EA).

5.12.5. Key notes from the SFRA Update (2016) that relate to the LG1 include:

- Section 29, 30 and Figure 2: Outlines whether potential growth areas affect ordinary watercourses and therefore require written consent from the LLFA to discharge surface water to them. LG1 is noted as a site which includes a network of ordinary watercourses, with flows

heading west and north. There are surface water flows within the Site during the 1 in 1000yr, 1 in 100yr and 1 in 30yr events. These flows are deemed mitigable through design, although some storage on-site may be preferable to prevent issues downstream. Consent from the LLFA is required if any works proposed to the watercourse, including outfall.

- No further historical flooding near the LG1 Site since 2008;
- Appendix G of the SFRA displays the surface water flooding predicted for Letchworth Garden City including the LG1 Site, this is the same as displayed in Section 4.6.

5.13. HERTFORDSHIRE COUNTY COUNCIL - NORTH HERTFORDSHIRE DISTRICT SURFACE WATER MANAGEMENT PLAN (SWMP) (2017)

5.13.1. A Surface Water Management Plan (SWMP) for the District of North Hertfordshire has been produced on behalf of Hertfordshire County Council, as Lead Local Flood Authority.

5.13.2. The need for a SWMP for the District of North Hertfordshire was identified within the LFRMS for Hertfordshire. The SWMP is to be a living document that should be reviewed approximately every five years, to ensure the implementation of the agreed actions is correct and that any new issues are addressed.

5.13.3. The first part of the risk assessment phase of the North Hertfordshire District SWMP was the strategic and intermediate assessments. The principle purpose of these assessments was to identify broad locations which were considered to be vulnerable to surface water flooding. This was undertaken using the best information available, including some GIS analytical techniques, and historical information. From these assessments, 17 hotspots of areas perceived and identified as being at greatest risk of surface water flooding were highlighted. Further analysis prioritised these hotspots to assess those most at risk of flooding, and assessed their suitability for modelling, resulting in six SWMP modelled hotspots.

5.13.4. The detailed phase of the SWMP focussed on the six SWMP Modelled Hotspots identified from the first part of the risk assessment phase. The detailed modelling involved the construction of individual hotspot models to assess the baseline flood mechanisms, pathways and extents.

5.13.5. The six hotspots identified in the SWMP do not include the proposed development area of LG1, Land to the north of the Grange Estate.

5.14. SUDS DESIGN GUIDE FOR HERTFORDSHIRE (MARCH 2015)

5.14.1. This guidance is for developers involved in the design and development of SuDS in Hertfordshire. It promotes an integrated approach to SuDS and landscape design and establishes a set of local design criteria to help shape the development of SuDS in respect of the County's unique environmental context.

5.14.2. SuDS design should be in line with best practice. This document was proposed to be reviewed and updated periodically to reflect current legislation, policy and guidance and should be read with reference to the NPPF, Sectorial Guidance (Supporting Information for) the Non-Statutory Standards for Sustainable Drainage, The SuDS Manual and the Local Flood Risk Management Strategy for Hertfordshire, alongside a few other documents.

5.15. LLFA SUMMARY GUIDANCE FOR DEVELOPERS, MANAGEMENT OF SURFACE WATER DRAINAGE (AUGUST 2021)

5.15.1. This is a factsheet that provides a summary of information, including a developer's checklist, to assist developers with producing a satisfactory Surface Water Drainage Assessment/ Flood Risk Assessment (FRA) in accordance with the NPPF. It is recommended that this guidance should be read alongside the Local Flood Risk Management Strategy 2 (LFRMS2) which includes the LLFAs SuDS Policies.

6. CLIMATE CHANGE

6.1. BACKGROUND INFORMATION

6.1.1. As explained in the Climate Change Adaptation Sub-Committee Progress Report 2014, increased flood risk is the greatest threat to the UK from climate change. Models of the climate system suggest floods of the type experienced in England and Wales in autumn 2000, and between December 2013 and February 2014, have become more likely as a consequence of increased concentrations of greenhouse gases in the atmosphere.

6.1.2. More frequent short-duration, high intensity rainfall and more frequent periods of long-duration rainfall could be expected. Sea levels are also expected to continue to rise.

6.1.3. New EA guidance "Flood risk assessments: climate change allowances" issued in 2016 and updated on 6th October 2021 provides up to date information on expected changes in rainfall, river flows and sea level rise as a consequence of climate change.

6.1.4. A key change from the previous guidance is that the climate change allowances for peak river flows now are shown as variable on a regional basis; allowances are also now based on percentiles, whereby a percentile is a measure used in statistics to describe the proportion of possible scenarios that fall below an allowance level (e.g., a 50% percentile means that the allowance has 50% chance of not being exceeded).

6.1.5. Peak river flow allowances show the anticipated changes to peak flow by management catchment. Management catchments are sub-catchments of river basin districts. The HLGV sits within the London Management Catchment.

6.1.6. Sea levels allowances reflect the previous guidance and vary on a regional basis and for each epoch as shown in Table 3 of the EA guidance.

6.1.7. The EA have provided guidance to assess the impact of climate change on fluvial flooding. Technical assessment of climate change impacts on fluvial flooding appropriate for new developments depending on their scale and location (see following section).

6.1.8. For peak rainfall the EA Guidance provides an upper end and central allowance depending on epoch; the guidance recommends assessing both the central and upper end allowances to understand the range of possible impacts. These allowances are detailed in Table 2 (Peak rainfall intensity allowance in small and urban catchments) of the EA guidance.

6.2. DEVELOPMENT LIFESPAN

6.2.1. A typical lifespan for a residential development is 100 years.

6.2.2. Based on this, the contingency peak rainfall allowances for climate change that are potentially applicable to this Site are as set out in Table 2 of the EA's "Flood risk assessments: climate change allowances" advice are:

- Upper End – 40% increase in peak rainfall by 2115;
- Central – 20% increase in peak rainfall by 2115.

6.2.3. When undertaking the drainage strategy design, the attenuation volumes will be determined using the central estimates but will be modelled with a freeboard that can accommodate the upper end estimates to prevent potential exceedance flows off-site.

6.3. IMPACT OF CLIMATE CHANGE ON THE PROPOSED DEVELOPMENT

6.3.1. The Site is located within Flood Zone 1 where the probability of fluvial and tidal flooding is lower than 0.1% in any year. Fluvial and tidal flooding is therefore not expected to become a significant issue even when the impact of climate change is considered.

6.3.2. Surface water runoff could in theory represent a risk to the Site, especially when the effects of climate change are considered. A drainage strategy which considers the potential impact of climate change has been produced to mitigate this risk.

6.3.3. The drainage strategy demonstrates that the drainage network at the Site will be designed to accommodate runoff during all events up to and including the 100 year plus 40% climate change allowance.

7. FLOOD RISK MITIGATION MEASURES

7.1.1. This section of the report details the flood risk mitigation measures required to manage the identified risk of flooding from different sources.

7.2. SITE LEVELS

7.2.1. Finished Site levels should be engineered to provide positive drainage, prevent ponding and channel flows away from residential dwellings during exceedance events. The accumulation of standing water would therefore not occur and thus not pose a risk to the development.

7.3. FLOOD COMPENSATION AND DISPLACEMENT

The Site is located within Flood Zone 1; therefore, compensatory flood storage is not required.

7.4. FLOOD RESILIENCE MEASURES FOR CONSIDERATION

7.4.1. The scheme, where applicable, will aim to comply with the Defra guidance on Improving the Flood Performance of New Buildings, so that the ground level in particular can quickly recover from flood events. The exact details on what measures can be implemented will depend on the final detailed design and choice of materials.

7.5. FLOOD WARNINGS/ EVACUATION PLAN/ FLOOD PROOFING

7.5.1. The Site is not located within a Flood Warning Area or a Flood Alert Area.

7.6. ACCESS AND EGRESS

7.6.1. As the proposed development is located within Flood Zone 1, access and egress will not be affected during extreme flooding events. Internal roads should be safe and dry for both pedestrian and vehicular access for all rainfall events.

7.7. GENERAL COMMENTS

7.7.1. As discussed in the previous sections, all potential sources of flooding identified that may affect the Site area can be considered low to negligible.

7.7.2. Any potential risk linked to surface water runoff generated onsite is limited through design, with attenuation provided to cater the 1% AEP event + 40% climate change event.

7.8. RESIDUAL FLOOD RISK

7.8.1. All potential sources of flooding were considered negligible to low. As discussed in the previous sections, the proposed design solutions detailed in the drainage strategy minimise any residual risk linked to potential extreme rainfall events.

7.8.2. The drainage strategy will ensure that the drainage network at the Site is designed to accommodate runoff during all events up to and including the 100 year plus 40% climate change event, preventing potential flows off-site. Drainage exceedance routes will be considered and allowed for as part of the development of parameters to ensure that any surface water runoff exceeding the drainage network capacity would naturally flow away.

7.8.3. It is also recommended for detailed design to be in accordance with best practice that all buildings within the development will have raised thresholds above the external levels, to help mitigate against any surface water flooding.

8. SURFACE WATER DRAINAGE STRATEGY

8.1. DESIGN CONSIDERATIONS

SUDS ADOPTION

8.1.1. The design of the SuDS for this scheme will follow current best practices, which are the CIRIA SuDS Manual C753, British Code of Practice for surface water management (BS 8582), the National Planning Policy Framework (NPPF) and the Non-statutory technical standards for sustainable drainage systems (2015).

GENERAL PRINCIPLES FOR PROPOSED SURFACE WATER DRAINAGE

8.1.2. This is in accordance with the current British Standards for surface water management (BS 8582) and Design and Construction Guidance 2021 where applicable.

8.1.3. The proposed drainage strategy has been designed not to exacerbate any existing flood risk associated with land situated upstream, or downstream, of the Site in accordance with principles set out within the NPPF.

8.1.4. The scheme will utilize the existing topography and natural drainage catchments. Some re-profiling of the site might be proposed at a later stage of design. However, the resultant flood flow paths should replicate the existing catchments.

8.2. DISCHARGE LOCATION

8.2.1. In order to determine the most appropriate receptor for storm water discharges from the proposed development, the new PPG guidance provides the following order of priority, supported by the Environment Agency and Local Authority:

Table 8-1 - SuDS Drainage Hierarchy

		Discharge Location	Availability	Comments
Search Sequence	↓	**Re-Use**	✓	The drainage strategy should seek to implement re-use techniques wherever possible, rainwater harvesting could be used within the site.
		Infiltration	✗	Infiltration testing did not show any meaningful infiltration, therefore, infiltration strategies are not considered feasible for the development of the drainage strategy.
		Watercourse	✓	The ordinary watercourses on the southeast and southwest of the site shall be utilised as a point of discharge for surface water into Pix Brook and River Iver.

		Surface Water Sewer	✓	A surface water sewer has been identified on the southern edge of the Site. Subject to capacity Surface Water Sewer could be a potential point of discharge.
		Combined Sewer	✗	No Combined Sewers were identified on Site or nearby.
		Foul Sewer	✓	A foul water sewer has been identified along the southern edge of the Site, subject to capacity

8.2.2. In accordance with the above search sequence, it is proposed to discharge surface water flows to the existing watercourse on site.

8.3. SUDS FEATURES

8.3.1. SuDS devices are proposed as part of the surface water drainage strategy to provide adequate levels of water quality treatment, attenuate surface water volumes and provide amenity benefit.

8.3.2. Taking into account the above design considerations, a hierarchy has been considered in applying the use of SuDS into the Proposed Development. Refer to **Table 8-2** for further details.

8.3.3. For further details of the surface water strategy refer to **Appendix H.**

Table 8-2 – SuDS Feasibility

Feature	Description	Selection
Green Roofs	Green roofs are systems which cover a building's roof with vegetation. They are laid over a drainage layer, with other layers providing protection, waterproofing and insulation.	✓ Roof pitches on residential buildings are generally not suitable for the use of green roofs. However, there will be non-residential properties which could make use of green roofs.
Filter Strips	These are wide, gently sloping areas of grass or other dense vegetation that treat runoff from adjacent impermeable areas.	✓ Filter strips could be utilised within the Site to provide additional water quality treatment, in conjunction with filter drains for conveyance. Potential suitable routes include alongside internal roads where space considerations may make swales less favourable.
Pervious Surfaces	Pervious surfaces allow rainwater to infiltrate through the surface into an underlying storage layer, where water is stored before infiltration to the ground, reuse, or release to surface water.	✓ Permeable surfacing could be used in communal and private parking areas to provide an element of upstream storage and pre-treatment.
Bio-retention / raingardens	Bioretentions systems are areas of vegetation into which rainwater and runoff can be directed. These are particularly	✓

	affected at providing water quality improvements.	Bioretention systems could be used in carparks and alongside internal roads where swales are not favourable.
Swales	Swales are broad, shallow channels covered by grass or other suitable vegetation. They are designed to convey and/or store runoff and can infiltrate the water into the ground (if ground conditions allow).	✓ Swales could be used within the Site to provide additional quality treatment. Additionally, potential swales could be utilised to route surface water flooding into the Site from Western Way to Pix Brook.
Infiltration Basins	Infiltration basins are depressions in the surface that are designed to store runoff and infiltrate the water to the ground. They may also be landscaped to provide aesthetic and amenity value.	× As mentioned in **Section 2.5**, ground investigations proved Infiltration to be an inviable option for the proposal and therefore infiltration basins will not be used.
Wet Ponds	Wet ponds are basins that have a permanent pool of water for water quality treatment. They provide temporary storage for additional storm runoff above the permanent water level. Wet ponds may provide amenity and wildlife benefits.	✓ Wet ponds could be used within the Site to provide additionally water quality treatment as well as a temporary water storage.
Detention Basins	Detention basins are normally dry, though they may have small permanent pools at the inlet and outlet. They are designed to detain a certain volume of runoff as well as providing water quality treatment.	✓ Detention basins are proposed that will provide attenuation, water quality and biodiversity enhancement. They should be sized to provide adequate attenuation in the 1 in 100 year storm + 40% climate change prior to discharge to Pix Brook and River Ivel.
Geocellular Storage	Geocellular storage structures are below-ground attenuation features. These are typically formed using crates which provide a high void space for attenuation and water quantity control.	× Tank systems are not proposed in this scheme as looked upon unfavourably by the LLFA and/or EA due to long term maintenance concerns.
Rainwater Harvesting	Rainwater harvesting is the collection of rainwater runoff for use.	✓ Rainwater harvesting could be utilised on Site but has not been allowed for within the attenuation calculations as it could be full during the critical event.

8.4. GREENFIELD RUN-OFF

8.4.1. National policy dictates that new developments control the peak discharge of storm water from a site to the baseline, undeveloped site conditions. Over very large development areas, the baseline rate of run-off is normally estimated using the FEH methodologies. However, Paragraph 3.1.2 of the Flood Estimation Handbook (FEH) guidance states:

"The frequency estimation procedures can be used on any catchment, gauged or ungauged, that drains an area of at least 0.5km². The flood estimation procedure can be applied on smaller catchments only where the catchment is gauged and offers simple flood peak or flood event data"

8.4.2. On undeveloped and ungauged catchments of less than 0.5km in area, the accepted methodology is to complete baseline site discharge assessments using the nationally accepted IoH124 methodology for small rural catchments in a manner set out by the Environment Agency document SC030219 Rainfall Runoff Management for Developments.

8.4.3. This methodology requires that, for catchments of less than 50ha, the IoH assessment is completed for a 50ha area with the results linearly interpolated to determine the flow rate value based on the ratio of the development to 50ha.

8.4.4. The overall application boundary is below the 50ha threshold, thus the IoH124 methodology is therefore the most appropriate for appraising the baseline run-off from the development. The baseline IoH run-off rates are shown on **Table 8-3** below and contained in **Appendix C.**

Table 8-3 - Greenfield Run-Off Rates

	Event	47ha (l/s)	1ha (l/s)
Soil 2 (North-East & North-West)	1 Year	58.75	1.25
	QBar	67.68	1.44
	100 Year	224.52	5.13
Soil 3 (South-West)	1 Year	93.06	1.98
	QBar	106.69	2.27
	100 Year	380.23	8.09

8.4.5. The proposed surface water discharge rate from the development will be restricted to the 1 in 1 year greenfield runoff rate for all events up to and including the 1 in 100 year storm event plus a 40% allowance for climate change.

8.5. DEVELOPMENT CATCHMENT AREAS, URBAN CREEP AND DISCHARGE RATES

8.5.1. As the site is currently undeveloped, the proposals will result in an increase in impermeable area, which will increase the overall rate of water discharging from the site if left un-controlled.

8.5.2. At this early stage in the design process, and without the benefit of a detailed plot level masterplan, it is not possible to ascertain the quantum of impermeable area for the site. As such, the impermeable area has been assumed as a percentage of the development catchment areas, based on assumed land-use types and densities.

8.5.3. Alongside this, over the lifetime of a development, it is possible that the overall impermeable area within the site could increase by as much as 10% through the house buyers undertaking activities such as property extensions and introducing paved gardens. This urban creep allowance is applied only to residential areas.

8.5.4. Given the mixed use nature of the development, the residential catchments have therefore been assumed as 66% impermeable, including a 10% allowance for urban creep. The commercial areas have been assumed as 80% impermeable

8.5.5. During the detailed design phase, the positive impacts of the potential source control measures (permeable paving etc) should be further considered.

8.5.6. The strategy drawing LW-WSP-XX-XX-DR-D-4000 in **Appendix H** indicates the proposed catchments based on the existing site topography. **Table 8-4** summarises the catchments, impermeable areas and the discharge rates associated with these.

Table 8-4 - Site Run-Off Assessment

Catchment	Development Area (ha)	Impermeable Area (ha)	1 in 1 Year Greenfield Runoff (l/s)	1 in 100 Year Greenfield Runoff (l/s)	Proposed Runoff rate (l/s)
North-East	20.3	14.9	18.6	76.4	18.6
North-West	16.8	12.1	15.1	62.0	15.1
South-West	11.5	7.9	15.6	57.4	15.6
Total	48.6	34.9	49.3	195.8	49.3

8.5.7. The Development area shown in **Table 8-4** for the north-east and north-west catchments include the areas dedicated to the two basins sitting outside the Site's red line boundary as can be seen in **Appendix H**. The area from these basins is a combined 1.6ha. Therefore, the development area within the Site's boundary adds up to a total of **47ha.**

8.6. SURFACE WATER STRATEGY

8.6.1. The proposed development drainage arrangement for the site will aim to hold water at the surface where viable and comprise of the following:

- Each of the 3 proposed catchment areas will convey surface water to an attenuation basin via gravity following the site topography. The southwest catchment area will have an onsite basin while the northwest and northeast will have offsite basins to the north. The proposed basins have been sized to ensure no flooding for all storm events up to and including the critical 1 in 100 year plus 40% climate change event together with a 300mm freeboard, with flows attenuated to the 1 in 1 year greenfield rate.

- The northern basins will discharge onto the ordinary watercourses at the central north of the Site extending north towards River Ivel. The southwestern basin will discharge onto the ordinary watercourse located at the southwestern boundary of the Site and extends west towards Pix Brook.

- The attenuation basins are to be located outside the fluvial flood extents for the River Ivel and Pix Brook for all events up to the 1 in 1000yr event, to avoid loss of attenuation storage during flood conditions.
- Where possible (subject to masterplan layout development), the proposed development will include limited discharge to existing ditches intersecting the site to ensure continued flow. Flow rates will aim to mimic existing as closely as possible.

8.6.2. All basins are to have a maximum side slope of 1 in 4 and include a 3m access track around their perimeter for maintenance purposes.

8.6.3. Micro Drainage source control modelling has been undertaken to determine the required basin sizes, refer to **Appendix I** for calculations. The storage volume requirements and the discharge rates for all three catchment areas are listed in **Table 8-5** below.

Table 8-5 - Site Attenuation Requirements

Catchment	Storage Volume Required (m^3)	Storage Plan Area (m^2)	Proposed Discharge Rate (l/s)	SuDS Controls
North-East	10,980	6,380	18.6	Detention Basin 3
North-West	9,250	7,462	15.1	Detention Basin 2
South-West	5,660	4,048	15.6	Detention Basin 1
Total	29,117	22,242	49.3	

8.6.4. All storm durations including the critical 1 in 100 year plus 40% climate change storm can be accommodated within the 1.7m depth of the proposed basins. Additionally, basins have been designed to allow a 300mm freeboard for events which exceeds 1 in 100 year plus 40% climate change.

8.6.5. Hydrobrake flow control devices will be utilised to restrict flow rates to the 1 in 1-year greenfield runoff rates of each catchment area.

8.7. WATER QUALITY

8.7.1. The number of water quality treatment elements within the surface water system prior to discharge is to be in accordance with CIRIA SuDS Manual C753, British Code of Practice for surface water

management (BS 8582), the National Planning Policy Framework (NPPF) and the Non-statutory technical standards for sustainable drainage systems (2015).

8.7.2. The proposed strategy will incorporate a suitable SuDs treatment train upstream of the proposed attenuation basins. Once the masterplan is developed all of the SuDS will be selected for the detailed planning application. These SuDS measures will provide sufficient stages of pre-treatment to satisfy Section 26 of the Ciria C753 SuDS Manual.

8.7.3. It has been assumed that the roads within the site will have more than 300 traffic movements per day, Table 26.2 of the Ciria C753 SuDS notes that pollution hazard levels for all roads accept low traffic roads and trunk roads/motorways are as follows:

- TSS is 0.7;
- Metals is 0.6;
- Hydrocarbons is 0.7.

8.7.4. Table 26.3 – "Indicative SuDS mitigation indices for discharges to surface waters" shows that a swale (assumed upstream SuDS feature) and attenuation basin (detention basin) are able to provide treatment to the required levels:

- Swale TSS at 0.5 + 0.5(Basin at 0.5) = 0.75
- Swale Metals at 0.6 + 0.5(Basin at 0.5) = 0.85
- Swale Hydrocarbons at 0.6 + 0.5(Basin at 0.6) = 0.90

8.7.5. Where surface water does not discharge via a swale, at least one alternative SuDS treatment will be provided prior to discharge to the basin, ensuring compliance with the SuDS mitigation indices. For private roads this will consist of lined permeable paving and for the commercial/non residential development this could include; a green-blue roof system, rain gardens or permeable pavements subject to a developed layout.

8.8. OPERATION AND MAINTENANCE

8.8.1. Any forthcoming on-site surface water sewerage networks, including appropriate SuDS features, will be designed to Sewerage Sector Guidance (SSG) including the Design for Construction Guidance (DCG) and will be offered for adoption by Anglian Water.

8.8.2. Central Beds District Council confirm within their latest guidance that they may adopt SuDS within proximity of a highway managed by them, which take highways flows only. It is therefore proposed that swales adjacent to the Carriageway will be adopted by CBC. They will then maintain the SuDS as part of their highways management function.

8.8.3. The maintenance of the attenuation basins and the pipe networks upstream of the detention basin is proposed to be offered for adoption by Anglian Water (in accordance with the requirements of Design and Construction Guidance 2021).

8.8.4. Alternatively, given the SSG and DCG which came into force on the 1st April 2020, there may be potential for the sewerage undertaker to adopt SuDS features under certain conditions such as conveying flows. Therefore, there may be the potential for SuDS features to be adopted by Anglian Water.

8.8.5. To ensure the effectiveness of the proposed drainage network a robust maintenance regime in accordance with CIRIA 753, will be implemented to ensure future performance of all SuDS and

drainage components. This will include regular cleaning of SuDS devices located on communal areas by a private management company.

8.8.6. The details of the party responsible for maintenance of each feature will be confirmed prior to occupation of the proposed development. Until such times as this may be determined.

9. FOUL WATER DRAINAGE

9.1. PROPOSED FOUL WATER DRAINAGE STRATEGY

9.1.1. The proposed foul water drainage strategy is to drain the site via a gravity sewer network to two on-site pumping stations which will in-turn discharge to the Anglian Water network. One of the pumping stations is proposed to be located in the south-west corner of the Site while the other is located in the central-northern area (refer to **Appendix F** for further information). Discussions with Anglian Water confirm available capacity within the existing foul water network for discharge from Site based on the following:

- 900 residential units
- 1 commercial unit
- 1 school/non-residential unit

9.1.2. AWs Initial assessment allows for a 125mm rising main and a combined pump rate of 17.3l/s. A copy the Anglian Water Pre-planning report is included in **Appendix F**.

9.1.3. The connection points to the foul sewer network have been identified as manhole MH2401 on the south-west and MH2601 on the central-south region. However, final pump rates and configurations should be determined at detailed design stage.

9.1.4. The proposed gravity and pumped drainage network (including pumping stations) across the site will be designed to current Sewerage Sector Guidance and will be offered for adoption by Anglian Water.

10. OFFSITE EFFECTS

10.1. INTRODUCTION

10.1.1. The outline surface water drainage strategy demonstrates that the drainage network at the Site is designed to accommodate runoff during all events up to and including the 100 year plus 40% climate change allowance and therefore prevents potential exceedance flows off-site.

10.2. PUBLIC DRAINAGE NETWORK

10.2.1. The surface water drainage is proposed to discharge to Pix Brook on the West and to River Ivel through a ditch north of the site, not to the public surface water sewer or combined network.

10.2.2. Anglian Water have undertaken an impact assessment for the proposed foul water discharge from the wider LG1 development and have agreed a rate of discharge of 17.3 l/s that can be accommodated without detriment to the offsite public drainage network.

10.3. FLUVIAL AND TIDAL EFFECT

10.3.1. As the surface water drainage strategy proposed discharges to the Pix Brook and River Ivel at greenfield runoff rates (to mimic the current surface water flows from the existing greenfield site) this should not result in additional flood risk offsite from the Pix Brook and River Ivel.

10.3.2. The development will not cause effects elsewhere in terms of fluvial and tidal flood risk due to its location within Flood Zone 1.

11. CONCLUSIONS

11.1.1. This FRA and drainage strategy has been prepared on behalf of Letchworth Heritage Foundation to support the outline planning application for a proposed residential led development at LG1, Land to the north of the Grange Estate, Letchworth Garden City, Hertfordshire.

11.1.2. The EA and the online GOV.UK Flood Map for Planning identify that the Site is located in Flood Zone 1 where the probability of river or sea flooding is less than 0.1% (1 in 1000) chance in any given year. Meaning that the probability of tidal or fluvial flooding can therefore be assessed as negligible.

11.1.3. All potential sources of flooding have been investigated and are deemed negligible or low..

11.1.4. Based upon information provided within this report, it is concluded that the site is presented as sustainable in terms of flood risk and compliant with the criteria set out in the NPPF. The Site and its occupants will not be at undue risk of flooding, and flood risk off site will be reduced post development.

11.1.5. This report sets out the principles of the surface water drainage strategy and foul water drainage strategy, including how the runoff will be dealt with for the development and how it operates in context with the wider LG1 Site.

11.1.6. The report sets out that SuDS will be implemented throughout the development to provide source control and attenuation of surface waters whilst also providing water quality enhancement.

11.1.7. The surface water runoff will be attenuated by 3 attenuation basins located north of the Site and on the western region of the Site for each of the 3 proposed catchment areas. Surface water then be discharged at 1 in 1 greenfield runoff rates to downstream ordinary watercourses which in turn discharge to the River Ivel and Pix Brook, mimicking the current conditions. These basins will be designed for events up to and including the critical 1 in 100 year event with a 40% allowance for climate change, and will be 2m deep with 300mm freeboard and a maximum of 1:4 side slopes. A SuDs treatment train will be provided that will fulfil the pollutant mitigation requirements of the CIRIA SuDS Guide Simple Index approach. Limited flows will be maintained to existing drainage ditches within the site boundary so they do not run dry, subject to masterplan development.

11.1.8. The proposed foul water drainage is to discharge into the existing Anglian Water foul sewer network via two on-site pumping stations. Two proposed rising mains will then connect to the manholes MH2601 and MH 2401 as proposed by Anglian Water. The current capacity of the foul water drainage results in an allowance of a combined pump rate of 17.3l/s for the Proposed Development.

11.1.9. It is proposed that all SuDS and drainage features will be offered for adoption to Anglian Water throughout the lifetime of the development.

11.1.10. This report has set out the principles for dealing with surface water for the Proposed Development and has shown that it can be dealt with in a sustainable manner, in accordance with the Environment Agency, LLFA and NPPF requirements and best practice guidelines

Appendix A

SITE MASTERPLAN

SITE LG01

Basic Indicative Plan

Appendix B

TOPOGRAPHICAL SURVEY

N

Station Information:

Station	Easting (m)	Northing (m)	Level (m)
L1	522783.274	235090.633	67.081
L2	522562.086	235281.730	59.395
L3	522462.419	235419.449	55.24
L6	521496.232	234301.823	77.933
L7	521538.734	234360.991	77.451
L8	521610.201	234442.520	77.847
L9	521683.903	234537.031	78.315
L10	521352.089	234408.392	74.594
L11	521364.835	234423.581	74.442
L12	521378.792	234445.407	73.120
GH18	522076.927	234621.407	79.454
GH19	522241.589	234548.688	79.904
GH20	521956.403	234673.234	79.002

OS Note:

Some services may have been omitted due to parked vehicles. The Ordnance Survey tile is to be used as a guide only.

OS Buildings *Surveyed Buildings*

This survey has been orientated to the Ordnance Survey (O.S) National Grid OSGB36(15) via Global Navigational Satellite Systems (GNSS) and the O.S. Active Network (OS Net).

A true OSGB36 coordinate has been established near to the site centre via a transformation using the OSTN15GB & OSGM15GB transformation models.

The survey has been correlated to this point and a further one or more OSGB36 (15) points established to create a true O.S. bearing for angle orientation.

No scale factor has been applied to the survey therefore the coordinates shown are arbitrary & not true O.S. Coordinates which have a scale factor applied.

Please refer to Survey Station Table to enable establishment of the on-site grid and datum.

Legend:

Buildings, Wall, Kerb line, Line marking, Drop kerb, Centre line, Overhead Cable, Concrete edge, Tarmac edge, Grass verge, Canopy/Overhang, Verge, Station and Name (1, 100.000), Station Level, Tree / Bush / Sapling, Area of Undergrowth, Woodland, R: Ridge Level, E: Eaves Level, F: Flat Roof Level, Gate

Fence types: I\W Interwoven, I\R Iron Railings, W\M Wire Mesh, P\R Post & Rail, P\W Post & Wire, C\L Chain Link, W\P Wooden Panels, C\P Concrete Panels, S\P Steel Palisade

IC	Inspection chamber	Bo	Bollard
PInv	Pipe invert	IB	Illuminated bollard
Gy	Gully	Bin	Rubbish bin
Bg	Back gully	Vp	Vent pipe
Dp	Down pipe	Grl	Ground light
Pipe	Pipe above ground	Lbox	Letter box
MH	Manhole	Ldr	Ladder
WL	Water level	Sty	Stile
Fl	Flood light	IFL	Internal floor level
Lp	Lamp post	THL	Threshold level
Tp	Telegraph post	Sp	Sign post
Ep	Electricity post	TH	Trialhole
Tl	Traffic light	BH	Borehole
Bus	Bus stop	ELC	Electric
Sv	Stop valve	BT	British Telecom
St	Stop tap	C'box	Control box
Er	Earth rod	TT	Tactile
Wm	Water meter	BP	Brick paved
Gas	Gas valve	CPS	Concrete paving slabs
Av	Air valve	CVR	Cover
ICU	Undentified inspection	IC	Inspection chamber
Wo	Wash out	R/wall	Retaining wall
Re	Rodding eye	UTL	Unable to lift
BB	Belisha beacon	TCL	Tree canopy level
CTV	Cable tv	G:	Girth
Mkr	Marker post	MG	Multi girth
Gmkr	Gas marker post	Stmp	Tree Stump
So	Soffit	CL:	Cover level
		IL:	Invert level

Rev	Date	Description	Drawn	Q. Ref.
1	27.11.22	North of Grange extension	LP	GH15528

greenhatch group

Topographical Surveys · Site Engineering · Utility / CCTV Surveys · Measured Building Surveys · 3D Laser Scanning · Revit & BIM Models

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CLIENT
Letchworth Garden City Heritage Foundation.

PROJECT
Land North of Grange Letchworth Garden City. SG6 4PL

TITLE
Topographical Survey

SCALE	DATE
A0@ 1: 2500	May 2017
DRAWN	QUALITY REF
DR	GH0980

Level datum	See note
Grid orientation	See note
Job number	27100

Drawing No.	Rev.
27100_T	1

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.
All dimensions should be checked on site prior to design and construction.
Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Notes:

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Appendix C

GROUND INVESTIGATION RESULTS

Land to the North of the Grange Estate, Letchworth

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INFILTRATION TEST REPORT

Report Prepared By:

Harriet Sagar

Report Reviewed By:

Steven Partridge

Contents

1 Introduction....3
1.1 The Purpose of Our Testing....3
1.2 The Scope of Our Work....3
1.3 Site Description, Location and Setting....4
1.4 Proposed Development Plans....4
2 Infiltration Results....5
2.1 BRE 365 Requirements....5
2.2 Details of Our Works....6
2.3 Test Pit Locations....6
2.4 Site Geology....8
2.5 Groundwater Observations....8
2.6 Infiltration Test Results....9
3 Soil Classification Tests....9
3.1 Soil Classification Testing Rationale....9
3.2 Soil Classification Testing Results....10
4 Conclusions....11

List of Attachments

Attachment One:	Notice to Interested Parties
Attachment Two:	Public Utility Drawings
Attachment Three:	Test Pit Logs
Attachment Four:	Infiltration Test Data
Attachment Five:	Geotechnical Laboratory Certificates

SUBADRA
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1 Introduction

1.1 The Purpose of Our Testing

The site is located north of the Grange Estate in Letchworth Garden City and comprises undeveloped agricultural land. We understand that Letchworth Garden City Heritage Foundation, Icknield Way, Letchworth Garden City, Hertfordshire, SG6 1GD (the Foundation) proposes for the site to be investigated for end use as mixed residential and commercial properties.

We have been commissioned by the Foundation to carry out infiltration testing of the underlying soil to provide data to assist WSP with developing an outline drainage strategy for the proposed development. Our infiltration testing was undertaken in accordance with the guidelines and methodology presented in British Research Establishment (BRE) Digest 365 (2016).

Your attention is drawn to the Notice to Interested Parties included as Attachment One.

1.2 The Scope of Our Work

Our assessment of the site was carried out in the following parts:

- Collection of public utility drawings for the sites locality to assist with locating public utilities that may be present;
- Supervising and logging the excavation of five test pits using an operated 3CX excavator, in four locations specified by the client;
- Filling the test pits over the course of two days with potable water using an operated refillable fresh-water bowser, and monitoring of falling water levels within the pits by a suitably qualified technician;
- Backfilling of test pits on completion;
- Geotechnical classification testing to verify the particle grading of the soil encountered on site;
- Provision of this report, which details the results of our testing and conclusions, and makes recommendations for further works (if necessary).

All the activities comprising this assessment were carried out in accordance with the procedures set out in our Quality Manual.

1.3 Site Description, Location and Setting

Item	Data			
Site Description	Undeveloped agricultural land.			
Grid Reference	521440 234500	Location	The site is located on the north edge of Letchworth Garden City	
Elevation	~ 70 to 80m AOD			
Size (approx)	~45ha			
Surrounding Land use	North	Undeveloped agricultural land.		
	East	Undeveloped agricultural land.		
	South	Recreation ground, with mixed residential and commercial beyond.		
	West	Undeveloped agricultural land.		
Geology and Hydrogeology	Drift (in order)	Head Deposits - Secondary Aquifer		
		Lowestoft Formation - Secondary Aquifer		
	Solid (in order)	Holywell Nodular Chalk Formation and New Pit Chalk Formation (Undifferentiated) (East) - Principal Aquifer		
		Melbourne Rock Member - Principal Aquifer		
		Zig Zag Chalk Formation - Principal Aquifer		
	SPZ	Site located within a Zone III (Total Catchment). Zone I located ~1.5km south-east of the site.		
Hydrology	On-site tributaries ultimately feeding into Pix Brook and the River Ivel.			

Table One: Summary of Desk Based Sensitivity Review

1.4 Proposed Development Plans

Proposed Developments	We understand the site is to be developed for end use as mixed residential and commercial properties. The proposed development plan is on the following page.

Table Two: Proposed Development Plans

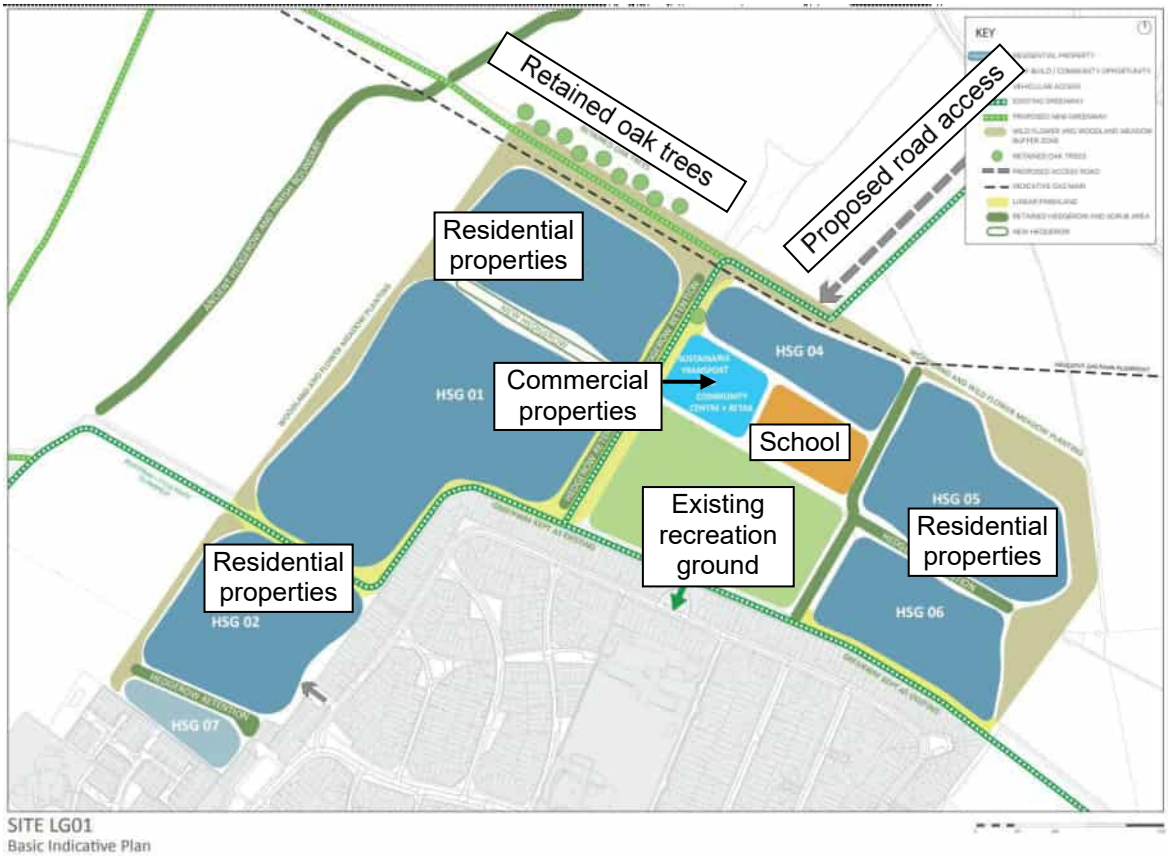

Figure One: Proposed Development Plan

2 Infiltration Results

2.1 BRE 365 Requirements

The British Research Establishment Digest 365 (2016) (BRE 365) guidance document sets out the recommended procedure for undertaking soakaway testing and design. This guidance specifies that the following procedures must be adhered to:

- Tests must be completed a minimum of 1.0m above groundwater level;
- Record the water level in the test pits until they fall to a depth equivalent to less than 25% of the original effective storage volume;
- Each test pit should be filled and the infiltration rate recorded three times during either the same, or on consecutive days;
- The soakaway should discharge from full to half empty in a 24hour period.

Table Three: BRE Testing Requirements

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2.2 Details of Our Works

Activity		Description of Works
Service Clearance	Public Utility Drawings	We have obtained and reviewed public utility drawings from the relevant service provider. This provides information regarding major services that supply the site and neighbouring properties. Copies of these plans are included as Attachment Two.
	On-site	Prior to excavating, all trial pit locations underwent a final service check using a Cable Avoidance Tool (CAT).
Infiltration Testing	Excavating Test Pits	Our infiltration test was completed on the 21st and 22nd of September 2022. Our test pit locations are shown in Figure One on the following page. Our drainage engineer requested that we complete the testing at 2.0m depths at four separate locations across the site (denoted TP001 - TP005). Test pits were logged on-site by a suitably qualified technician. Copies of our test pit logs are provided in Attachment Three. Next to each soakaway pit we dug a trial pit (TP005 - TP009) to locate the top of the chalk, however all four trial pits were terminated at 3.5m without encountering chalk and backfilled with arisings.
	Groundwater	No groundwater was encountered in any of the test pits.
	Filling of Test Pits	Testing commenced on the first day in TP001-TP004. We returned on the second day to remeasure the test pits at ~24hours after the test was commenced. Testing in TP005 was started on the second day, and TP001-TP004 were refilled and tests restarted. Due to the slow infiltration observed in the test pits on both days, in agreement with the client, we suspended all testing pits at the end of the second day. All test pits were backfilled with arisings at the end of our works.

Table Four: Our Methodologies

2.3 Test Pit Locations

A figure showing the test pit locations is on the following page.

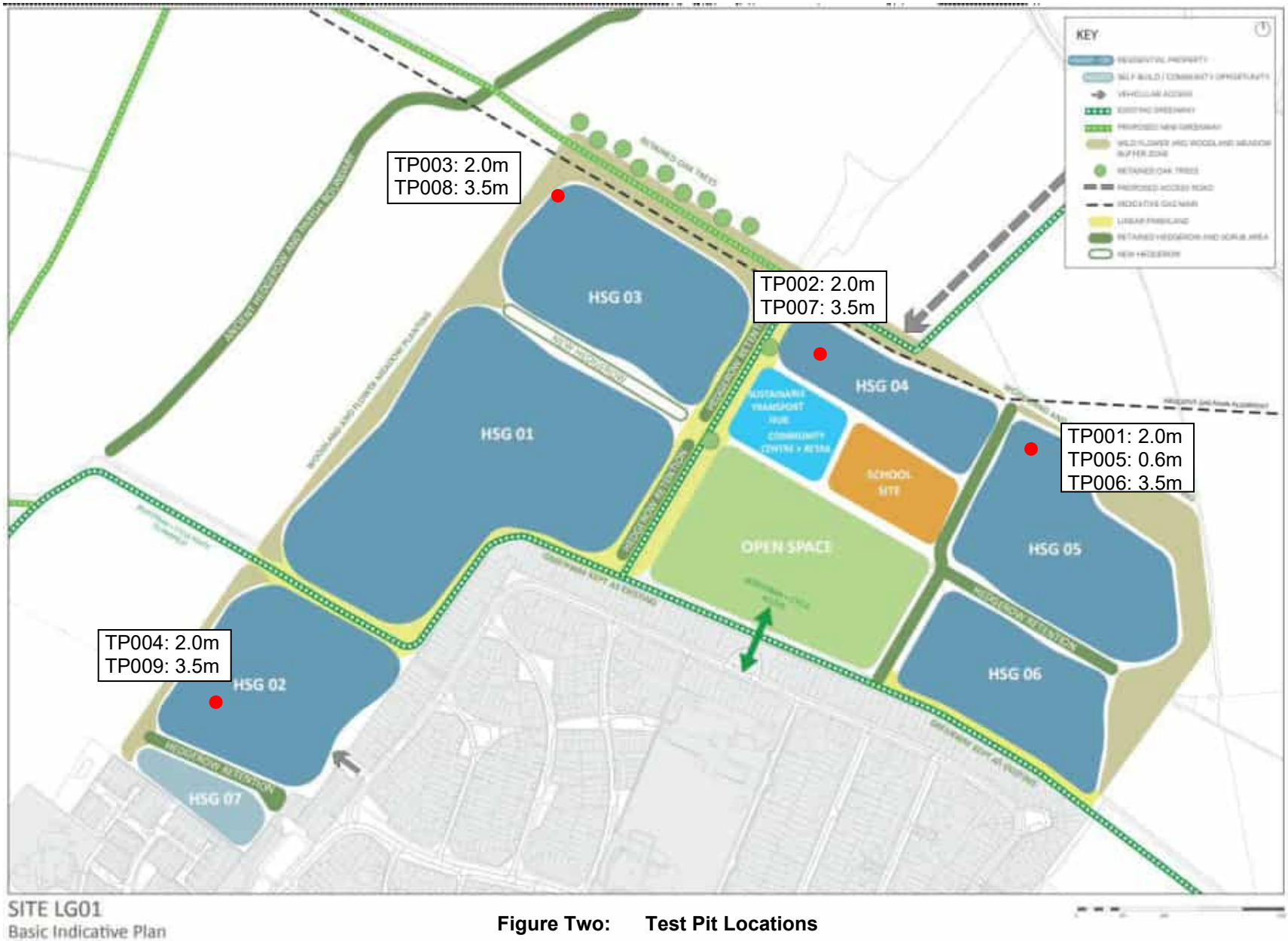

Figure Two: Test Pit Locations

2.4 Site Geology

	Unit	Description
Layer I	Made Ground	LOOSE brown SAND with frequent fine to coarse chert gravel and rootlets.
Layer II	Lowestoft Formation	LOOSE brown clayey SAND with frequent fine to medium gravels chalk and chert.
Layer III		FIRM brown slightly sandy brown CLAY with frequent fine to coarse gravels and cobbles of chalk and chert.

	Depth to Base of Layer				
	TP001	TP002	TP003	TP004	TP005
Layer I	0.3m	0.25m	0.3m	0.3m	0.3m
Layer II	0.7m	-	-	-	>0.6m
Layer III	>2.0m	>2.0m	>2.0m	>2.0m	-

	Depth to Base of Layer			
	TP006	TP007	TP008	TP009
Layer I	0.3m	0.25m	0.3m	0.3m
Layer II	0.7m	-	-	-
Layer III	>3.5m	>3.5m	>3.5m	>3.5m

All dimensions in metres below ground level

Table Five: Soil Lithology

2.5 Groundwater Observations

No groundwater was encountered within the any of the pits we excavated.

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2.6 Infiltration Test Results

Our infiltration test data is provided in full as Attachment Four and summarised in the following table.

Location	Test Pit Dimension L x W x D (m)	Soil Infiltration Rate (m/sec)			Notes
		First Fill	Second Fill	Third Fill	
TP001	2.0 x 0.5 x 2.0	3.00×10^{-7}*	Infiltration too slow to complete second fill or provide interpolation		Water levels fell by 0.446m in 21hours in the first test
TP002	2.0 x 0.5 x 2.0	Infiltration too slow to complete first and/or second fill or provide interpolation. Soil infiltration likely to be $<10^{-7}$m/sec			Water levels fell by 0.227m in 22hours in the first test
TP003	2.0 x 0.5 x 2.0				Water levels fell by 0.196m 22hours in the first test
TP004	2.0 x 0.5 x 2.0				Water levels fell by 0.359m in 22hours in the first test
TP005	1.5 x 0.5 x 0.6	6.25×10^{-7}*	Insufficient time to commence further fills during the second day of testing		Water levels fell by 0.171m in 5hours on the second day of testing

*Interpolated data. Insufficient time to complete test within single day and testing re-started the next day.

Table Six: Soakaway Test Results

3 Soil Classification Tests

3.1 Soil Classification Testing Rationale

We completed Particle Size Distribution tests on soils encountered to verify the soil types we had logged on-site. The results of our laboratory testing analysis are summarised in the table below. Certificates for all laboratory testing are included in Attachment Five.

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3.2 Soil Classification Testing Results

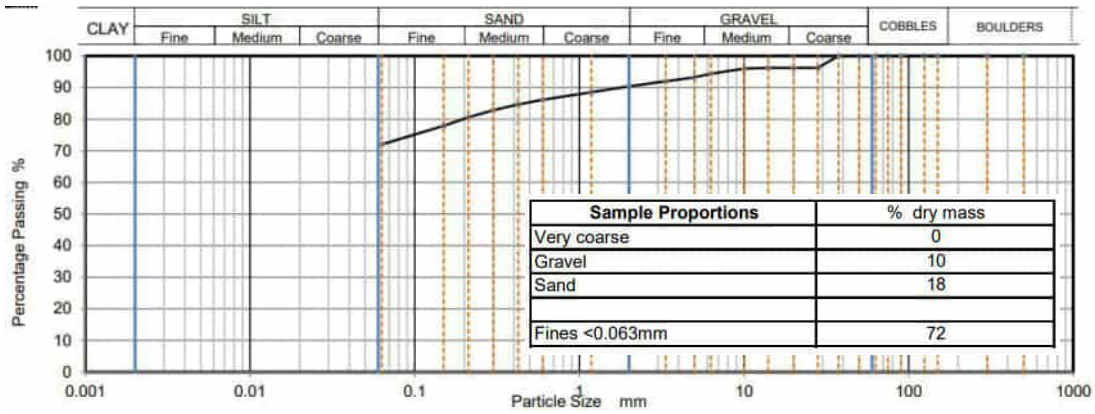
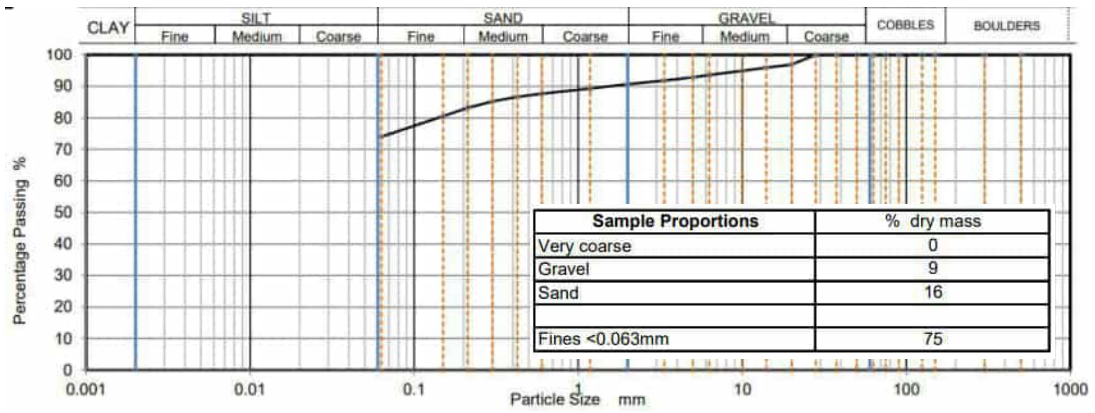
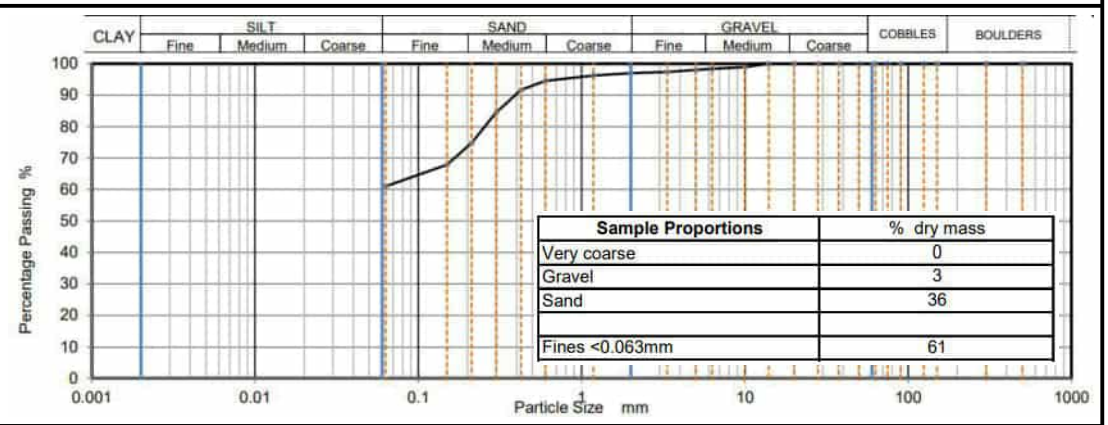
TP001 at 2.0m FIRM brown slightly sandy CLAY. Layer includes frequent fine to coarse gravels and cobbles of chalk and chert.	
TP002 at 2.0m FIRM brown slightly sandy CLAY. Layer includes frequent fine to coarse gravels and cobbles of chalk and chert.	
TP003 at 2.0m FIRM brown sandy CLAY. Layer includes frequent fine to coarse gravels and cobbles of chalk and chert.	

Table continued on following page

Table continued from previous page

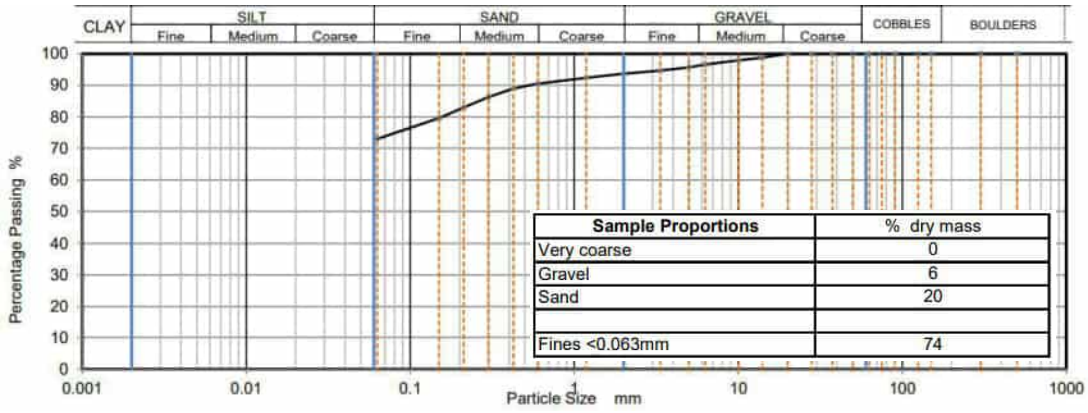
TP004 at 2.0m FIRM brown slightly sandy CLAY. Layer includes frequent fine to coarse gravels and cobbles of chalk and chert.	

Table Seven: Particle Size Distribution Test Results

4 Conclusions

The results of our infiltration testing indicate the following:

- We understand our infiltration testing data is to be used to assist with the design of the surface water drainage strategy for the site's redevelopment.
- We recorded a thin layer of topsoil, to a maximum depth of 0.3m, overlying Lowestoft Formation (clay with gravels, as shown in the PSD analysis), which was present in all trial pits to base. A maximum 0.4m layer of sand was present below the topsoil in TP001 and TP005. Trial pits next to each of the test pits showed that chalk is >3.0m below ground level across the site.
- Infiltration testing was carried out in test pits TP001 through TP005. None of the test pits completed a single fill over the two day period. BRE guidance requires: The soakaway should discharge from full to half empty in a 24hour period; none of our test pits achieved this criteria.
- Based on our test results, the use of standard soakaways is unlikely to be a viable drainage solution at the depths and locations tested.

We note this is a large site and there is possibility for variation of geology in other locations. The results of any future geotechnical investigation should be reviewed, once available, to verify there are no other areas of the site where more preferential infiltration rates could be achieved.

Your attention is drawn to the Notice to Interested Parties included as Attachment One.

Table Eight: Conclusions

Appendix D

EA CORRESPONDENCE

Flood risk assessments: Climate change allowances

Application of the allowances and local considerations

East Anglia; Essex, Norfolk, Suffolk, Cambridgeshire and Bedfordshire

1) The climate change allowances

The National Planning Practice Guidance refers planners, developers and advisors to the Environment Agency guidance on considering climate change in Flood Risk Assessments (FRAs). This guidance was updated in October 2021 and is available on Gov.uk. The guidance can be used for planning applications, local plans, neighbourhood plans and other projects. It provides climate change allowances for peak river flow, peak rainfall, sea level rise, wind speed and wave height. The guidance provides a range of allowances to assess fluvial flooding, rather than a single national allowance. It advises on what allowances to use for assessment based on vulnerability classification, flood zone and development lifetime.

2) Assessment of climate change impacts on fluvial flooding

Where existing EA flood risk datasets and models do not provide the required climate change allowances, it is up to developers to undertake any work needed to appropriately assess the impacts of climate change on flood risk. They can do this by using the approaches in **Table A** below:

Table A below indicates the level of technical assessment of climate change impacts on fluvial flooding appropriate for new developments depending on their scale and location. This should be used as **a guide only**. Ultimately, the agreed approach should be based on expert local knowledge of flood risk conditions, local sensitivities and other influences. **For these reasons, we recommend that applicants and / or their consultants should contact the Environment Agency at the pre-planning application stage to confirm the assessment approach, on a case by case basis**. The email addresses for our Sustainable Places teams at our respective offices can be found in Section 8 below.

Table A defines three possible approaches to account for flood risk impacts due to climate change, in new development proposals:

- **Basic:** Developer can add an allowance to the 'design flood' (i.e. 1% annual probability) peak levels to account for potential climate change impacts. The allowance should be derived and agreed locally by Environment Agency teams.
- **Intermediate:** Developer can use existing modelled flood and flow data to construct a stage-discharge rating curve, which can be used to interpolate a flood level based on the required peak flow allowance being applied to the 'design flood' flow.
- **Detailed:** Perform detailed hydraulic modelling, either through re-running Environment Agency hydraulic models (if available) or construction of a new model by the developer.

Table A – Indicative guide to assessment approach

VULNERABILITY CLASSIFICATION	FLOOD ZONE	DEVELOPMENT TYPE		
		NON-MAJOR	SMALL-MAJOR	LARGE-MAJOR
ESSENTIAL INFRASTRUCTURE	Zone 2	Detailed		
	Zone 3a	Detailed		
	Zone 3b	Detailed		
HIGHLY VULNERABLE	Zone 2	Intermediate/ Basic	Intermediate/ Basic	Detailed
	Zone 3a	Not appropriate development		
	Zone 3b	Not appropriate development		
MORE VULNERABLE	Zone 2	Basic	Basic	Intermediate/ Basic
	Zone 3a	Intermediate/ Basic	Detailed	Detailed
	Zone 3b	Not appropriate development		
LESS VULNERABLE	Zone 2	Basic	Basic	Intermediate/ Basic
	Zone 3a	Basic	Basic	Detailed
	Zone 3b	Not appropriate development		
WATER COMPATIBLE	Zone 2	None		
	Zone 3a	Intermediate/ Basic		
	Zone 3b	Detailed		

Note: Where the table states 'not appropriate development', this is in line with national planning policy. If in exceptional circumstances such development types are proposed in these locations, we would expect a detailed modelling approach to be used.

NOTES:

- Non-Major: 1-9 dwellings/ less than 0.5 ha | Office / light industrial under 1ha | General industrial under 1 ha | Retail under 1 ha | Gypsy/traveller site between 0 and 9 pitches
- Small-Major: 10 to 30 dwellings | Office / light industrial 1ha to 5ha | General industrial 1ha to 5ha | Retail over 1ha to 5ha | Gypsy/traveller site over 10 to 30 pitches
- Large-Major: 30+ dwellings | Office / light industrial 5ha+ | General industrial 5ha+ | Retail 5ha+ | Gypsy/traveler site over 30+ pitches | any other development that creates a non-residential building or development over 1000 sq m.

The assessment approach should be agreed with the Environment Agency as part of pre-planning application discussions to avoid abortive work.

3) Specific local considerations

Where the Environment Agency and the applicant and / or their consultant has agreed that a '**basic**´ level of assessment is appropriate, the figures in Table B below can be used as a precautionary allowance for potential climate change impacts on peak 'design' (i.e. 1% annual probability) fluvial flood level rather than undertaking detailed modelling.

Table B – Local precautionary allowances for potential climate change impacts

Essex, Norfolk and Suffolk

Hydraulic Model (Watercourse)	Precautionary allowance (basic approach)
Blackwater & Brain - Blackwater between TL7520925623 and TL7820324314 Brain between TL7373323312 and TL7683821321	500mm
Other main rivers, tributaries and ordinary watercourses	For other main rivers, tributaries and ordinary watercourses that are not stated above, basic allowances have not been calculated. In this instance you can either: • If flow data is available you can request this data from us and can conduct an intermediate assessment yourself • Or alternatively, you can choose to undertake a Detailed Assessment and "perform detailed hydraulic modelling, through either re-running our hydraulic models (if available) or constructing a new model

Cambridgeshire and Bedfordshire

Watercourse / Model	Precautionary allowance (basic approach)
Alconbury Brook	600mm
River Kym	
Lower Ouse (Model Extent)	700mm
Mid Ouse (Cold Brayfield to Bromham – between SP9156852223 and TL0132950919)	700mm
Mid Ouse (East of Bedford to Roxton – between TL0791848903 and TL1618854543)	700mm
River Hiz and River Purwell	400mm
River Ivel	500mm
Pix Brook	450mm
Potton Brook	500mm
River Cam and tributaries (excluding the Cam Lodes and the Slade System)	450mm
Great Barford (ordinary watercourses)	500mm
Bromham (ordinary watercourse)	550mm

NOTES:

Urban areas excluded from the 'basic' approach: St Ives, Holywell, Godmanchester, Swavesey, Over, Bedford, Newport Pagnell, Buckingham and Leighton Buzzard. More detailed assessment of climate change allowances will need to be undertaken in these locations.

Use of these allowances will only be accepted after discussion with the Environment Agency.

4) Fluvial flood risk mitigation

For planning consultations where we are a statutory consultee and our Flood risk standing advice **does not** apply we use the following benchmarks to inform flood risk mitigation for different vulnerability classifications. **These are a guide only**. **We strongly recommend you contact us at the pre-planning application stage to confirm this on a case by case basis.** For planning consultations where we are not a statutory consultee or our Flood risk Standing advice applies, we recommend that local planning authorities and developers use these benchmarks but we do not expect to be consulted.

- For development classed as '**essential infrastructure**' our benchmark for flood risk mitigation is for it to be designed to the '**higher central**' climate change allowance for the epoch that most closely represents the lifetime of the development, including decommissioning. Please note that nationally significant infrastructure projects (NSIPs) may also need to assess a **credible maximum climate change scenario** by applying the '**upper end**' allowance for peak river flow as a sensitivity test. This will help to determine how sensitive the development is to changes in the climate and to ensure that it can be adapted to large-scale climate change over its lifetime.

- For **highly vulnerable**, **more vulnerable, less vulnerable and water compatible** developments in flood zones 2 and 3a, the '**central**' climate change allowance is our minimum benchmark for flood risk mitigation. For large urban settlement extensions or developments that form new communities, the credible maximum climate change scenario must be assessed; in these circumstances, you should use the '**upper end'** allowance.

- For **water compatible** development in flood zone 3b, the '**central**' climate change allowance for the epoch that most closely represents the lifetime of the development is our minimum benchmark for flood risk mitigation.

For peak river flow allowances and a visual representation of the above, please see Tables 1 and 2 below.

Table 1 peak river flow allowances by Management Catchment (use 1961 to 1990 baseline)

Management Catchment	Allowance category	Total potential change anticipated for '2020s' (2015 to 39)	Total potential change anticipated for '2050s' (2040 to 2069)	Total potential change anticipated for '2080s' (2070 to 2125)
Upper and Bedford Ouse	**Upper end**	24%	30%	58%
	Higher central	10%	11%	30%
	Central	5%	4%	19%
Cam and Ely Ouse	**Upper End**	21%	22%	45%
	Higher Central	7%	5%	19%
	Central	2%	-2%	9%
Old Bedford and Middle Level	**Upper End**	23%	22%	39%
	Higher central	9%	4%	15%
	Central	3%	-3%	6%
North West Norfolk	**Upper End**	30%	34%	57%
	Higher central	18%	18%	33%
	Central	13%	11%	23%
North Norfolk Rivers	**Upper End**	26%	27%	48%
	Higher central	13%	11%	24%
	Central	7%	4%	14%
Broadland Rivers	**Upper End**	27%	27%	44%
	Higher central	14%	10%	20%
	Central	8%	3%	11%
East Suffolk	**Upper End**	25%	29%	54%
	Higher central	13%	13%	29%
	Central	8%	7%	19%
Combined Essex	**Upper End**	27%	37%	72%
	Higher central	13%	16%	38%
	Central	7%	8%	25%

South Essex	**Upper End**	22%	27%	48%
	Higher central	11%	11%	26%
	Central	6%	5%	17%

If you are not sure which management catchment your site falls within, please use the guidance and link to the peak river flow map, which can be found at: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances#peak-river-flow-allowances

Table 2: Using peak river flow allowances for flood risk assessments

Flood Zone	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
2	higher central[1]	central[2]	central[2]	central	central
3a	higher central[1]	**X**	central[2]	central	central
3b	higher central[1]	**X**	**X**	**X**	central

X – Development should not be permitted
If (exceptionally) development is considered appropriate when not in accordance with flood zone vulnerability categories, then it would be appropriate to use the higher central allowance.

[1] For NSIPs, the 'upper end' allowance should be used to assess a credible maximum climate change scenario.

[2] For large urban settlement extensions or developments that form new communities, the credible maximum climate change scenario must be assessed. In these circumstances, you should use the 'upper end' allowance.

There may be circumstances where local evidence supports the use of other data or allowances. Where you think this is the case we may want to check this data and how you propose to use it.

Assessing off-site impacts and calculating floodplain compensation

The appropriate allowance to assess off-site impacts and calculation floodplain compensation requirements depends on the land uses in affected areas.

The '**central'** allowance should be used in most cases. However, the '**higher central'** allowance should be used when the affected area contains essential infrastructure.

5) Development in tidal flood risk areas

For flood risk assessments and strategic flood risk assessments, assess both the **higher central** and **upper end** allowances for all development vulnerability classes (see table 3 below).

For NSIPs and large urban settlement extensions or developments that form new communities, the **credible maximum climate change scenario** should be assessed (sea level rise and sensitivity test allowances for offshore wind speed and extreme wave height and storm surge uplift). To assess the flood risk from a high impact climate change scenario, you should use the H^{++} allowance of 1.9m for the total sea level rise to 2100.

Table 3: sea level allowances for each epoch in mm for each year (based on a 1981 to 2000 baseline) – the total sea level risk for each epoch is in brackets

Area of England	Allowance	2000 to 2035 (mm)	2036 to 2065 (mm)	2066 to 2095 (mm)	2096 to 2125 (mm)	Cumulative rise 2000 to 2125 (metres)
Anglian	Higher central	5.8 (203)	8.7 (261)	11.6 (348)	13 (390)	1.20
Anglian	Upper end	7 (245)	11.3 (339)	15.8 (474)	18.1 (543)	1.60
South east	Higher central	5.7 (200)	8.7 (261)	11.6 (348)	13.1 (393)	1.20
South east	Upper end	6.9 (242)	11.3 (339)	15.8 (474)	18.2 (546)	1.60

6) Tidal flood risk mitigation

For planning consultations where we are a statutory consultee and our flood risk standing advice does not apply, we use the following benchmarks to inform flood risk mitigation for different vulnerability classifications. **These are a guide only. We strongly recommend you contact us at the pre-planning application stage to confirm this on a case by case basis. Please note you may be charged for this advice.** For planning consultations where we are not a statutory consultee or our flood risk standing advice applies, we recommend that local planning authorities and developers use these benchmarks but we do not expect to be consulted.

- For development classed as essential Infrastructure, highly vulnerable development and more vulnerable development, our minimum benchmark for flood risk mitigation is the **'upper end'** climate change allowance for the development lifetime (including decommissioning where relevant).

- For water compatible or less vulnerable development (e.g. commercial), our minimum benchmark for flood risk mitigation is the **'higher central'** climate change allowance for the development lifetime. In sensitive locations it may be necessary to use the **'upper end'** allowance to inform built in resilience.

If you are using our 2018 Coastal Flood Modelling Data outputs:
The **upper end** allowance become progressively higher each year than the climate change flood level outputs used in our current 2018 coastal flood model. So as an approximation we recommend that the following uplift values are added on to the on-site climate change flood levels provided in the Product 4:

- For development lifetimes extending to 2122, add 0.34m
- For development lifetimes extending to 2123, add 0.36m
- For development lifetimes extending to 2124, add 0.38m
- For development lifetimes extending to 2125, add 0.40m

If the proposed development is greater than 30 houses and the flood zone is in an open-coast location, we recommend that a more accurate impact of the increased upper end flood levels on the overtopping on-site flood levels is modelled by rerunning our coastal overtopping model with the new flood levels; you can obtain the model from us with a Product 6 and 7 request. If the site is located within a small or constrained tidal or coastal floodplain then regardless of the size of the development, you may also need to undertake remodelling of the flood levels to obtain an accurate assessment of the impacts of climate change; please contact us for advice (contact details in Section 8 below).

If you are using our Broads 2008 Flood Modelling Data outputs:
For the **upper end** allowance, please add the following uplift values onto the climate change flood levels provided in the Product 4:

- For development lifetimes extending to 2122, add 0.34m
- For development lifetimes extending to 2123, add 0.36m
- For development lifetimes extending to 2124, add 0.38m
- For development lifetimes extending to 2125, add 0.40m

If you are using our 2008 Thames Flood Modelling Data outputs:
Please add the appropriate climate change allowances for the South East River Basin District onto the present day flood levels obtained in the Product 4, starting from a base year of 2005. The allowances should be applied to the year appropriate to the respective development lifetime for residential or commercial developments.
***** note**:*** *We anticipate that there will be updated flood modelling outputs available for the Thames Estuary in mid-2022. Developers preparing Flood Risk Assessments for developments in this area should check for availability of new data with the East Anglia (East) PSO team (contact details in Section 8 below).*

There may be circumstances where local evidence supports the use of other data or allowances. Where you think this is the case, we may want to check this data and how you propose to use it.

7) Assessment of climate change impacts for Surface Water Management

Please see the latest advice on the use of Peak Rainfall Intensity climate change allowances, which can be found here: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

The Environment Agency is not a statutory consultee to the land use planning system for the consideration of surface water flood risk and management. We therefore recommend that you contact the relevant Lead Local Flood Authority (contact details listed below) to discuss Flood Risk Assessment requirements to support your development's surface water management proposals.

Cambridgeshire County Council - fr.planning@cambridgeshire.gov.uk
Central Bedfordshire Council – floodrisk@centralbedfordshire.gov.uk
Bedford Borough Council – floodrisk@bedford.gov.uk
Milton Keynes Council – llfa@milton-keynes.gov.uk
Buckinghamshire County Council - floodmanagement@buckscc.gov.uk
Herts County Council - floodandwatermanagement@hertscc.gov.uk
Northamptonshire County Council - floodandwater@northamptonshire.gov.uk
Norfolk County Council – llfa@norfolk.gov.uk
Suffolk County Council – floods@suffolk.gov.uk
Essex County Council – suds@essex.gov.uk
Thurrock Council – TransportDevelopment@thurrock.gov.uk
Southend-on-Sea Council – llfa@southend.gov.uk

8) Our Service

Non-chargeable service

We will give a free opinion on:

- What climate change allowance to apply to a particular development type
- Which technical approach is suitable in the FRA

Chargeable service:

- Review of climate change impacts using intermediate and detailed technical approaches (i.e. modelling review)
- Assessment and review of proposals for managed adaptation.

Contact Details

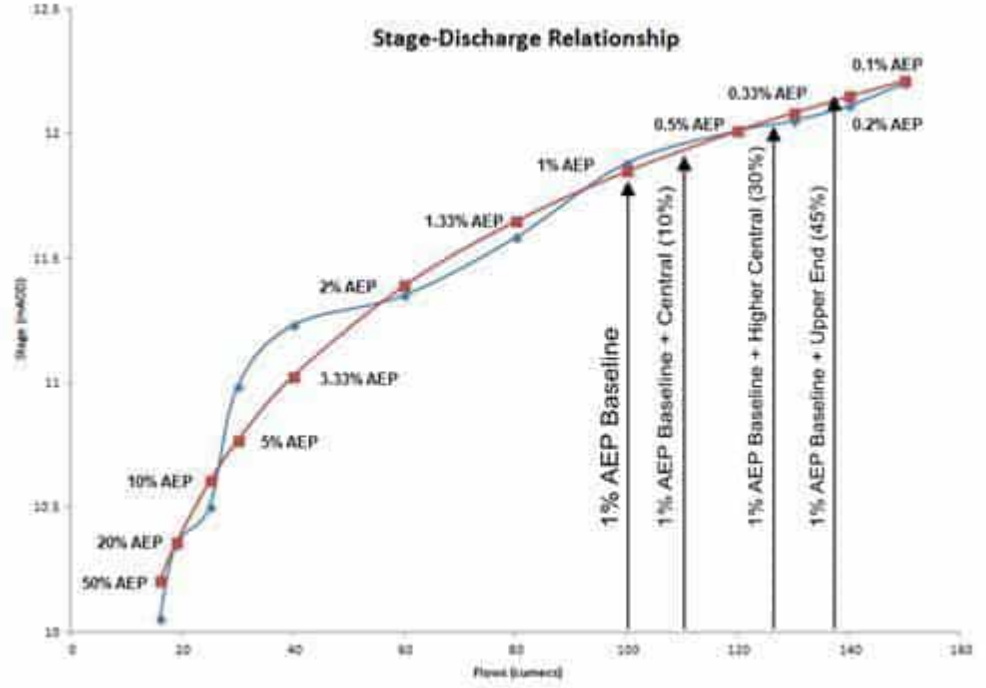
For East Anglia (Great Ouse Catchment): planning.brampton@environment-agency.gov.uk

For East Anglia (East): planning.ipswich@environment-agency.gov.uk

Appendix 1 – Further information on the Intermediate approach.

1) The methodology the chart is based on does not produce an accurate stage-discharge rating and is a simplified methodology for producing flood levels that can be applied in low risk small-scale development situations.
2) The method should not be applied where there is existing detailed modelled climate change outputs that use the new allowances. In such circumstances, the 'with climate change' modelled scenarios should be applied.

An example stage-discharge relationship is shown below.



Appendix E

LLFA CORRESPONDENCE

Vazquez Asenjo, Rodrigo

From: Flood and Water Management <FloodandWaterManagement@hertfordshire.gov.uk>
Sent: 28 June 2022 16:59
To: Amoah, Emmerson
Subject: Auto Response from Shared Mailbox FloodandWaterManagement@hertfordshire.gov.uk

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you for your email to the Flood Risk Management team.

We will respond as soon as we can but there may be delays in our ability to respond due to increased workload alongside staffing shortages.

We aim to action all requests within a week but this is not always possible currently. This inbox is reviewed daily.

Apologies for any inconvenience. Thank you for your understanding.

Best regards

The Flood Risk Management Team

****Disclaimer****

The information in this message should be regarded as confidential and is intended for the addressee only unless explicitly stated. If you have received this message in error it must be deleted and the sender notified. The views expressed in this message are personal and not necessarily those of Hertfordshire County Council unless explicitly stated. Please be aware that emails sent to or received from Hertfordshire County Council may be intercepted and read by the council. Interception will only occur to ensure compliance with council policies or procedures or regulatory obligations, to prevent or deter crime, or for the purposes of essential maintenance or support of the email system.

Appendix F

ANGLIAN WATER RECORDS

Pre-Planning Assessment Report

Letchworth LG1

InFlow Reference: PPE-0155874

Assessment Type: Used Water

Report published: 14/10/2022

Thank you for submitting a pre-planning enquiry.

This has been produced for WSP UK Ltd.

Your reference number is **PPE-0155874**.

This report can be submitted as a drainage strategy for the development should it seek planning permission.

If you have any questions upon receipt of this report, you can submit a further question via InFlow. Alternatively, please contact the Planning & Capacity team on **07929 786 955** or email planningliaison@anglianwater.co.uk

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Section 1 - Proposed development

The response within this report has been based on the following information which was submitted as part of your application:

List of planned developments	
Type of development	**No. Of units**
Business	1
Dwellings	900
Non-residential	1

The anticipated residential build rate is:

Year	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12
Build rate	50	50	50	50	50	50	50	50	50	50	50	352

Development type: Greenfield

Planning application status: Unknown

Site grid reference number: TL2197934852

The comments contained within this report relate to the public water mains and sewers indicated on our records.

Your attention is drawn to the disclaimer in the useful information section of this report.

Section 2 - Assets affected

Our records indicate that we have the following types of assets within or overlapping the boundary of your development site as listed in the table below.

Additionally, it is highly recommended that you carry out a thorough investigation of your proposed working area to establish whether any unmapped public or private sewers and lateral drains are in existence. We are unable to permit development either over or within the easement strip without our prior consent. The extent of the easement is provided in the table below. Please be aware that the existing water mains/public sewers should be located in highway or open space and not in private gardens. This is to ensure available access for any future maintenance and repair and this should be taken into consideration when planning your site layout.

Water and Used water easement information		
Asset type	Pipe size (mm)	Total easement required (m)
Sewer mains	375	3.00 m either side of the centre line

If it is not possible to avoid our assets then these may need to be diverted in accordance with Section 185 of the Water Industry Act (1991). You will need to make a formal application if you would like a diversion to be considered.

Due to the private sewer transfer in October 2011 many newly adopted public used water assets and their history are not indicated on our records. You also need to be aware that your development site may contain private water mains, drains or other assets not shown on our records. These are private assets and not the responsibility of Anglian Water but that of the landowner.

Section 3 - Water recycling services

In examining the used water system we assess the ability for your site to connect to the public sewerage network without causing a detriment to the operation of the system. We also assess the receiving water recycling centre and determine whether the water recycling centre can cope with the increased flow and effluent quality arising from your development.

Water recycling centre

The foul drainage from the proposed development is in the catchment of Letchworth Water Recycling Centre, which currently has capacity to treat the flows from your development site. Anglian Water cannot reserve capacity and the available capacity at the water recycling centre can be reduced at any time due to growth, environmental and regulation driven changes.

Used water network

Our assessment has been based on development flows connecting to the nearest foul water sewer of the same size or greater pipe diameter to that required to drain the site. The infrastructure to convey foul water flows to the receiving sewerage network is assumed to be the responsibility of the developer. Conveyance to the connection point is considered as Onsite Work and includes all work carried out upstream from of the point of connection, including making the connection to our existing network. This connection point has been determined in reference to the calculated discharge flow and on this basis, a 300mm internal diameter pipe is required to drain the development site. The nearest practicable connection is to the 375mm diameter sewer running along the southern edge of the site. Connections may be made to; manhole MH2401 on the western tip of the site at National Grid Reference NGR TL 21203 34481, invert level 66.28m; and to manhole MH2601 off of Gaunts Way at NGR TL 22210 34623, invert level 77.89m. Anglian Water has assessed the impact of a pumped conveyance from the planned development to the public foul sewerage network and we can confirm that this connection is acceptable as the foul sewerage system, at present, has available capacity for your site. In line with Sewers for Adoption, the pumped discharge will need to connect via an intermediate manhole and at least 5 metres of an appropriately sized gravity sewer. Our assessment has been based on conveyance pump operating assumptions and we would expect to see a rising main nominal bore of 125mm and a pumped rate of 17.3l/s. The final pump rate and configuration of the connection will be determined with your detailed design. You should submit this detail with your Section 106 new connection application. Please note that Anglian Water will request a suitably worded condition at planning application stage to ensure this strategy is implemented to mitigate the risk of flooding.

It is assumed that the developer will provide the necessary infrastructure to convey flows from the site to the network. Consequently, this report does not include any costs for the conveyance of flows.

Surface water disposal

You indicated on the Pre-Planning Application form that a connection to the public surface water sewer network is not required as infiltration and a connection to a watercourse is to be utilised. A new surface water sewer can be used as a mechanism to discharge surface water to a watercourse or as part of a Suds scheme where appropriate. Subject to the sewer being designed in accordance with the current version of Sewers For Adoption, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991. If the outfall is to a watercourse, the applicant will be required to obtain consent to discharge via the appropriate body. Therefore a capacity assessment has not been made on the public surface water network. However, should this situation change and you wish to have a surface water connection assessment on the local network, then we will provide this free of charge if requested within 12 months of this report and you are able to provide the relevant evidence that your original strategy was unviable Please note that Anglian Water will request a suitably worded condition at planning application stage to ensure this strategy is implemented to mitigate the risk of flooding.

As you may be aware, Anglian Water will consider the adoption of SuDs provided that they meet the criteria outline in our SuDs adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and Lead Local Flood Authority (LLFA), to the criteria within our SuDs adoption manual.

Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceedance design, and
3. Effective maintenance schedule demonstrating than the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDs then an expression of interest form can be found on our website

As the proposed method of surface water disposal is not relevant to Anglian Water; we suggest that you contact the relevant Local Authority, Lead Local Flood Authority, the Environment Agency or the Internal Drainage Board, as appropriate.

Trade Effluent

We note that you do not have any trade effluent requirements. Should this be required in the future you will need our written formal consent. This is in accordance with Section 118 of the Water Industry Act (1991).

Used Water Budget Costs

Your development site will be required to pay an Infrastructure charge for each new property connecting to the public water and sewerage network that benefits from Full planning permission. The infrastructure charge replaces the zonal charge as previously identified.

You will be required to pay an infrastructure charge upon connection for each new plot on your development site. The infrastructure charge are types of charges set out in Section 146(2) of the Water Industry Act 1991.

The charge should be paid by anyone who wishes to build or develop a property and is payable upon request of connection.

• The Infrastructure Charge is based on the cost of any reinforcement and upgrades to our existing network ("Network Reinforcements"), whether designed to address strategic or local capacity issues. For more information on our Infrastructure Charge, please see the 'Useful Information' section of this report.

Infrastructure charges are raised on a standard basis of one charge per new connection (one for water and one for sewerage).

The Water Recyling Infrastructure charge for your dwellings is:

Infrastructure charge	Number of units	Total
£ 490	900	£441,000.00

Please note that you should also budget for infrastructure charges on non-household premises where applicable and these will be calculated according to the number and type of water fittings in the premises. This is called the "relevant multiplier" method of calculating the charge and the relevant multiplier will be applied to the figures set out in our 2022-23 Developer Charging Arrangements to arrive at the amount payable. Details of the relevant multiplier for each fitting can be found on our website.

Section 4 - Map of Proposed Point of Connection(s)

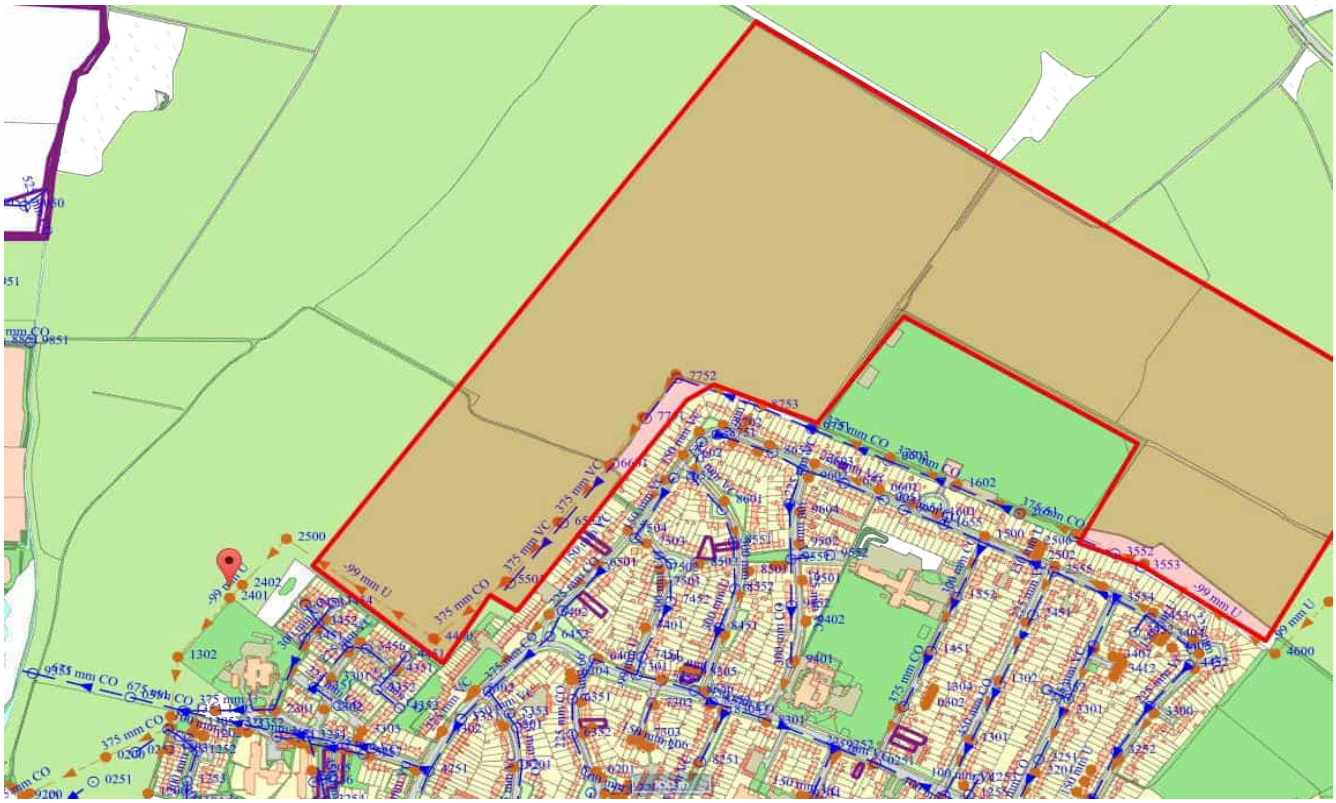


Figure 1a: Showing your water recycling foul point of connection

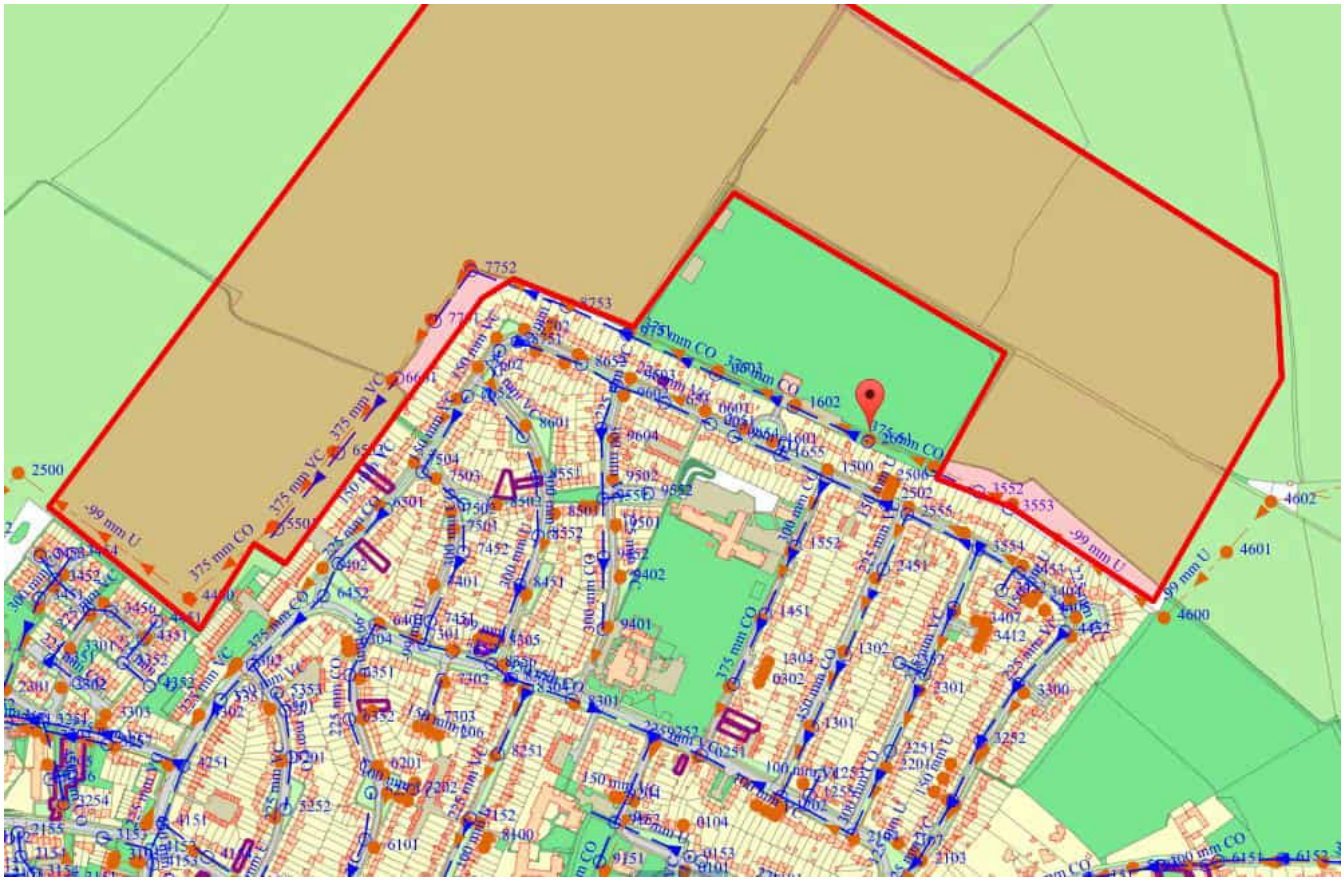


Figure 1b: Showing your water recycling foul point of connection

Section 5 - Useful information

Water Industry Act – Key used water sections

Section 98:

This provides you with the right to requisition a new public sewer. The new public sewer can be constructed by Anglian Water on your behalf. Alternatively, you can construct the sewer yourself under section 30 of the Anglian Water Authority Act 1977.

Section 102:

This provides you with the right to have an existing sewerage asset vested by us. It is your responsibility to bring the infrastructure to an adoptable condition ahead of the asset being vested.

Section 104:

This provides you with the right to have a design technically vetted and an agreement reached that will see us adopt your assets following their satisfactory construction and connection to the public sewer.

Section 106:

This provides you with the right to have your constructed sewer connected to the public sewer.

Section 185

This provides you with the right to have a public sewerage asset diverted.

Details on how to make a formal application for a new sewer, new connection or diversion are available on our website or via our Development Services team on **0345 60 66 087**.

Sustainable drainage systems

Many existing urban drainage systems can cause problems of flooding, pollution or damage to the environment and are not resilient to climate change in the long term. .

Our preferred method of surface water disposal is through the use of Sustainable Drainage Systems or SuDS.

SuDS are a range of techniques that aim to mimic the way surface water drains in natural systems within urban areas. For more information on SuDS, please visit our website

We recommend that you contact the Local Authority and Lead Local Flood Authority (LLFA) for your site to discuss your application.

Private sewer transfers

Sewers and lateral drains connected to the public sewer on the 1 July 2011 transferred into Water Company ownership on the 1 October 2011. This follows the implementation of the Floods and Water Management Act (FWMA). This included sewers and lateral drains that were subject to an existing Section 104 Adoption Agreement and those that were not. There were exemptions and the main non-transferable assets were as follows:

Surface water sewers and lateral drains that do not discharge to the public sewer, e.g. those that discharged to a watercourse.

Foul sewers and lateral drains that discharged to a privately owned sewage treatment/collection facility.

Pumping stations and rising mains will transfer between 1 October 2011 and 1 October 2016.

The implementation of Section 42 of the FWMA will ensure that future private sewers will not be created. It is anticipated that all new sewer applications will need to have an approved section 104 application ahead of a section 106 connection.

It is anticipated that all new sewer applications will need to have an approved Section104 application ahead of a Section 106 connection

Encroachment

Anglian Water operates a risk based approach to development encroaching close to our used water infrastructure. We assess the issue of encroachment if you are planning to build within 400 metres of a water recycling centre or, within 15 metres to 100 metres of a pumping station. We have more information available on our website

Locating our assets

Maps detailing the location of our water and used water infrastructure including both underground assets and above ground assets such as pumping stations and recycling centres are available from digdat

All requests from members of the public or non-statutory bodies for maps showing the location of our assets will be subject to an appropriate administrative charge.

We have more information on our website

Charging arrangements

Our charging arrangements and summary for this year's water and used water connection and infrastructure charges can be found on our website

Section 6 - Disclaimer

The information provided in this report is based on data currently held by Anglian Water Services Limited ('Anglian Water') or provided by a third party. Accordingly, the information in this report is provided with no guarantee of accuracy, timeliness, completeness and is without indemnity or warranty of any kind (express or implied).

This report should not be considered in isolation and does not nullify the need for the enquirer to make additional appropriate searches, inspections and enquiries. Anglian Water supports the plan led approach to sustainable development that is set out in the National Planning Policy Framework ('NPPF') and any infrastructure needs identified in this report must be considered in the context of current, adopted and/or emerging local plans. Where local plans are absent, silent or have expired these needs should be considered against the definition of sustainability holistically as set out in the NPPF.

Whilst the information in this report is based on the presumption that proposed development obtains planning permission, nothing in this report confirms that planning permission will be granted or that Anglian Water will be bound to carry out the works/proposals contained within this report.

No liability whatsoever, including liability for negligence is accepted by Anglian Water or its partners, employees or agents, for any error or omission, or for the results obtained from the use of this report and/or its content.

Furthermore, in no event will any of those parties be liable to the applicant or any third party for any decision made or action taken as a result of reliance on this report.

This report is valid from the date issued and the enquirer is advised to resubmit their request for an up to date report should there be a delay in submitting any subsequent application for water supply/sewer connection(s). Our pre-planning reports are valid for 12 months, however please note Anglian Water cannot reserve capacity and available capacity in our network can be reduced at any time due to increased requirements from existing businesses and houses as well as from new housing and new commercial developments.

Appendix G

GREENFIELD RUNOFF RATES

PUBLIC

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:	Rodrigo Vazquez Asenjo
Site name:	LHF - LG1
Site location:	Letchworth

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	51.99854° N
Longitude:	0.22573° W
Reference:	3929821435
Date:	Jan 09 2023 09:55

Runoff estimation approach IH124

Site characteristics

Total site area (ha): 1

Methodology

Q_{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Soil characteristics	Default	Edited
SOIL type:	2	2
HOST class:	N/A	N/A
SPR/SPRHOST:	0.3	0.3

Hydrological characteristics	Default	Edited
SAAR (mm):	573	573
Hydrological region:	5	5
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	2.45	2.45
Growth curve factor 100 years:	3.56	3.56
Growth curve factor 200 years:	4.21	4.21

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates	Default	Edited
Q_{BAR} (l/s):	1.44	1.44
1 in 1 year (l/s):	1.25	1.25
1 in 30 years (l/s):	3.53	3.53
1 in 100 year (l/s):	5.13	5.13
1 in 200 years (l/s):	6.07	6.07

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Print | Close Report

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:	Rodrigo Vazquez Asenjo
Site name:	LHF - LG1
Site location:	Letchworth

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	51.99629° N
Longitude:	0.23114° W
Reference:	2360956869
Date:	Jan 09 2023 14:15

Runoff estimation approach IH124

Site characteristics

Total site area (ha): 1

Methodology

Q_{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Soil characteristics	Default	Edited
SOIL type:	3	3
HOST class:	N/A	N/A
SPR/SPRHOST:	0.37	0.37

Hydrological characteristics	Default	Edited
SAAR (mm):	573	573
Hydrological region:	5	5
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	2.45	2.45
Growth curve factor 100 years:	3.56	3.56
Growth curve factor 200 years:	4.21	4.21

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

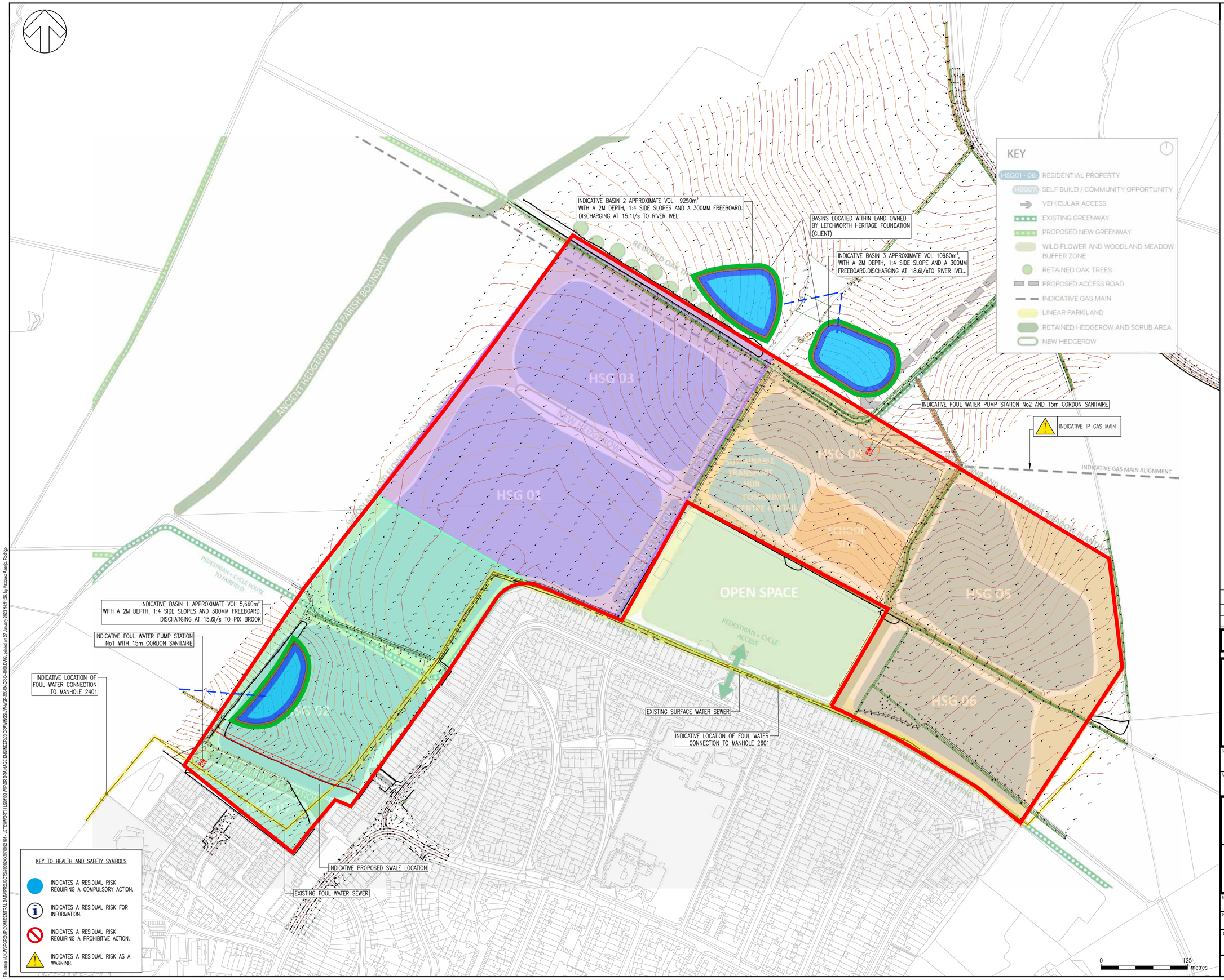
Greenfield runoff rates	Default	Edited
Q_{BAR} (l/s):	2.27	2.27
1 in 1 year (l/s):	1.98	1.98
1 in 30 years (l/s):	5.57	5.57
1 in 100 year (l/s):	8.09	8.09
1 in 200 years (l/s):	9.57	9.57

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Appendix H

DRAINAGE STRATEGY

PUBLIC



DO NOT SCALE

NOTES

1. ALL LEVELS ARE IN METRES AOD UNLESS OTHERWISE SPECIFIED.
2. DRAINAGE CATCHMENTS BASED UPON STERLING SURVEYS TOPOGRAPHICAL SURVEY 2014-1 DATED APRIL 2022, AND PEGASUS EMERGING FRAMEWORK PLAN P20-0895_20E.
3. BASINS SHOWN SHOULD BE CONSIDERED AS HIGHLY INDICATIVE AND POTENTIALLY SUBJECT TO SUBSTANTIAL CHANGE FOLLOWING ONGOING DISCUSSIONS WITH ANGLIAN WATER REGARDING AVAILABLE CAPACITY WITHIN THEIR EXISTING SURFACE WATER SEWER NETWORK.
4. BASIN SHOWN ARE SIZED TO ACCOMMODATE UP TO A 1 IN 100YR RAINFALL EVENT PLUS A 40% ALLOWANCE FOR CLIMATE CHANGE. DISCHARGE RATES RESTRICTED TO A PEAK OF THE CORRESPONDING 1 IN 1YR GREENFIELD RUNOFF RATE AS PER HERTFORSHIRE COUNTY COUNCIL LLFA GUIDANCE. THE DISCHARGE RATES FOLLOWING ONGOING DISCUSSIONS WITH ANGLIAN WATER ARE SUBJECT TO CHANGE, THUS THE BASIN SIZES/VOLUMES MAY INCREASE.
5. THE SURFACE WATER DRAINAGE STRATEGY HAS BEEN BASED ON THE FOLLOWING IMPERMEABILITY FOR THE DIFFERENT LAND USES: 66% FOR RESIDENTIAL AREAS, 80% FOR COMMERCIAL AREAS AND 10% URBAN CREEP.
6. THE BASINS CURRENTLY SHOWN ASSUME A GRAVITY OUTFALL TO THE NEARBY ORDINARY WATERCOURSES LOCATED AT THE CENTRAL NORTH REGION LEADING TO RIVER IVEL AND AT THE WESTERN REGION TOWARDS PIX BROOK.

KEY

- SITE BOUNDARY
- INDICATIVE PROPOSED PUMP STATIONS
- CATCHMENT TO BASIN 1
- CATCHMENT TO BASIN 2
- CATCHMENT TO BASIN 3
- INDICATIVE PROPOSED BASIN
- INDICATIVE 3m BASIN ACCESS TRACK
- INDICATIVE APPROX, BASIN TIE-IN EARTHWORKS EXTENT
- INDICATIVE PROPOSED SWALE LOCATION
- EXISTING SURFACE WATER SEWER
- INDICATIVE PROPOSED SURFACE WATER DRAINAGE
- EXISTING FOUL WATER SEWER
- EXISTING SEWER 3M EASEMENT
- PROPOSED RISING MAIN
- EXISTING TREE CANOPY
- EXISTING HEDGES
- EXISTING DENSE UNDERGROWTH VEGETATION.
- TOPOGRAPHY CONTOURS

P02	23/01/2023	RVA	TOPO SURVEY EXTENDED, BASINS MODIFIED & FW CONNECTION POINTS ADDED.	JJL	JG
P01	23/09/2022	EBA	FIRST ISSUE	TM	KM
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: LETCHWORTH HERITAGE FOUNDATION

ARCHITECT:

SITE/PROJECT: LETCHWORTH LG01

TITLE: INDICATIVE DRAINAGE STRATEGY

SCALE @ A1:	CHECKED:	APPROVED:
1:2500	TM	KM

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70092164	TM	EBA	January 23

DRAWING No: LW-WSP-XX-XX-DR-D-4000 REV: P02

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File name: UK-VMSPSRGROUP.COM\CENTRAL DATA\PROJECTS\70092XX\70092164 - LETCHWORTH LG01\03 WIP\DR DRAINAGE ENGINEER\03 DRAWINGS\LW-WSP-XX-XX-DR-D-4000.DWG, printed on 27 January 2023 14:11:26, by Vazquez Asenjo, Rodrigo

Appendix I

MICRODRAINAGE RESULTS

PUBLIC

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	64.576	0.576	22.7	1656.3	O K
30 min Summer	64.754	0.754	22.7	2221.7	O K
60 min Summer	64.928	0.928	22.7	2795.4	O K
120 min Summer	65.160	1.160	22.7	3603.7	O K
180 min Summer	65.289	1.289	22.7	4070.4	O K
240 min Summer	65.369	1.369	22.7	4369.8	O K
360 min Summer	65.458	1.458	22.7	4705.7	O K
480 min Summer	65.501	1.501	22.7	4873.4	O K
600 min Summer	65.522	1.522	22.7	4955.2	O K
720 min Summer	65.530	1.530	22.7	4987.5	O K
960 min Summer	65.525	1.525	22.7	4964.5	O K
1440 min Summer	65.476	1.476	22.7	4778.1	O K
2160 min Summer	65.392	1.392	22.7	4458.1	O K
2880 min Summer	65.328	1.328	22.7	4217.1	O K
4320 min Summer	65.235	1.235	22.7	3873.9	O K
5760 min Summer	65.165	1.165	22.7	3620.7	O K
15 min Winter	64.640	0.640	22.7	1857.4	O K
30 min Winter	64.837	0.837	22.7	2492.5	O K
60 min Winter	65.028	1.028	22.7	3139.3	O K
120 min Winter	65.282	1.282	22.7	4047.8	O K
180 min Winter	65.423	1.423	22.7	4575.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	117.656	0.0	1473.4	27
30 min Summer	79.100	0.0	1845.8	41
60 min Summer	50.092	0.0	2738.7	72
120 min Summer	32.599	0.0	3442.1	130
180 min Summer	24.813	0.0	3576.0	190
240 min Summer	20.199	0.0	3539.0	250
360 min Summer	14.821	0.0	3476.8	368
480 min Summer	11.765	0.0	3434.5	488
600 min Summer	9.780	0.0	3400.4	606
720 min Summer	8.384	0.0	3369.7	726
960 min Summer	6.538	0.0	3311.4	964
1440 min Summer	4.580	0.0	3200.4	1442
2160 min Summer	3.216	0.0	6390.9	1840
2880 min Summer	2.516	0.0	6461.0	2220
4320 min Summer	1.807	0.0	5919.4	2992
5760 min Summer	1.448	0.0	7904.0	3856
15 min Winter	117.656	0.0	1629.1	26
30 min Winter	79.100	0.0	1900.8	41
60 min Winter	50.092	0.0	3047.6	70
120 min Winter	32.599	0.0	3593.4	128
180 min Winter	24.813	0.0	3546.5	188

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
240 min Winter	65.512	1.512	22.7	4917.0	O K
360 min Winter	65.611	1.611	22.7	5306.0	O K
480 min Winter	65.662	1.662	22.7	5506.6	O K
600 min Winter	65.688	1.688	22.7	5610.8	O K
720 min Winter	65.700	1.700	22.8	5659.3	O K
960 min Winter	65.699	1.699	22.8	5658.0	O K
1440 min Winter	65.659	1.659	22.7	5497.7	O K
2160 min Winter	65.575	1.575	22.7	5162.8	O K
2880 min Winter	65.495	1.495	22.7	4851.7	O K
4320 min Winter	65.379	1.379	22.7	4407.6	O K
5760 min Winter	65.280	1.280	22.7	4039.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
240 min Winter	20.199	0.0	3508.3	246
360 min Winter	14.821	0.0	3471.9	362
480 min Winter	11.765	0.0	3453.8	480
600 min Winter	9.780	0.0	3441.2	596
720 min Winter	8.384	0.0	3430.7	714
960 min Winter	6.538	0.0	3411.4	944
1440 min Winter	4.580	0.0	3358.1	1394
2160 min Winter	3.216	0.0	6843.6	2032
2880 min Winter	2.516	0.0	6632.9	2312
4320 min Winter	1.807	0.0	6110.6	3240
5760 min Winter	1.448	0.0	8851.4	4160

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Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 520950 235050 TL 20950 35050
Data Type	Catchment
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	5760
Climate Change %	+40

Time Area Diagram

Total Area (ha) 7.614

Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)
0	4	2.538	4	8	2.538	8	12	2.538

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Model Details

Storage is Online Cover Level (m) 66.000

Tank or Pond Structure

Invert Level (m) 64.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	2660.0	1.000	3441.6	1.700	4048.5	2.000	4323.7

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0200-2280-1700-2280
Design Head (m)	1.700
Design Flow (l/s)	22.8
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	200
Invert Level (m)	64.000
Minimum Outlet Pipe Diameter (mm)	225
Suggested Manhole Diameter (mm)	1800

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.700	22.8
Flush-Flo™	0.503	22.7
Kick-Flo®	1.089	18.4
Mean Flow over Head Range	-	19.7

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	6.9	1.200	19.3	3.000	29.9	7.000	45.0
0.200	18.9	1.400	20.8	3.500	32.2	7.500	46.5
0.300	21.7	1.600	22.1	4.000	34.3	8.000	48.0
0.400	22.5	1.800	23.4	4.500	36.3	8.500	49.4
0.500	22.7	2.000	24.6	5.000	38.2	9.000	50.8
0.600	22.6	2.200	25.8	5.500	40.0	9.500	52.1
0.800	21.9	2.400	26.9	6.000	41.7		
1.000	20.1	2.600	27.9	6.500	43.4		

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	65.596	0.596	21.6	2915.6	O K
30 min Summer	65.753	0.753	21.6	3744.7	O K
60 min Summer	65.905	0.905	21.6	4568.3	O K
120 min Summer	66.122	1.122	21.6	5790.9	O K
180 min Summer	66.247	1.247	21.6	6517.6	O K
240 min Summer	66.328	1.328	21.6	6993.7	O K
360 min Summer	66.419	1.419	21.6	7546.2	O K
480 min Summer	66.468	1.468	21.6	7841.6	O K
600 min Summer	66.496	1.496	21.6	8011.4	O K
720 min Summer	66.511	1.511	21.6	8109.3	O K
960 min Summer	66.522	1.522	21.6	8177.1	O K
1440 min Summer	66.511	1.511	21.6	8105.7	O K
2160 min Summer	66.468	1.468	21.6	7842.4	O K
2880 min Summer	66.418	1.418	21.6	7535.4	O K
4320 min Summer	66.347	1.347	21.6	7110.7	O K
5760 min Summer	66.304	1.304	21.6	6853.7	O K
15 min Winter	65.663	0.663	21.6	3267.7	O K
30 min Winter	65.837	0.837	21.6	4198.0	O K
60 min Winter	66.005	1.005	21.6	5123.4	O K
120 min Winter	66.244	1.244	21.6	6497.9	O K
180 min Winter	66.381	1.381	21.6	7315.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.768	0.0	1818.1	27
30 min Summer	89.264	0.0	1833.7	42
60 min Summer	54.670	0.0	3605.6	72
120 min Summer	34.860	0.0	3444.8	132
180 min Summer	26.320	0.0	3291.3	190
240 min Summer	21.319	0.0	3220.3	250
360 min Summer	15.535	0.0	3167.6	370
480 min Summer	12.266	0.0	3155.5	490
600 min Summer	10.156	0.0	3156.0	608
720 min Summer	8.678	0.0	3160.7	728
960 min Summer	6.735	0.0	3153.9	968
1440 min Summer	4.687	0.0	3094.4	1446
2160 min Summer	3.266	0.0	6264.3	2164
2880 min Summer	2.540	0.0	6055.4	2804
4320 min Summer	1.811	0.0	5673.5	3464
5760 min Summer	1.445	0.0	11443.6	4256
15 min Winter	138.768	0.0	1838.4	27
30 min Winter	89.264	0.0	1819.5	41
60 min Winter	54.670	0.0	3590.2	70
120 min Winter	34.860	0.0	3318.0	130
180 min Winter	26.320	0.0	3221.1	188

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
240 min Winter	66.470	1.470	21.6	7853.3	O K
360 min Winter	66.572	1.572	21.6	8483.2	O K
480 min Winter	66.626	1.626	21.6	8825.7	O K
600 min Winter	66.658	1.658	21.6	9027.4	O K
720 min Winter	66.677	1.677	21.6	9148.1	O K
960 min Winter	66.693	1.693	21.6	9246.6	O K
1440 min Winter	66.687	1.687	21.6	9210.9	O K
2160 min Winter	66.651	1.651	21.6	8983.1	O K
2880 min Winter	66.607	1.607	21.6	8705.6	O K
4320 min Winter	66.525	1.525	21.6	8194.1	O K
5760 min Winter	66.472	1.472	21.6	7867.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
240 min Winter	21.319	0.0	3202.7	248
360 min Winter	15.535	0.0	3246.7	364
480 min Winter	12.266	0.0	3296.9	482
600 min Winter	10.156	0.0	3320.2	600
720 min Winter	8.678	0.0	3328.3	718
960 min Winter	6.735	0.0	3317.9	952
1440 min Winter	4.687	0.0	3250.5	1416
2160 min Winter	3.266	0.0	6369.2	2100
2880 min Winter	2.540	0.0	6230.9	2768
4320 min Winter	1.811	0.0	6005.3	3944
5760 min Winter	1.445	0.0	12494.1	4496

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Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 522171 235085 TL 22171 35085
Data Type	Point
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	5760
Climate Change %	+40

Time Area Diagram

Total Area (ha) 11.292

Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)
0	4	3.764	4	8	3.764	8	12	3.764

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Model Details

Storage is Online Cover Level (m) 67.000

Tank or Pond Structure

Invert Level (m) 65.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	4600.0	1.000	5612.0	1.700	6380.2	2.000	6724.5

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0195-2160-1700-2160
Design Head (m)	1.700
Design Flow (l/s)	21.6
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	195
Invert Level (m)	65.000
Minimum Outlet Pipe Diameter (mm)	225
Suggested Manhole Diameter (mm)	1800

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.700	21.6
Flush-Flo™	0.507	21.6
Kick-Flo®	1.093	17.5
Mean Flow over Head Range	-	18.7

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	6.8	1.200	18.3	3.000	28.3	7.000	42.6
0.200	18.2	1.400	19.7	3.500	30.5	7.500	44.0
0.300	20.6	1.600	21.0	4.000	32.5	8.000	45.4
0.400	21.4	1.800	22.2	4.500	34.4	8.500	46.8
0.500	21.6	2.000	23.3	5.000	36.2	9.000	48.1
0.600	21.5	2.200	24.4	5.500	37.9	9.500	49.4
0.800	20.8	2.400	25.4	6.000	39.5		
1.000	19.1	2.600	26.4	6.500	41.1		

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	62.591	0.591	25.1	3453.2	O K
30 min Summer	62.748	0.748	25.1	4435.3	O K
60 min Summer	62.900	0.900	25.1	5411.4	O K
120 min Summer	63.118	1.118	25.1	6860.6	O K
180 min Summer	63.244	1.244	25.1	7723.5	O K
240 min Summer	63.326	1.326	25.1	8289.4	O K
360 min Summer	63.419	1.419	25.1	8947.7	O K
480 min Summer	63.468	1.468	25.1	9301.6	O K
600 min Summer	63.497	1.497	25.1	9506.5	O K
720 min Summer	63.513	1.513	25.1	9626.3	O K
960 min Summer	63.525	1.525	25.1	9714.2	O K
1440 min Summer	63.516	1.516	25.1	9644.1	O K
2160 min Summer	63.475	1.475	25.1	9352.4	O K
2880 min Summer	63.427	1.427	25.1	9005.9	O K
4320 min Summer	63.358	1.358	25.1	8517.3	O K
5760 min Summer	63.317	1.317	25.1	8225.3	O K
15 min Winter	62.658	0.658	25.1	3870.1	O K
30 min Winter	62.832	0.832	25.1	4972.0	O K
60 min Winter	63.000	1.000	25.1	6068.5	O K
120 min Winter	63.241	1.241	25.1	7698.1	O K
180 min Winter	63.379	1.379	25.1	8668.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.768	0.0	2110.8	27
30 min Summer	89.264	0.0	2129.4	42
60 min Summer	54.670	0.0	4194.0	72
120 min Summer	34.860	0.0	4019.3	132
180 min Summer	26.320	0.0	3836.6	190
240 min Summer	21.319	0.0	3751.8	250
360 min Summer	15.535	0.0	3687.0	370
480 min Summer	12.266	0.0	3669.6	490
600 min Summer	10.156	0.0	3667.2	608
720 min Summer	8.678	0.0	3670.1	728
960 min Summer	6.735	0.0	3660.0	968
1440 min Summer	4.687	0.0	3586.3	1446
2160 min Summer	3.266	0.0	7268.8	2164
2880 min Summer	2.540	0.0	7023.3	2856
4320 min Summer	1.811	0.0	6578.5	3504
5760 min Summer	1.445	0.0	13465.6	4264
15 min Winter	138.768	0.0	2134.3	27
30 min Winter	89.264	0.0	2114.3	41
60 min Winter	54.670	0.0	4178.5	70
120 min Winter	34.860	0.0	3869.0	130
180 min Winter	26.320	0.0	3753.2	188

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
240 min Winter	63.469	1.469	25.1	9306.9	O K
360 min Winter	63.573	1.573	25.1	10056.6	O K
480 min Winter	63.628	1.628	25.1	10466.0	O K
600 min Winter	63.661	1.661	25.1	10708.5	O K
720 min Winter	63.681	1.681	25.1	10855.1	O K
960 min Winter	63.697	1.697	25.1	10979.0	O K
1440 min Winter	63.694	1.694	25.1	10950.5	O K
2160 min Winter	63.660	1.660	25.1	10700.3	O K
2880 min Winter	63.618	1.618	25.1	10389.0	O K
4320 min Winter	63.539	1.539	25.1	9811.3	O K
5760 min Winter	63.487	1.487	25.1	9434.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
240 min Winter	21.319	0.0	3729.2	248
360 min Winter	15.535	0.0	3775.0	364
480 min Winter	12.266	0.0	3832.5	482
600 min Winter	10.156	0.0	3859.0	600
720 min Winter	8.678	0.0	3867.7	718
960 min Winter	6.735	0.0	3853.7	952
1440 min Winter	4.687	0.0	3771.2	1416
2160 min Winter	3.266	0.0	7401.7	2100
2880 min Winter	2.540	0.0	7239.4	2768
4320 min Winter	1.811	0.0	6970.0	3980
5760 min Winter	1.445	0.0	14584.5	4496

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Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 522171 235085 TL 22171 35085
Data Type	Point
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	5760
Climate Change %	+40

Time Area Diagram

Total Area (ha) 13.371

Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)
0	4	4.457	4	8	4.457	8	12	4.457

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Model Details

Storage is Online Cover Level (m) 64.000

Tank or Pond Structure

Invert Level (m) 62.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	5525.0	1.000	6629.2	1.700	7462.0	2.000	7834.0

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0209-2510-1700-2510
Design Head (m)	1.700
Design Flow (l/s)	25.1
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	209
Invert Level (m)	62.000
Minimum Outlet Pipe Diameter (mm)	225
Suggested Manhole Diameter (mm)	1800

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.700	25.1
Flush-Flo™	0.508	25.1
Kick-Flo®	1.104	20.4
Mean Flow over Head Range	-	21.7

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	7.1	1.200	21.3	3.000	32.9	7.000	49.6
0.200	20.2	1.400	22.9	3.500	35.5	7.500	51.3
0.300	23.9	1.600	24.4	4.000	37.8	8.000	52.9
0.400	24.8	1.800	25.8	4.500	40.1	8.500	54.5
0.500	25.1	2.000	27.1	5.000	42.1	9.000	56.0
0.600	25.0	2.200	28.4	5.500	44.1	9.500	57.5
0.800	24.2	2.400	29.6	6.000	46.0		
1.000	22.5	2.600	30.8	6.500	47.8		

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Appendix M

Housing needs assessment

Letchworth Garden City Housing Need Assessment Update 2022

Market & Affordable Housing Needs

Letchworth Garden City Heritage Foundation

May 2022

LICHFIELDS

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Executive Summary

This Housing Need Assessment has been produced by Lichfields on behalf of the Letchworth Garden City Heritage Foundation to provide an updated assessment of local housing needs in Letchworth. This is in the context of the North of Letchworth Garden City allocation in the emerging North Hertfordshire Local Plan, which is expected to deliver around 900 new homes. This assessment is one of several reports prepared by Lichfields over recent years for the Foundation.

Background

The purpose of this assessment is to help the Foundation understand in more detail, the up-to-date housing needs of local residents and how the North of Letchworth allocation can best serve these needs. It aims to set out implications for the housing mix to be provided within the Strategic Masterplan for the site allocation, to inform discussions with North Hertfordshire District Council.

In the mid to late 2000's, Letchworth Garden City saw relatively little population and housing growth, but in recent years housing development has increased. This led to a peak in the town's total population in 2017, at just under **35,000 people**, however this has declined over the last few years. Whilst house prices in Letchworth are currently lower than the district average, prices across North Hertfordshire have risen sharply in recent years and the ratio of house prices to earnings is almost 50% higher than the figure for England. The average house price in Letchworth is now around **£370,000**, in comparison to the national average of £285,000.

This Assessment: Findings and Implications

Letchworth is expected to see a growth of **1,600** new homes between **2020 and 2035**. This uptick in the delivery of homes will help to reverse the declining population trend and is projected to increase the town's population to nearly **37,000** by **2035**. This growth will be driven by an increase in the number and proportion of elderly people in the town, leading to more single person and couple households.

These trends in projected household growth and the way in which different households occupy housing at present allow for a projection on future change in relation to the demand for different types and sizes of housing. This assessment has identified a suggested range for **market** housing which is heavily geared towards 3-beds, and a suggested range for **affordable** housing which is primarily for 1-beds. A summary of the overall suggested mix for market and affordable housing is shown in the table below.

	1-bed	2-bed	3-bed	4+ bed
Market	0-10%	10-20%	50-60%	15-20%
Affordable	60-80%	20-30%	0-5%	

Evidence also suggests there is scope to make better use of the existing housing stock in Letchworth, with a significant number of households living in affordable housing which is likely to far exceed their needs. With older single people making up a substantial proportion of future growth, adaptable and accessible affordable housing can also play a key role in freeing up larger affordable housing to meet the needs of families.

With the affordability of private market housing being a key issue within Letchworth – both for homeownership and for rented tenures – this assessment highlights the role that more modestly sized market housing (3-bed) and smaller affordable housing (1-bed) will play in meeting needs within Letchworth, specifically as part of the North of Letchworth allocation.

Contents

1.0 Introduction 1
Context 1
Previous Work 2
Purpose & Structure of this Report 3

2.0 Context 4
Population 4
Socio-Economics 6
Local housing market 10
Summary 14

3.0 Assessment of Overall Future Growth 16
Scale of housing growth 16
Population growth 16
Household growth 18
Summary 19

4.0 Assessment of Market Demand 20
Occupancy patterns 20
Future demand 21
Sensitivity testing 22
Summary 24

5.0 Assessment of Affordable Need 26
Overview of housing costs 26
Overall affordable housing need in Letchworth 27
Mix of affordable housing needed 32
Summary 35

6.0 Wider Market Analysis 37
Strategic sites in the local area 37
Findings 39
Summary 40

7.0 Summary & Conclusions 41

Figures

Figure 1.1 North of Letchworth Garden City allocation (Site LG1) 2

Figure 2.1 Total Population Change in Letchworth – 1911 to 2020 4

Figure 2.2 Total Population - North Hertfordshire and Letchworth: 2010 to 2020 5

Figure 2.3 Recent changes in population by broad age group - Letchworth 2011-2020 5

Figure 2.4 Age Structure (2020) - Letchworth and England 6

Figure 2.5 MOSAIC Summary Groups: North Hertfordshire and Letchworth (2020) 7

Figure 2.6 Indices of Multiple Deprivation - North Hertfordshire and Letchworth 9

Figure 2.7 Housing stock by type, tenure and size - Letchworth, North Hertfordshire and England 11

Figure 2.8 Household composition of all households - Letchworth, North Hertfordshire and England 12

Figure 2.9 Average (median) house prices from December 1995 to September 2021 12

Figure 2.10 Average monthly (median) rental prices: North Hertfordshire, East of England and England - 2018 to 2021 14

Figure 2.11 Lowest monthly rental prices currently available: Letchworth Garden City and North Hertfordshire 14

Figure 3.1 Projected population growth based on housing trajectory 17

Figure 3.2 Change in age structure - 2020 to 2035 18

Figure 3.3 Projected change in households by age and type - 2020 to 2035 19

Figure 4.1 Occupancy patterns (**market** households) - North Hertfordshire, 2011 20

Figure 4.2 Occupancy patterns (**all** households) – Letchworth and North Hertfordshire, 2011 23

Figure 5.1 Summary of incomes required to access housing in North Hertfordshire 27

Figure 5.2 Household income distribution by type - Letchworth 29

Figure 5.3 Occupancy patterns of households - affordable rented housing - North Hertfordshire, 2011 34

Figure 6.1 Nearby Strategic Sites - Housing Mix Provision by size and tenure 38

Figure 6.2 Overall Housing Mix on Nearby Strategic Sites 39

Figure 6.3 Average Housing Mix on Nearby Strategic Sites (Market & Affordable) 40

Figure 7.1 Projected change in households by age and type in Letchworth - 2020 to 2035 41

Tables

Table 2.1 Population structure by broad age group – Letchworth, North Hertfordshire and England (2020) 6

Table 2.2 Number and Proportion of households in each Mosaic Group – North Hertfordshire 7

Table 2.3 Household Income - 2021 9

Table 2.4 Weekly earnings (gross) for full-time workers, median 10

Table 2.5 Average (median) house prices - England, East of England, North Hertfordshire and Letchworth (Year ending Sept 2021) 13

Table 2.6 Lower quartile affordability ratio: England, East of England, North Hertfordshire – 2019 to 2021 13

Table 3.1 Change in population age structure - 2020 to 2035 17

Table 4.1 Proportion of households living in market housing, by age and type - North Hertfordshire*, 2022 21

Table 4.2 Assessment of future market demand by type/size - Letchworth, to 2035 22

Table 4.3 Indicative type/size mix for **market** housing - Letchworth, to 2035 22

Table 4.4 Housing mix sensitivity - housing mix (**all** households) using North Hertfordshire and Letchworth occupancy patterns 23

Table 4.5 Housing mix sensitivity - housing mix (**all** households) outcomes 24

Table 4.6 Summary of mix assessment and suggested mix for market housing 25

Table 5.1 Summary of housing costs across North Hertfordshire 26

Table 5.2 Housing need, rental costs and income required 28

Table 5.3 Estimate of current affordable housing need in Letchworth 30

Table 5.4 Comparison of estimated current need with Census 31

Table 5.5 Future need for affordable housing in Letchworth based on income threshold 31

Table 5.6 Total affordable housing need based on income threshold 32

Table 5.7 Affordable housing need based on housing waiting list (2020/21) for North Hertfordshire 32

Table 5.8 Affordable housing need based on housing waiting list (April 2022) for Letchworth 32

Table 5.9 Estimated need for affordable housing by size 33

Table 5.10 Occupancy patterns - affordable rented housing - Letchworth, 2011 34

Table 5.11 Disability prevalence amongst affordable housing residents by age (day-to-day activities limited a lot) 35

Table 5.12 Suggested range - affordable housing mix for Letchworth 36

Table 6.1 Housing Mix Provision – Nearby Strategic Sites 37

Table 6.2 Lichfields suggested mix for market and affordable housing for Letchworth 40

Table 7.1 Summary of suggested mix for market and affordable housing 42

Table 7.2 Housing trajectory for Letchworth 1

Appendices

Appendix 1 Housing Trajectory

Appendix 2 Strategic Site Analysis

1.0 Introduction

1.1 This Housing Needs Assessment has been produced by Lichfields on behalf of the Letchworth Garden City Heritage Foundation ("LGCHF", "the Foundation") to provide an updated assessment of local housing needs in Letchworth.

1.2 With the adoption of the emerging North Hertfordshire Local Plan expected soon, the Foundation is seeking to update its evidence to inform discussions with North Hertfordshire District Council ("the Council", "NHDC") regarding the development of the Strategic Masterplan for the North of Letchworth Garden City allocation ("the site" or "North of Letchworth"), which is expected to deliver around 900 homes (Site LG1). This evidence will help to guide the masterplan and the mix of housing provided at the site.

Context

Letchworth Garden City

1.3 Letchworth Garden City was founded in 1903 by First Garden City Ltd under Ebenezer Howard's vision to create a 'third alternative' way of living which encompassed the benefits of town and country living through zoning, careful design and affordable housing combined with local jobs. The central ethos was that all profits were reinvested back into the estate; the assets and responsibilities of First Garden City Ltd were transferred to a public sector organisation in 1962 (titled the Letchworth Garden City Corporation), and today those responsibilities lie with the Foundation. Through generation of revenue from its land, the Foundation supports and funds activities in the local community, ranging from the environment, heritage, culture, leisure and wellbeing.

The North Hertfordshire Local Plan

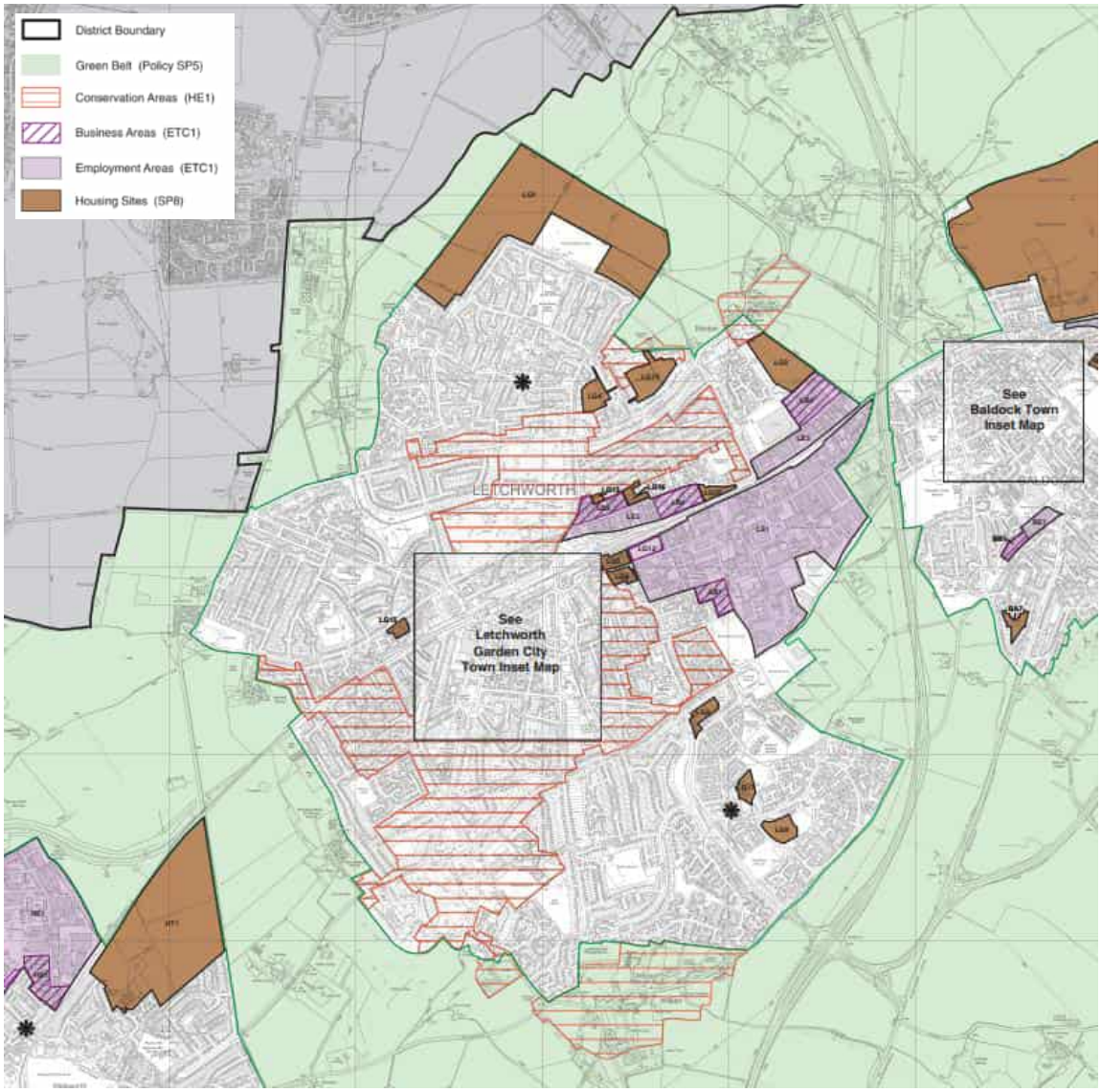
1.4 The North Hertfordshire Local Plan ("the Local Plan") was submitted to the Secretary of State in June 2017 and has been the subject of a long and complex examination. The initial Hearing Sessions took place between November 2017 and March 2018, and in 2019 the Council consulted on its proposed schedule of Main Modifications (MMs). Following this consultation, and a lengthy delay due to COVID-19 and the North Hertfordshire Extraordinary Council Meeting, additional Hearing Sessions took place between November 2020 and February 2021. Consultation on the Inspector's Further Main Modifications (FMs) ended in June 2021, and as of November 2021, the Inspector was in the process of writing his Final Report on the Local Plan examination.

1.5 The FMs confirm that Letchworth Garden City is expected to see the delivery of **1,928 homes** (c.15% of the District's total) between 2011 and 2031. This includes completions and planning permissions from the start of the plan period to date (totalling 693 homes), 600 homes at North of Letchworth, a further 585 homes at 11 other allocated sites, and 50 homes in the town centre broad location (see FMs 149 and 152). As set out within Policy SP8 (FM 057), the North of Letchworth Garden City allocation – Site LG1 – is anticipated to deliver approximately **600 homes in the plan period to 2031**, with a further 300 homes beyond the plan period.

1.6 Both Policy SP9 and site-specific Policy SP15 require a Strategic Masterplan to be produced for North of Letchworth by the landowner/applicant, in collaboration with the Council (see FMs 001, 005). Policy SP15 also confirms that the site will be expected to deliver a new 2FE primary school on site, neighbourhood retail and community facilities, a GP surgery and 9 plots for self-build housing. Provision of an appropriate site for a care home for older people, as proposed by

the MMs, is no longer required (see FM 005). The proposed site allocation for North of Letchworth is shown in Figure 1.1.

Figure 1.1 North of Letchworth Garden City allocation (Site LG1)



Source: North Hertfordshire Local Plan Policies Map (Submission Version)

Previous Work

1.7 This report follows a range of housing, employment and retail evidence previously undertaken by Lichfields on behalf of the Foundation in recent years to inform the North Hertfordshire Local Plan process, including:

1 LGCHF Economic Assessment of Growth Options (**November 2013**). This report undertook an assessment of the present socioeconomic position of Letchworth Garden City and an assessment of the impact of different scales of expansion;

2 LGCHF Economic Assessment of Growth Options Update (**April 2016**), which updated the 2013 report;

3 LGCHF Local Housing Study (**August 2016**). This report undertook a more detailed assessment of the current local housing market in Letchworth, reviewed the need for

affordable housing and undertook several further scenarios for future housing needs in the town; and

4 LGCHF Local Housing Needs Study (**March 2019**). This report summarised the housing market context for Letchworth and analysed the findings of a housing needs survey distributed to Letchworth residents in late 2018, to better understand future need.

Purpose & Structure of this Report

1.8 Now that the overall scale of housing in Letchworth has been established through the North Hertfordshire Local Plan (which has been informed by our previous work), there is no longer a need to consider the overall quantum of housing needed in Letchworth. The purpose of this report is to provide an up-to-date assessment of the mix of homes which are likely to be required in Letchworth in the future, in order to inform planning for the strategic site North of Letchworth.

1.9 The remainder of this report is structured as follows:

- **Section 2.0 Context** – Provides an updated contextual analysis of local demographic characteristics and housing market data, as well as up-to-date information on local household incomes for Letchworth Garden City;
- **Section 3.0 Assessment of Overall Future Growth** – Sets out an estimate of overall household growth by type, using official projections from PopGroup demographic modelling software;
- **Section 4.0 Assessment of Market Demand** – Analyses current occupancy patterns alongside projected change in households by type to understand the likely demand for market housing by size;
- **Section 5.0 Assessment of Affordable Housing Need** – Analyses the current and future need for affordable housing in Letchworth by size, based on previous survey findings, Housing Register data and household growth by type and income;
- **Section 6.0 Wider Market Analysis** – Reviews nearby strategic sites to identify trends in housing provision and potential gaps; and
- **Section 7.0 Summary & Conclusions** – Sets out the findings of the assessment and draws out implications for the housing mix to be provided within the North of Letchworth allocation.

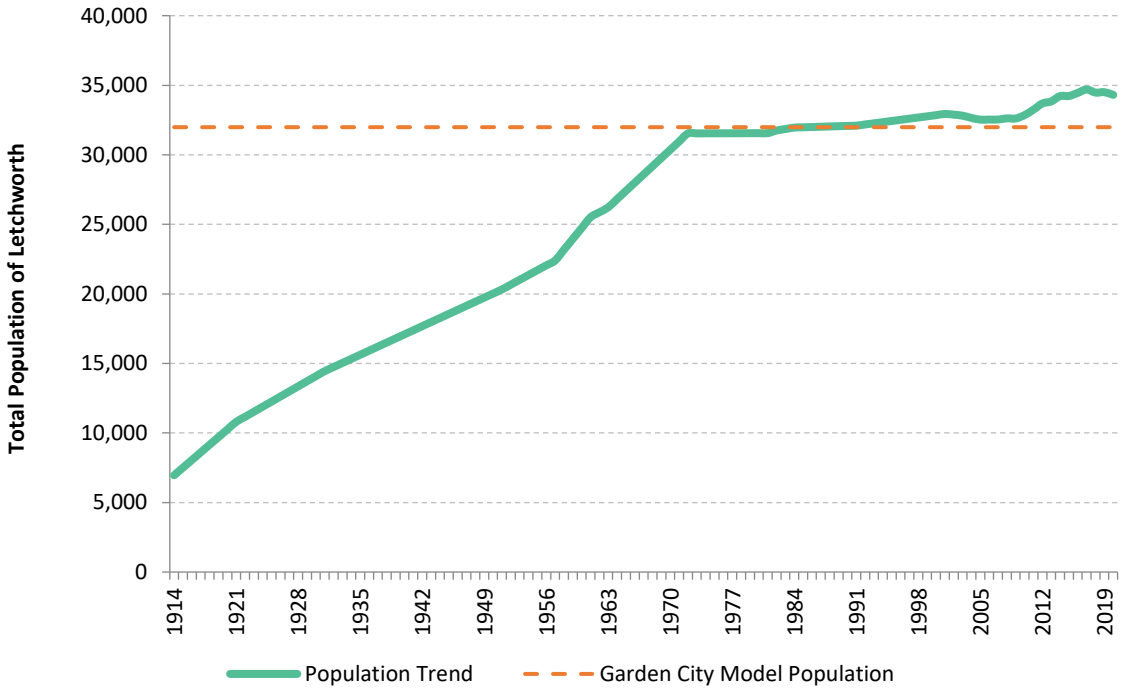
2.0 Context

2.1 This section sets out the general context for housing in Letchworth, focusing on local demographic and housing market characteristics. It provides an understanding of trends in the area and an informative basis on which future need can be analysed.

Population

2.2 Letchworth's population grew steadily from around 5,000 in 1911 to around 32,000 by 1971. This was driven by the original development of Letchworth as a Garden City, with various extensions taking place in the 1940s, 1960s and early 1970s. After 1971, population growth was almost flat, and reached 33,000 30 years later in 2001. The town has seen more population growth in the last recent years than was seen in the 1970s, 1980s and 1990s, as shown in Figure 2.1, likely due to housing development.

Figure 2.1 Total Population Change in Letchworth – 1911 to 2020



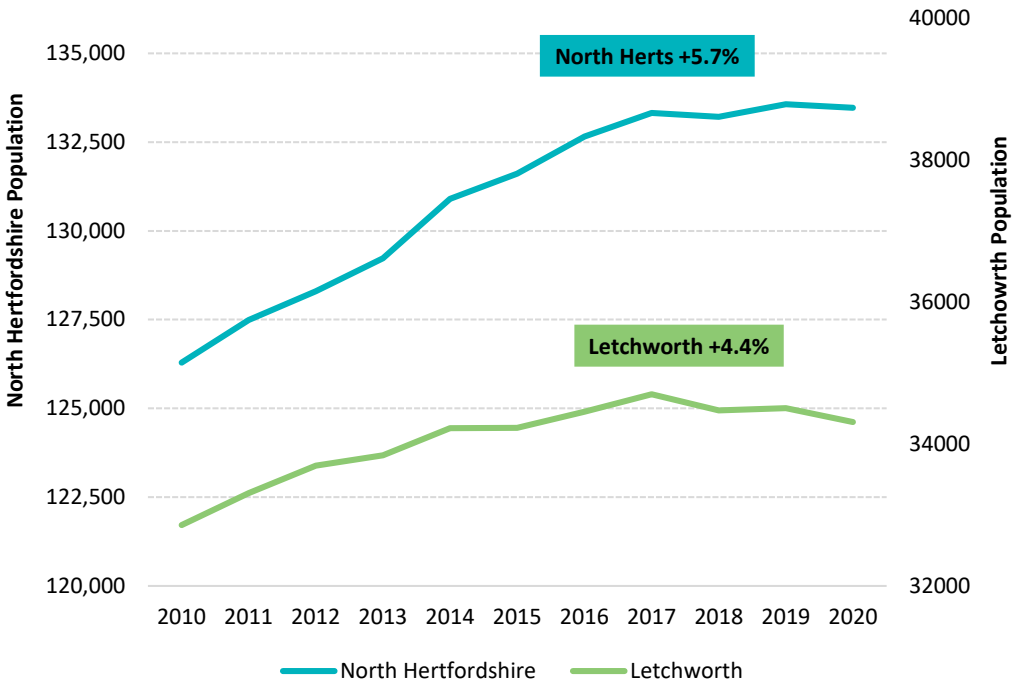
Source: Lichfields based on ONS population estimates

2.3 In the last 10 years, the total population of Letchworth[1] has grown by 1,450 people, an increase of 4.4%. In comparison, the population of North Hertfordshire has grown by 5.7% over the same period, and England by 7.4%. As shown in Figure 2.2, the population growth in Letchworth has not been a gradual year-on-year increase, with the population fluctuating slightly over this period. In 2017, the population of Letchworth peaked at 34,697 people and this has since decreased to 34,308 people in 2020. This suggests that the population of Letchworth is not keeping pace with the region and nation as a whole, and that additional housing is needed to reverse the declining trend.

2.4 Letchworth currently represents just over one-quarter (26%) of North Hertfordshire's total population of 133,463.

[1] All demographic characteristics for Letchworth are based on the parish boundary or the five MSOA's comprising North Hertfordshire 003, 006, 007, 008 and 009.

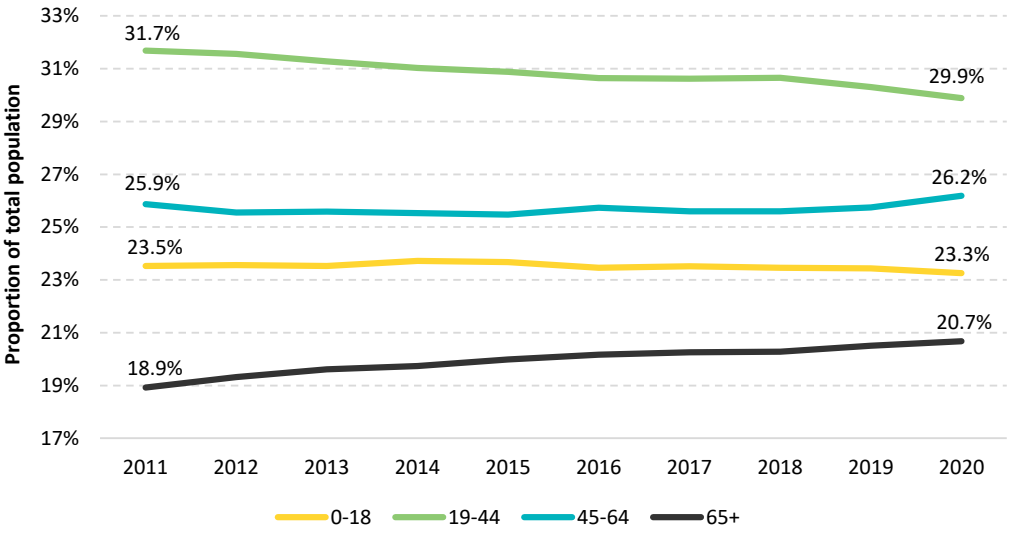
Figure 2.2 Total Population - North Hertfordshire and Letchworth: 2010 to 2020



Source: Lichfields based on ONS population estimates

2.5 The provision of new housing in the town in recent years appears to have helped attract families to the area. This is evident from the proportion of children living in Letchworth remaining constant over recent years, as shown in Figure 2.3. There has been a decline in the proportion of residents aged 19-44, which is likely to be associated with younger adults moving away to attend university and/or for employment opportunities in larger nearby cities, such as London and Cambridge. The town also reflects wider national trends around ageing, with the proportion of those aged 65 and over increasing by 12.6% between 2011 and 2020 compared to an overall population growth in Letchworth of around 3% over the same period.

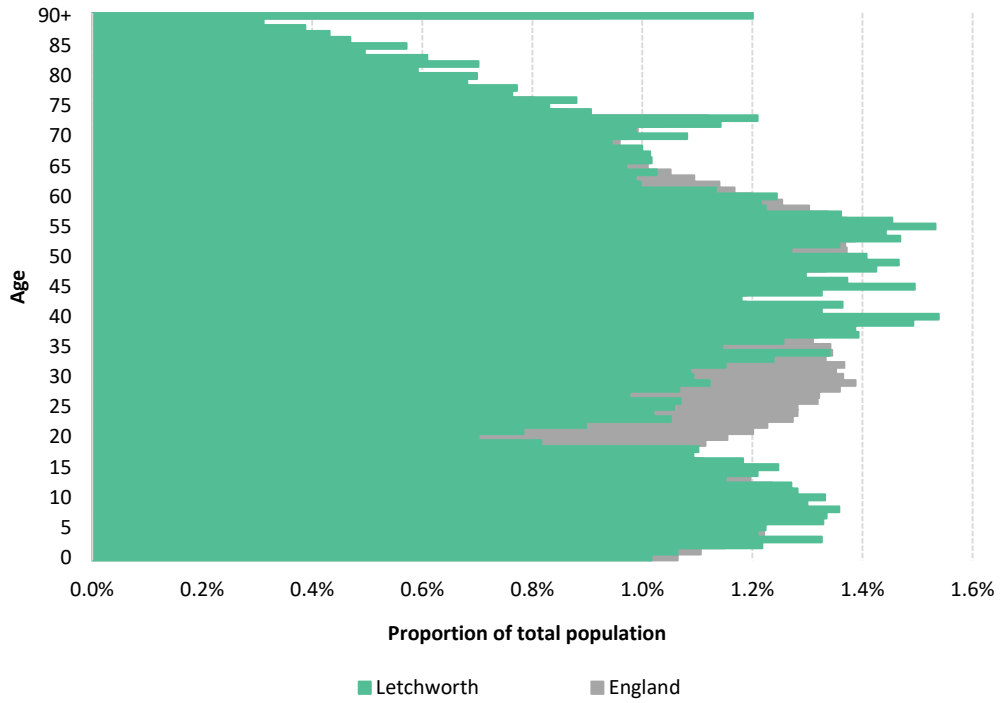
Figure 2.3 Recent changes in population by broad age group - Letchworth 2011-2020



Source: Lichfields based on ONS population estimates

2.6 Figure 2.4 and Table 2.1 show that as of 2020, the population of Letchworth is characterised by a higher proportion of younger (0-18) and older (65+) residents compared to both national and district averages. In turn, there is a notable difference in the proportion of younger working age groups, with Letchworth having a much lower proportion of residents aged around 19-44 compared to the national average.

Figure 2.4 Age Structure (2020) - Letchworth and England



Source: Lichfields based on ONS population estimates

Table 2.1 Population structure by broad age group – Letchworth, North Hertfordshire and England (2020)

Age	Letchworth	North Hertfordshire	England
0-18	23.3%	22.8%	22.5%
19-44	29.9%	30.7%	33.4%
45-64	26.2%	27.2%	25.6%
65+	20.7%	19.4%	18.5%

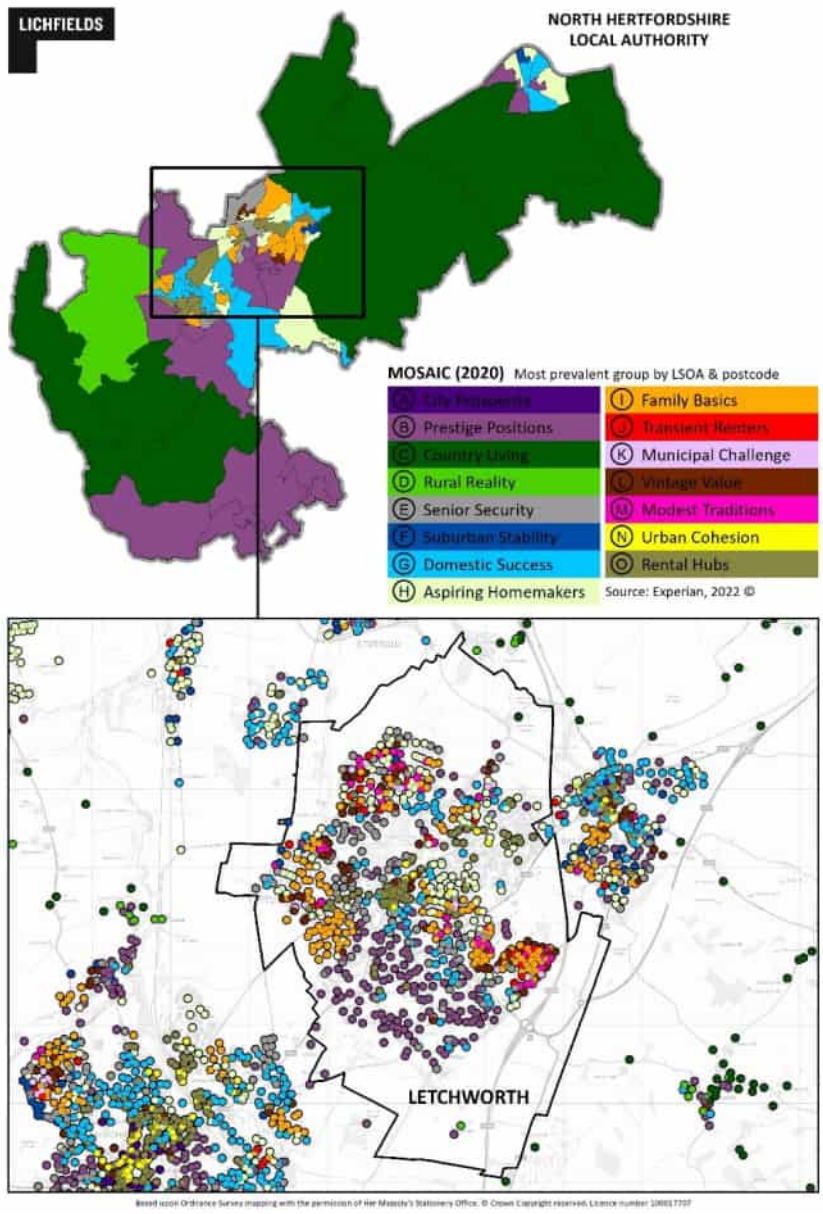
Source: Lichfields based on ONS population estimates

Socio-Economics

Socio-economic groups in the district

2.7 A more detailed understanding of socio-economic groups can also indicate the types of households living in the local area. Experian Mosaic is a tool that uses a wide range of data to allocate households into one of fifteen summary groups; the individuals within these groups are similar in specific ways, such as age, interests, household income and life-stage. This information allows a better understanding of the current demographic profile as well as future household needs. Figure 2.5 shows all Mosaic Groups across North Hertfordshire and within Letchworth, while Table 2.2 illustrates the number and proportion of households in North Hertfordshire within each of the Mosaic Groups as of 2020.

Figure 2.5 MOSAIC Summary Groups: North Hertfordshire and Letchworth (2020)



Source: Lichfields based on Experian Mosaic data (2020)

Table 2.2 Number and Proportion of households in each Mosaic Group – North Hertfordshire

Mosaic Group	Households (%)	Households (Number)
Domestic Success	18.2%	10,452
Prestige Positions	14.4%	8,277
Aspiring Homemakers	13.3%	7,638

Source: Lichfields based on Experian Mosaic data (2020)

2.8 This data shows that the most prevalent groups in North Hertfordshire are 'Domestic Success', 'Prestige Positions' and 'Aspiring Homemakers'. Representing almost one-fifth of all households across the district, the Domestic Success group consists of thriving families aged 36-45 living in upmarket homes, who are busy raising children and pursuing careers. As the next most prevalent groups in the district, Prestige Positions households are characterised by established, older (aged 56-65) families who own large homes and live upmarket lifestyles, and Aspiring

Homemakers comprise younger households aged 26-35 on lower-incomes settling down in smaller homes.

2.9 Around one-third of the population in the district is therefore characterised by wealthier, working-age households living in large housing. The high proportion of Prestige Positions households also suggests that there are lots of wealthy households approaching retirement age, currently living in large housing supporting older children. This group represents the future market for downsizing into housing that better suits their needs. In Letchworth, Figure 2.5 shows that there is also a notable quantity of 'Family Basics' and 'Transient Renters' – reflecting the high proportion of affordable housing within the town (see Figure 2.7).

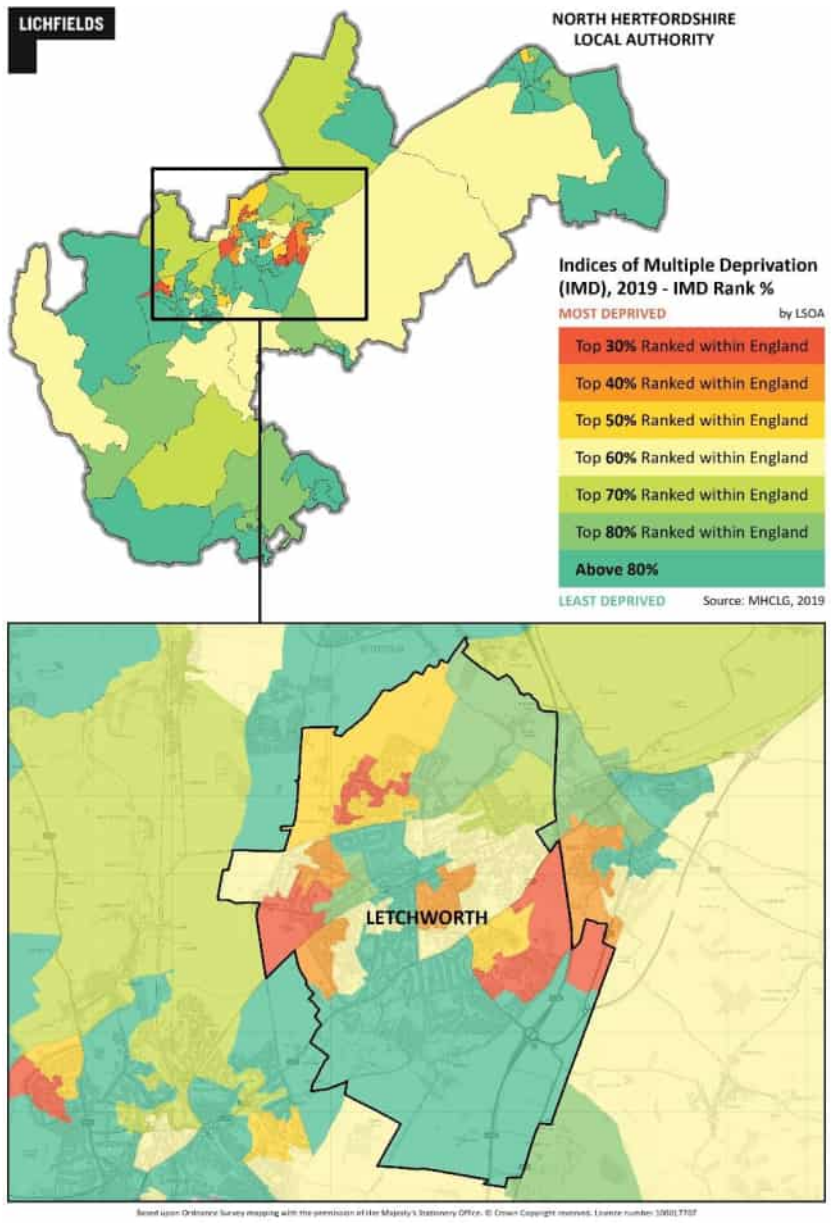
Deprivation

2.10 Deprivation at the local level is measured by the Indices of Multiple Deprivation (IMD), which uses several datasets to rank areas across seven distinct domains of deprivation, including income, employment, education, health, crime, living environment and barriers to housing and services. The latest overall deprivation rank[2] shows that out of 317 local authorities in England, North Hertfordshire is ranked as the 269th most deprived; this means that it sits within the 15% least deprived local authorities nationally.

2.11 However, Figure 2.6 shows that within North Hertfordshire there is wide variation across the district. The majority of the district sits within the lesser deprived range, and it is the urban areas around Letchworth and Hitchin where most variability – and higher rates of deprivation – are seen. Looking solely at the town of Letchworth, this includes areas at all ranges of the IMD rank, from the most 30% deprived to the least 20% deprived.

[2] English Indices of Deprivation (2019), Ministry of Housing, Communities and Local Government (MHCLG), available here

Figure 2.6 Indices of Multiple Deprivation - North Hertfordshire and Letchworth



Source: Lichfields based on IMD (2019)

Income and earnings

2.12 The average (median) household income in Letchworth in 2021 is just under £36,000; this is 10% higher than the national average of £32,500 as shown in Table 2.3 below. This in income from all sources (earnings, pension, investments, benefits, etc).

Table 2.3 Household Income - 2021

	Letchworth	UK	Difference
Lower Quartile	£20,122	£18,066	+11%
Median	**£35,951**	**£32,549**	**+10%**
Upper Quartile	£58,235	£53,685	+8%

Source: CACI

2.13 Weekly workplace earnings in North Hertfordshire are over £110 lower than resident earnings as shown in Table 2.4, which shows that residents living in the district commute out to better paying jobs elsewhere. This includes large employment centres such as Cambridge, Milton Keynes and Watford, as well as Greater London. The same is true of the East region as a whole, which has workplace earnings of £602 and workplace earnings of £629; this reflects the influence of London, which attracts workers from the region and offers better wages than local jobs.

2.14 Both workplace and resident earnings in North Hertfordshire are higher than the national and regional averages, which aligns with household income data which suggests higher incomes in Letchworth compared with the UK.

Table 2.4 Weekly earnings (gross) for full-time workers, median

	Workplace		Resident	
	Weekly earnings, 2021	10-year change (2011-21)	Weekly earnings, 2021	10-year change (2011-21)
North Hertfordshire	£653	35%	£766	24%
East	£602	23%	£629	20%
England	£613	22%	£613	22%

Source: ONS Annual Survey of Hours and Earnings

Local housing market

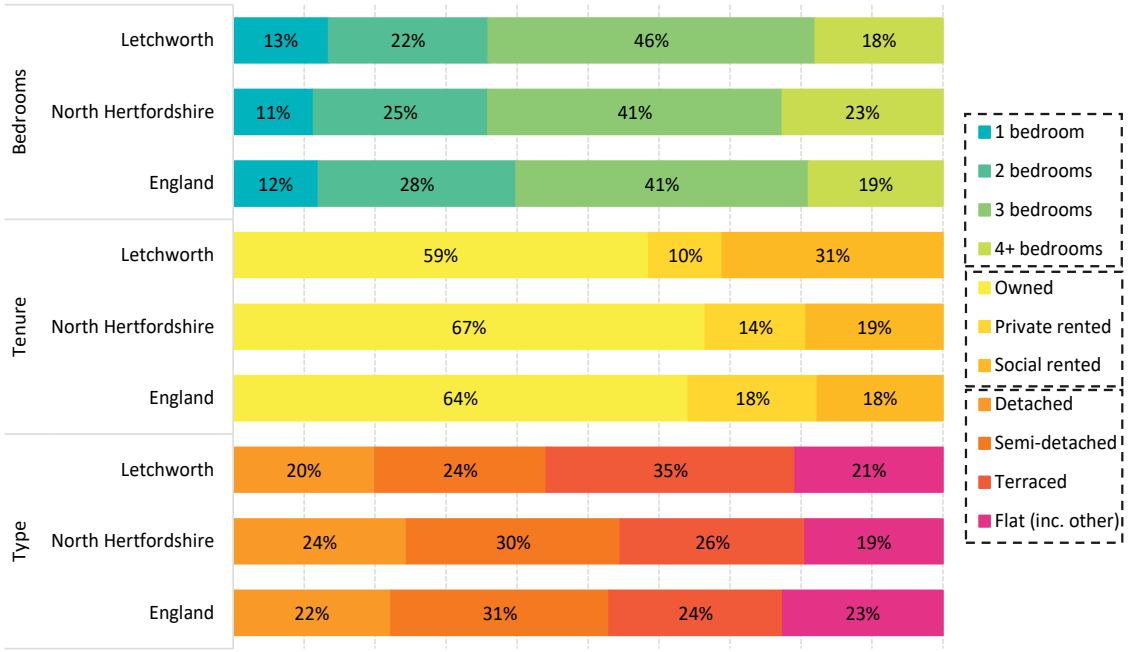
2.15 As recognised by the emerging plan, it is important that the size and mix of homes delivered reflect the changing demographic and economic make-up of Letchworth. This section provides a high-level assessment of the some of the housing market characteristics in the local area, including a comparison of the local area with the wider district.

Housing stock

2.16 Across Letchworth, over half (56%) of all homes comprise flats or terraced housing. This is slightly higher than the proportion (45%) for North Hertfordshire as well as the national proportion (47%) and reflects the primarily urban and suburban setting of Letchworth, with detached and semi-detached properties less common. This is shown in Figure 2.7. In particular, the high proportion of terraced homes in Letchworth (35%) presents a notable deviation from the local and national averages, which both sit around 10% lower. The disparity between North Hertfordshire and Letchworth is primarily a function of the local area – with Letchworth being one of the district's key (and only) towns, it will have a smaller housing stock overall (with more smaller homes and flats).

2.17 Notwithstanding the higher proportion of terraced housing, households in Letchworth typically live in larger homes compared to the national average. Figure 2.7 shows that Letchworth has the highest proportion of 3-bedroom properties, which comprise 46% of all homes in the town, compared to 41% across both North Hertfordshire and England. Conversely, Letchworth has the lowest proportion of 2-bedroom properties (23%) in comparison to the district (25%) and national (28%) averages. Overall, 35% of homes in Letchworth comprise smaller properties (1 and 2 beds), while across England this is 40%.

Figure 2.7 Housing stock by type, tenure and size - Letchworth, North Hertfordshire and England



Source: Census 2011 (QS411EW, KS402EW and KS401EW)

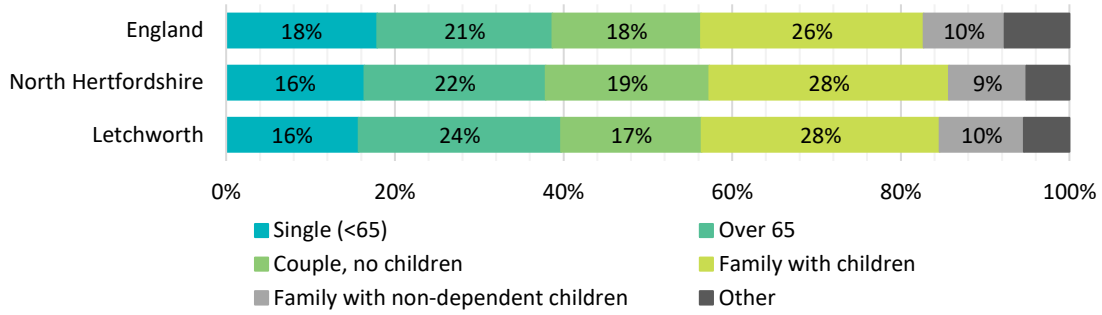
2.18 The proportion of households in Letchworth who own their home – either outright or with a mortgage/loan – is notably lower than the district and national averages, with a combined figure of 59% compared to 67% and 64% respectively. This is due to the high proportion of households in Letchworth living in social rented housing, which represents almost a third (31%) of all households in the town. Figure 2.7 also shows that there is a discernible difference in the proportion of households available for private rent, with a much lower proportion of privately rented homes in Letchworth.

2.19 Lichfields previous research[3] for the Foundation has found that local residents in Letchworth typically perceive the available stock of affordable housing positively, noting that there is a good availability of social rented housing at acceptable rent levels. This mirrors the fact that Letchworth has a notably high proportion of homes for affordable housing compared with other areas and the wider average.

2.20 The household composition of Letchworth is broadly similar to the district, regional and national averages, as shown in Figure 2.8. Families with children make up the largest group in Letchworth, representing around one-third of all households, which is the same as for North Hertfordshire. However, Letchworth does have a higher share of over 65 households and a smaller proportion of single households. This reflects the town's higher proportion of older residents as well as the smaller proportion of 1 and 2-bedroom properties (35% compared to 40% nationally, as shown in Figure 2.7).

[3] See Letchworth Garden City Local Housing Needs Study: Letchworth Garden City Heritage Foundation March 2019 (Lichfields) – for example, paragraph 6.6

Figure 2.8 Household composition of all households - Letchworth, North Hertfordshire and England



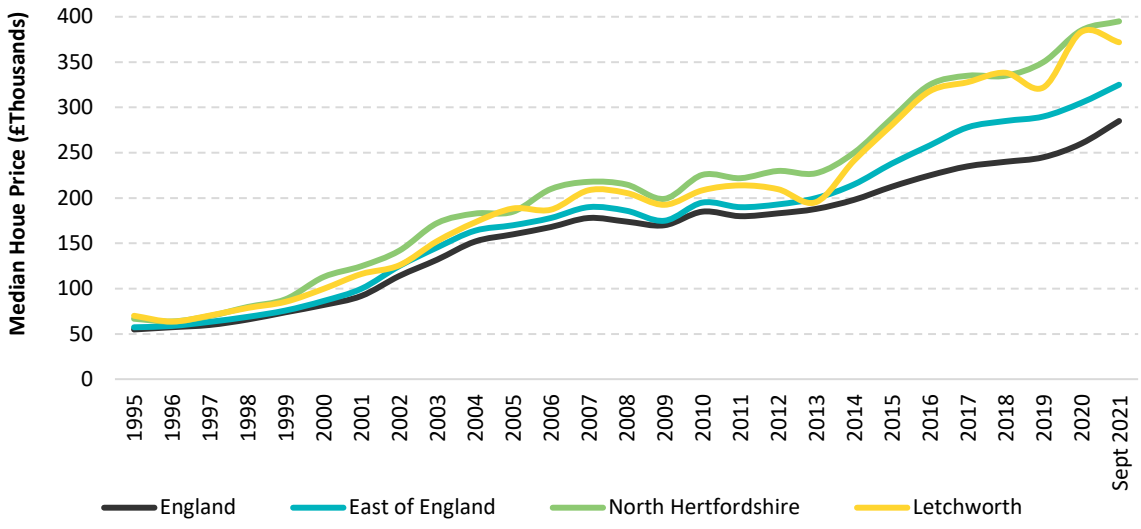
Source: Census 2011 (KS105EW). 'Other' households include those with dependent children (which are not one family only) and those comprising all full-time students. 'Other' households comprising all 65+ residents are included in the 'Over 65' category. 'Family' households include lone parent households.

House prices and affordability

2.21 As of September 2021, the average (median) price across all types and sizes of housing in Letchworth was £372,000. While prices in Letchworth are currently lower than they are district-wide, prices have risen faster, increasing by 44% over the last ten years compared to 42% in North Hertfordshire and 37% nationally.

2.22 As shown in Figure 2.9, prices in Letchworth and North Hertfordshire as a whole are significantly higher than the regional average as well as the national average; as of September 2021, the average (median) house price in Letchworth was over 30% higher (£87,000) than the average price in England. Figure 2.9 also demonstrates that this is a historic trend and that this gap in price has increased over time; in 1995, the average house price in Letchworth was only c.£15,000 higher than the national average (albeit this still represented a 27% increase).

Figure 2.9 Average (median) house prices from December 1995 to September 2021



Source: ONS House Price Statistics (HPSSA Datasets 2 & 9)

Table 2.5 Average (median) house prices - England, East of England, North Hertfordshire and Letchworth (Year ending Sept 2021)

	Median house price	10-year increase (£)	10-year increase (%)
England	£285,000	£105,000	37%
East of England	£325,000	£135,000	42%
North Hertfordshire	£395,000	£167,000	42%
Letchworth	**£372,000**	**£163,000**	**44%**

Source: ONS House Price Statistics (HPSSA Datasets 2 & 9)

2.23 An important indicator of housing affordability is the ratio of house prices to earnings. The ratio shown in Table 2.6 is calculated by dividing lower-quartile house prices by lower-quartile gross annual work-place based earnings. This measure of affordability indicates the extent to which people can afford to live where they work. A higher ratio indicates that on average, it is less affordable for a resident to purchase a house; conversely, a lower ratio suggests housing is more affordable in the area.

2.24 Based on the latest data (2021), the lower quartile affordability ratio for North Hertfordshire was 11.88, compared to 10.40 for the East region and 8.04 nationally. This means that full-time employees in North Hertfordshire – and Letchworth – could typically expect to spend around 12 times their earnings on purchasing a home in the district, which is almost 50% more than the amount needed across England. As shown in Table 2.6, housing affordability has worsened in all areas over the last 3 years, although the ratio has risen faster across both England (10.7%) and the region (8%) than in North Hertfordshire (6.8%).

Table 2.6 Lower quartile affordability ratio: England, East of England, North Hertfordshire – 2019 to 2021

	2019	2020	2021
England	7.26	7.18	8.04
East of England	9.63	9.59	10.40
North Hertfordshire	11.12	11.14	11.88

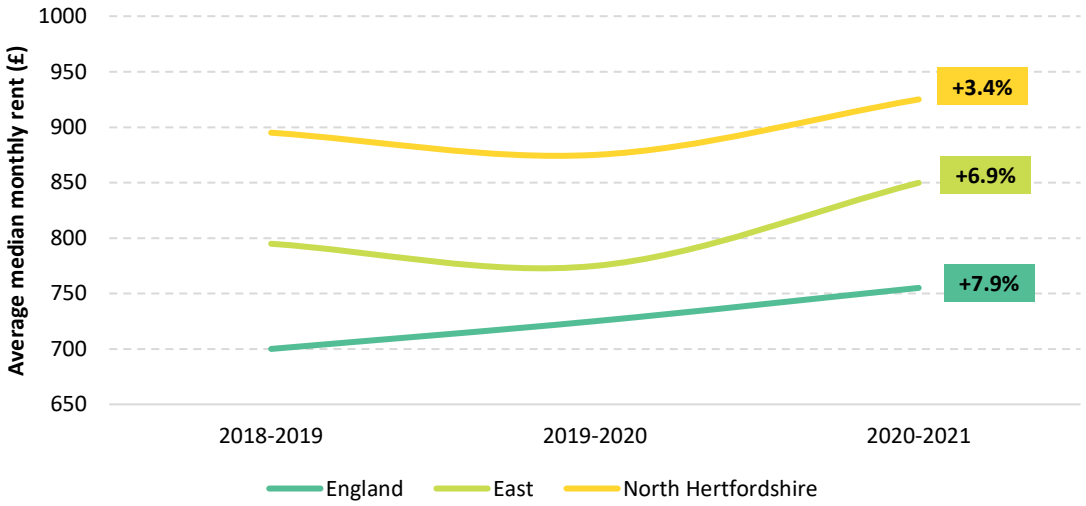
Source: ONS Ratio of house price to workplace-based earnings

Rents

2.25 It is also important to look at rental prices within the district, given that nearly half (41%) of all households in Letchworth are for rented tenures (refer to Figure 2.7) and that renting is typically the most common tenure among those with the lowest incomes. As shown in Figure 2.10, the median monthly rent recorded between October 2020 and September 2021 was £925 for North Hertfordshire, compared to £850 across the East and £755 in England. Rents in the district are therefore significantly higher than wider regional and national averages. Nevertheless, Figure 2.10 also shows that rents are increasing at a slower rate in North Hertfordshire, with prices rising by 3.4% over the last 3 years compared to 6.9% regionally and 7.9% nationally.

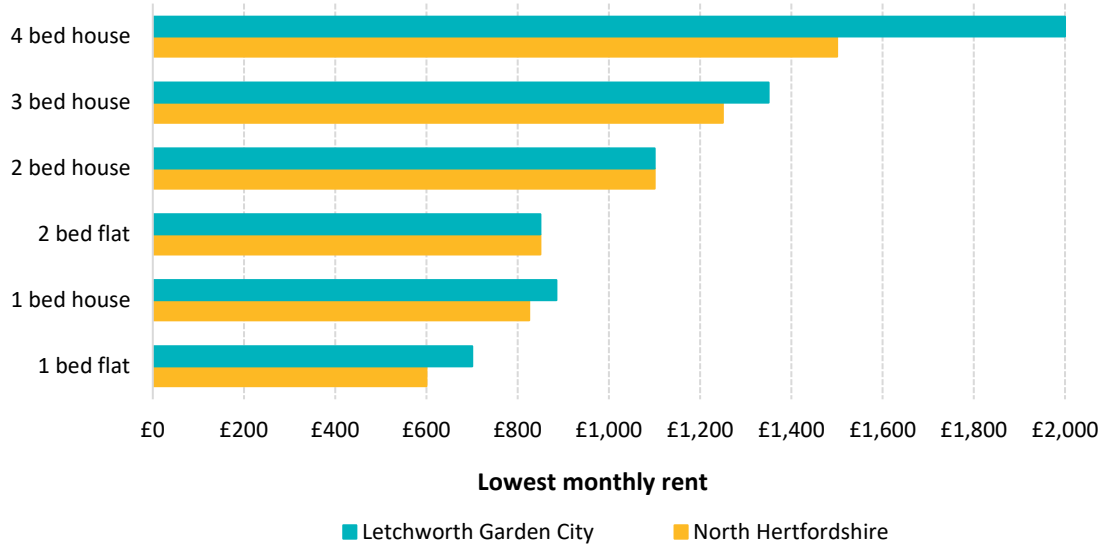
2.26 At a more local level, a search of properties currently listed for rent in Letchworth suggests that while there is not a significant difference in rental prices across the district, properties in Letchworth are more expensive than the district as a whole. As shown in Figure 2.11, the lowest monthly rent for 1-bed properties currently available in Letchworth is £60-100 higher than the cheapest 1-bed properties in North Hertfordshire, and the lowest monthly rent for a 4-bed property in Letchworth is £500 higher.

Figure 2.10 Average monthly (median) rental prices: North Hertfordshire, East of England and England - 2018 to 2021



Source: ONS Private Rental Market Statistics available here

Figure 2.11 Lowest monthly rental prices currently available: Letchworth Garden City and North Hertfordshire



Source: Lichfields based on a search of RightMove (May 2022)

Summary

2.27 By the mid/late-2000's, Letchworth Garden City was seeing relatively little population and housing growth. In recent years, this has picked up which led to the town's population reaching a peak of just under 35,000 in 2017. Still, the town has seen a much slower rate of growth compared to the district as a whole and its population has started to decline over the last 3 years. The town also reflects wider trends of ageing and has a higher share of older residents than national averages.

2.28 The most prevalent household groups across the district comprise wealthier, working-age households living in large housing. In particular, there is a high proportion of wealthy households approaching retirement age, currently living in large housing. This reflects the fact that incomes and earnings of residents are higher in Letchworth and North Hertfordshire than

national and regional averages, as well as the district sitting within the least 15% deprived local authorities nationally.

2.29 Households in Letchworth typically live in larger, 3-4 bed homes compared to the national average, with this representing 65% of all homes in the town. Letchworth also has a significantly higher proportion of social rented homes compared to the district and national averages, with 31% of households in social rented housing as of 2011. Nevertheless, the town has a larger proportion of over 65 households and a smaller proportion of single households than wider averages, suggesting that residents living in Letchworth are under-occupying homes.

2.30 While house prices are currently lower in Letchworth than they are district-wide, they have increased at a higher rate over the last ten years and still sit significantly higher (30%) than the national average. Conversely, the lowest private rents appear to be higher in Letchworth than across the district. In line with wider trends, housing affordability has generally worsened in recent years, and those working in North Hertfordshire can now typically expect to spend around 12 times their earnings on purchasing a home in the district.

3.0 Assessment of Overall Future Growth

3.1 As previously outlined, the overall scale of housing growth for Letchworth over the next 10-15 years has now been established in the North Hertfordshire Local Plan. This section sets out the scale of population growth which is likely to be generated by this level of housing growth, based on demographic modelling undertaken with PopGroup. This population and household growth underpins further analysis in this report on the types of housing required.

3.2 **Future growth is assessed over the period 2020 to 2035**; 2020 reflects the most recent mid-year population estimates and 2035 is when the Foundation anticipates that all housing growth planned for Letchworth in the North Hertfordshire Local Plan will be completed.

Scale of housing growth

3.3 The 2020/21 year saw 152 housing completions in Letchworth, as set out in the North Hertfordshire Annual Monitoring Report. This comprises a mix of sites which are allocated in the emerging plan which are already delivering and other small-scale windfalls.

3.4 The North Hertfordshire Local Plan allocates a number of sites in Letchworth for housing, the largest site being LG1 Land North of Letchworth, which accounts for over half of all housing delivery in Letchworth and is allocated for 900 new homes. This is anticipated to begin delivery in 2025/26 and take c.10 years to deliver[4]. Other notable housing allocations in Letchworth include LG2 Land east of Kristiansand Way and Talbot Way (120 dwellings, not yet commenced), LG5 Land at Birds Hill (86 dwellings) and LG8 Pixmore Centre (80 dwellings).

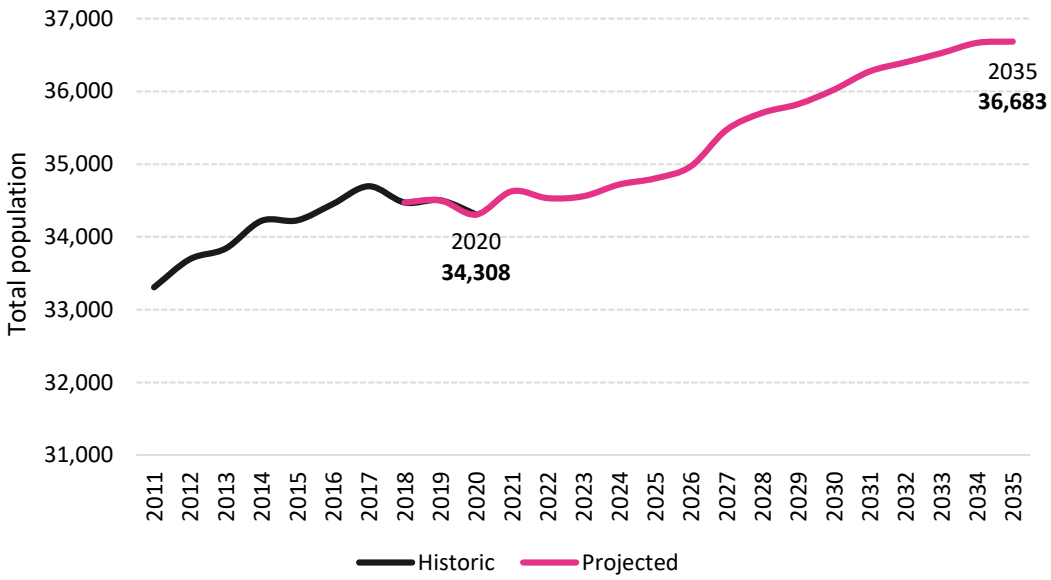
3.5 In total, over the period 2020 to 2035 (including completions in 2020/21) Letchworth is anticipated to see **1,613 new homes**. This represents an 11% increase on the 14,271 dwellings recorded in the 2011 Census (although the number of homes in Letchworth as of 2020 is likely to be slightly higher, owing to completions in the 2011-20 period). This differs to the number of homes reported in the North Hertfordshire Local Plan, because the Local Plan covers the period 2011 to 2031, compared with 2020 to 2035 in this analysis, however both are based on the same sites so are consistent.

Population growth

3.6 As of 2020 Letchworth's population stands at 34,308. Based on a trajectory of around 1,600 new homes in the town by 2035, the population would be expected to grow by 7% to a population of 36,683 as shown in Figure 3.1. Growth would be broadly steady, albeit would accelerate upon commencement of North Letchworth in 2025/26, which accounts for 900 of the total 1,600 homes. Importantly, this scale of growth would help to reverse the population decline which Letchworth has seen in recent years.

[4] Full details of the housing trajectory assumed for this modelling are set out in Appendix 1. These assumptions are based largely on the latest housing trajectory published by North Hertfordshire District Council (April 2021) but with adjustments to some sites to reflect the views of the LGCHF about the likely timing of these sites. The overall quantum of delivery to 2035 in Letchworth reflects that set out in the emerging plan.

Figure 3.1 Projected population growth based on housing trajectory



Source: Lichfields analysis using PopGroup

3.7 As with most parts of England, falling birth rates, increasing life expectancy and falling levels of migration mean that Letchworth's population will age in the future, with the average age of residents increasing from 42.6 years in 2020 to 44.3 years by 2035 as shown in Table 3.1. Over 65's are projected to be the fastest growing age group, increasing by 20% over the period. This compares with just 7% growth in the working age population (19-64). The number of secondary school age children is expected to remain broadly stable, but the number of primary school age children is expected to decline. This is due to a combination of falling birth rates and because of a historic lack of growth amongst younger adults in Letchworth; the town has typically been a place which sees significant out-migration of young adults who move elsewhere for university or employment opportunities. Still, the provision of housing at scale will help to stem the decline in the number of primary school age; our previous assessments for different growth options for the town showed that with no (or very little) housing growth, the decline in the number of children would be far more substantial than this.

Table 3.1 Change in population age structure - 2020 to 2035

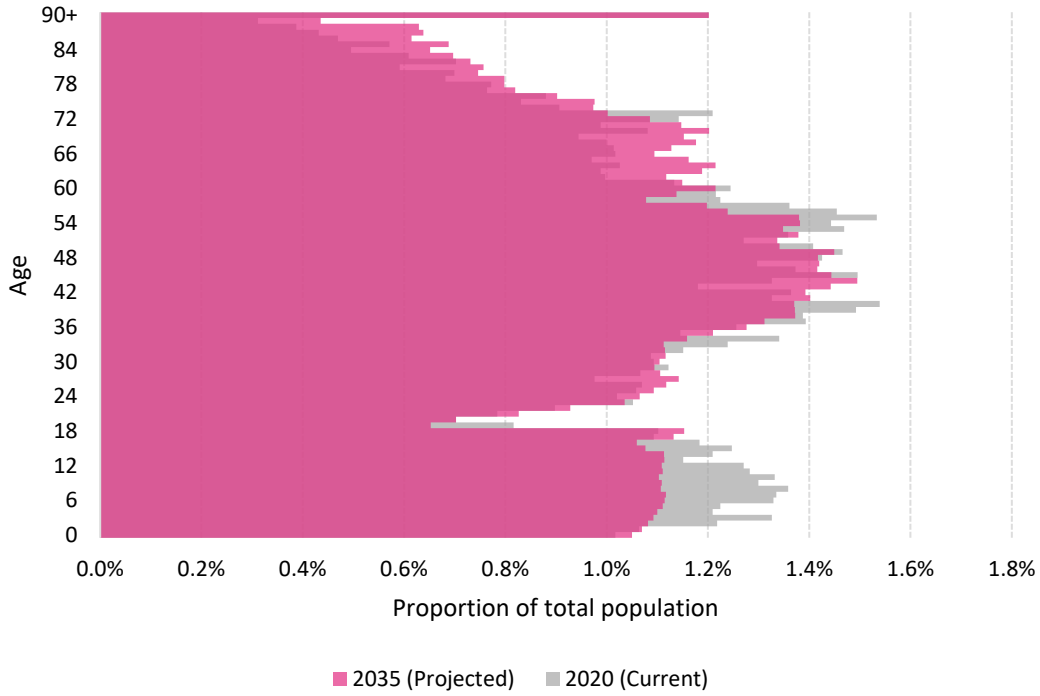
	2020	2035	Change	Change (%)
0-4	2,002	1,979	-23	-1%
5-11	3,143	2,851	-292	-9%
12-18	2,833	2,846	13	0%
19-64	19,237	20,494	1,257	7%
65+	7,093	8,513	1,420	20%
Total	**34,308**	**36,683**	**2,375**	**7%**
Average (median) age	*42.6 years*	*44.3 years*	*+1.7 years*	*+4%*

Source: Lichfields analysis using PopGroup

3.8 The changing population age structure is also shown in Figure 3.2. The decline in the number of children is evident, and the town is likely to continue to see out-migration of young adults, albeit there is expected to be some growth amongst those age 25-35 as a result of new housing encouraging more in-migration than historically. Patterns of ageing are also indicated by the

increasing proportion of older people, particularly those aged around 60-70. This changing population structure will affect Letchworth's household structure, which is explored below.

Figure 3.2 Change in age structure - 2020 to 2035



Source: Lichfields analysis using PopGroup

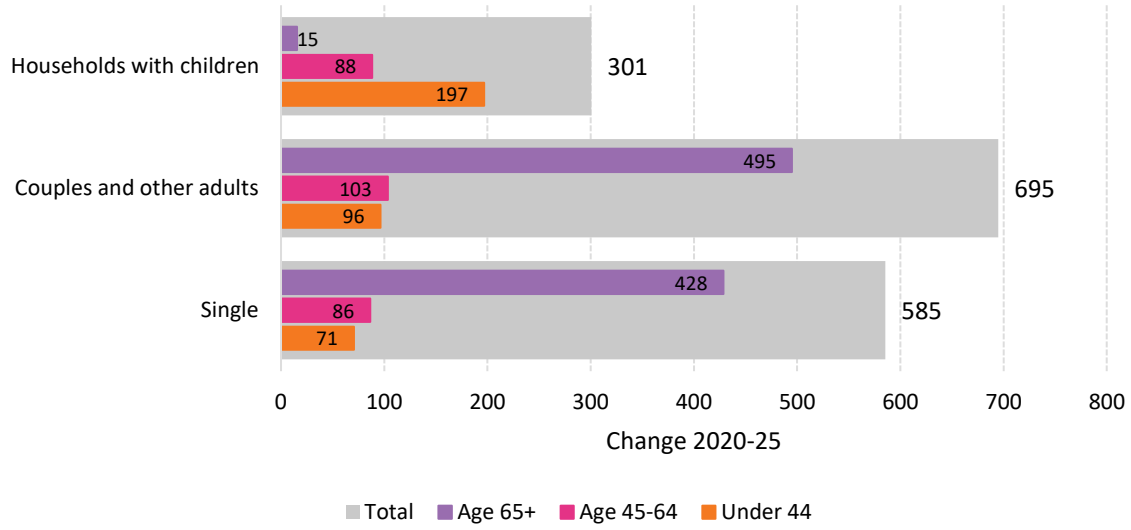
Household growth

3.9 Based on the scale of population growth and the changing demographic profile, the change in households can also be assessed using household projections. These provide household representative rates – the rate at which people of a given age group are expected to form households of varying types – for North Hertfordshire, which are applied to Letchworth[5].

3.10 As shown in Figure 3.3 Letchworth is projected to see growth across a range of household types to 2035, albeit couples and single people over age 65 are a key driver of change, reflecting trends of ageing. There is projected to be growth of 301 families (households with children), of which most are in the under 44 age group. These trends will drive the different types, sizes and tenures Letchworth is likely to need in the future, which is explored in Section 4.0.

[5] Source: ONS 2018-based Household Projections. An allowance is made for the population not living in households – for under 75s this is taken from the Census for Letchworth; for over 75s the rate for North Hertfordshire in the projections is applied.

Figure 3.3 Projected change in households by age and type - 2020 to 2035



Source: Lichfields analysis using PopGroup

Summary

3.11 Letchworth is expected to see c.1,600 new homes built over the next 15 years which will help reverse the recent trend of population decline and see the town's population grow to nearly 37,000 by 2035. Older people will be the fastest growing age group (in line with wider trends) but there is also expected to be a modest level of growth amongst the working age population. These trends are reflected in household growth, which will largely be driven by elderly people albeit with some growth in the number of families, and (to a lesser degree) younger couples and single people.

4.0 Assessment of Market Demand

4.1 Section 3.0 established the scale and nature of projected population and household growth in Letchworth to 2035, based on planned housing growth. Based on that analysis, this section seeks to understand the likely demand for market housing by size and type.

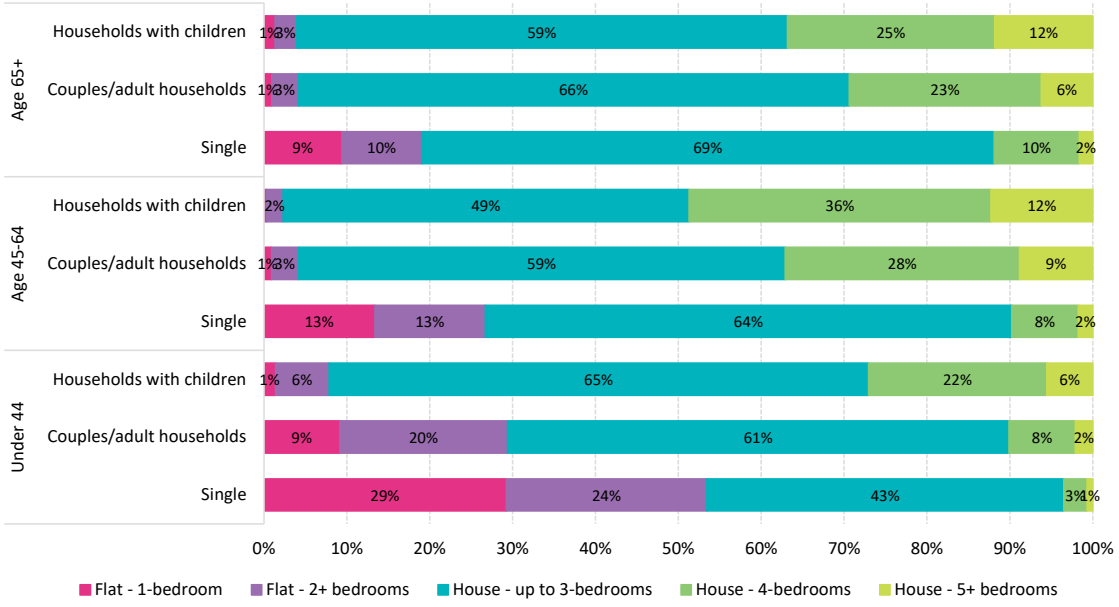
Occupancy patterns

4.2 Understanding occupancy within the market sector is key to understanding future housing demand; this is because in the open market households are able to occupy housing in line with what they can afford, which is often much larger than they would 'need' according to bedroom standards[6]. For the purposes of this analysis 'market' incorporates owner-occupiers (including shared ownership), private renters and those living rent free. This is different to the affordable sector, where households are typically allocated housing closely aligned to their needs (in part, this is also due to the so-called 'bedroom tax' which seeks to minimise under-occupancy within the sector).

4.3 The 2011 Census provides a range of different data showing occupancy patterns. The most detailed patterns of occupancy (broken down by tenure, housing type and size, for household types and ages) for North Hertfordshire are shown in Figure 4.1. Homes with up to 3-bedrooms are the most common type of housing amongst most households, especially amongst older households where 69% of single people and 66% of couples live. Fairly few older households in the market sector live in flats; this is because many older people (especially couples) will be living in family homes which they have occupied for a long time, likely where children have previously lived.

4.4 It also clearly shows the changing preferences of households as they age, with older families (age 45-64) occupying much larger homes than younger families. Similarly, the majority of young single people live in flats and this declines with age.

Figure 4.1 Occupancy patterns (**market** households) - North Hertfordshire, 2011



Source: Census 2011 (CT0345 Age of Household Reference Person by household composition by tenure by bespoke accommodation type by number of bedrooms). Excludes those living in caravans or temporary structures.

[6] Overcrowding as used by ONS for Census purposes is as per the Housing (Overcrowding) Bill 2003, summarised here.

Future demand

4.5 By applying current occupancy patterns (by age and household type) to future growth we can assess the net change over the next 15 years. The inherent assumption is that in the future, households will occupy housing in a similar way to which they do now. Whilst this provides a useful starting point for housing mix policy, the Foundation will need to consider the degree to which changing preferences, economic circumstances, and other policy objectives, may affect the types and sizes of housing offered in Letchworth. For example:

1 Increased trends for working from home and/or policy objectives to attract more families may suggest larger homes may be more appropriate;

2 If the Foundation was actively seeking to encourage right-sizing amongst older households by providing a better choice of housing suitable for elderly people, this may suggest a mix skewed more toward smaller homes may be appropriate (because this would be expected to free up existing family housing and mean the older households occupy smaller housing in the future than they do now).

4.6 To assess future demand, firstly it is necessary to separate out the proportion of households living in market housing. This is because households of different ages and types have different propensities to live in market housing (as opposed to affordable housing); for example the Census shows that across North Hertfordshire* 90% of all couples households under age 44 live in market housing compared with 68% of single households over age 65. Because these households occupy housing in different ways, the profile of future household growth will affect the overall mix of housing.

4.7 Based on overall household growth of 1,581 to 2035, we would estimate that 1,235 of these households will live in market housing, based on current propensities of living in market housing seen across North Hertfordshire. This is shown in Table 4.1.

Table 4.1 Proportion of households living in market housing, by age and type - North Hertfordshire*, 2022

	Single person	Households with children	Couples and other adults
Proportion living in market housing			
Under 44	84%	73%	90%
Age 45-64	76%	87%	86%
Age 65+	68%	54%	84%
Applied to projected growth			
Household growth			
Under 44	71	197	96
Age 45-64	86	88	103
Age 65+	428	15	495
Total	**1,581****		
Estimated number living in market housing			
Under 44	59	144	87
Age 45-64	66	77	89
Age 65+	289	8	415
Total	**1,235**		

Source: Census 2011 (CT0345 Age of Household Reference Person by household composition by tenure by bespoke accommodation type by number of bedrooms). Excludes those living in caravans or temporary structures. *Analysis is based on the tenure split of households across North Hertfordshire because this data is not available for Letchworth. Whilst Letchworth has a higher overall proportion of households living in affordable housing than North Hertfordshire (and because future housing growth will be subject higher affordable housing requirements than current stock across North Hertfordshire), assuming this is distributed proportionally amongst households it will not affect the market mix outcome. **Household growth is slightly lower than housing growth (1,613 homes) because of an allowance for dwelling vacancy.

4.8 Having established the proportion of each of the different household types who are likely to be living in market housing, the occupancy patterns of these different household types, as shown in Figure 4.1 above, are applied. This is shown in Table 4.2.

Table 4.2 Assessment of future market demand by type/size - Letchworth, to 2035

		Split			Units			Total
		Single person	HHs w. children	Couples /other	Single person	HHs w. children	Couples /other	
Under 44	**Proportion living in market**	**84%**	**73%**	**90%**	**59**	**144**	**87**	**291**
	House - up to 3-bedrooms	43%	65%	61%	26	94	53	172
	House - 4-bedrooms	3%	22%	8%	2	31	7	40
	House - 5+ bedrooms	1%	6%	2%	0	8	2	10
	Flat - 1-bedroom	29%	1%	9%	17	2	8	27
	Flat - 2+ bedrooms	24%	6%	20%	14	9	18	41
Age 45-64	**Proportion living in market**	**76%**	**87%**	**86%**	**66**	**77**	**89**	**232**
	House - up to 3-bedrooms	64%	49%	59%	42	38	52	132
	House - 4-bedrooms	8%	36%	28%	5	28	25	59
	House - 5+ bedrooms	2%	12%	9%	1	9	8	18
	Flat - 1-bedroom	13%	0%	1%	9	0	1	10
	Flat - 2+ bedrooms	13%	2%	3%	9	2	3	13
Age 65+	**Proportion living in market**	**68%**	**54%**	**84%**	**289**	**8**	**415**	**712**
	House - up to 3-bedrooms	69%	59%	66%	200	5	276	480
	House - 4-bedrooms	10%	25%	23%	30	2	96	128
	House - 5+ bedrooms	2%	12%	6%	5	1	26	31
	Flat - 1-bedroom	9%	1%	1%	27	0	4	31
	Flat - 2+ bedrooms	10%	3%	3%	28	0	13	41

Source: Lichfields analysis using PopGroup and Census. May not sum due to rounding.

4.9 In total, this would suggest the majority of Letchworth's need (64%) is for homes with up to 3-bedrooms. This type of housing is most common in Letchworth at the moment, and typically offers enough flexibility to accommodate many households throughout their lifestages (e.g. as a couple, family with up to 2 children, and into retirement). There is a relatively small need for flats as young single people are expected to see amongst the lowest level of growth in the future. There is also a need for c.23% of new homes to have 4+ bedrooms, to cater to the demands of larger families with children.

Table 4.3 Indicative type/size mix for **market** housing - Letchworth, to 2035

	Flat - 1-bedroom	Flat - 2+ bedrooms	House - up to 3-bedrooms	House - 4-bedrooms	House - 5+ bedrooms
Units	68	96	784	226	60
Split (%)	**6%**	**8%**	**64%**	**18%**	**5%**

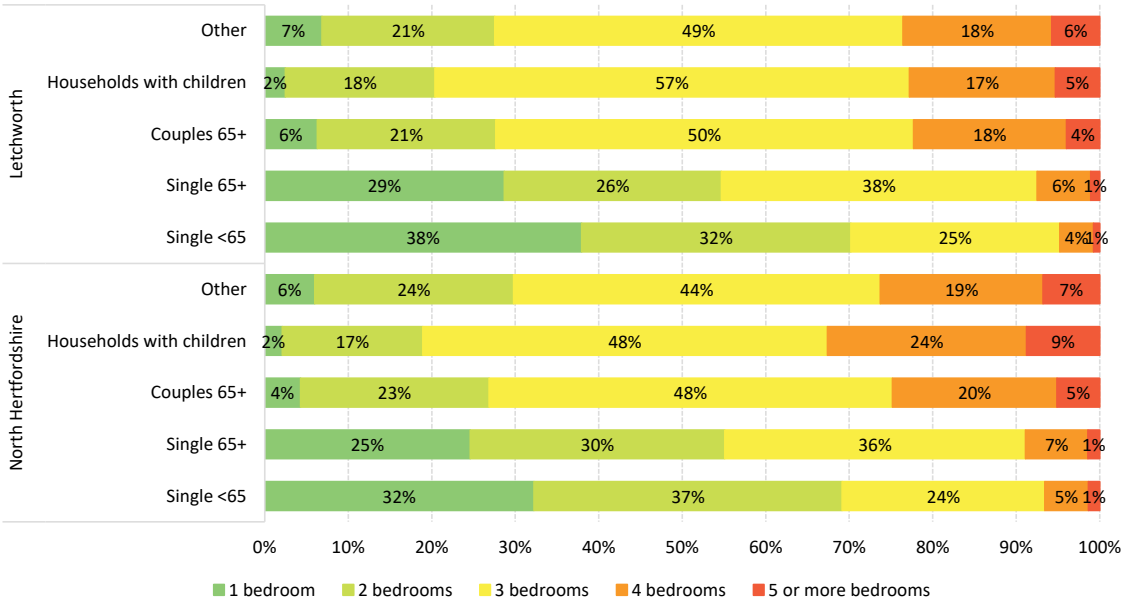
Source: Lichfields analysis. May not sum due to rounding.

Sensitivity testing

4.10 Other Census data provides a more local analysis of occupancy patterns, which is shown for Letchworth and North Hertfordshire in Figure 4.2. However, this local data is not broken down by tenure (hence refers to all households, including those in affordable rented housing) and does not provide as much detail for household type and housing type. However, these occupancy

patterns are used to sense-check the assessment which uses the detailed breakdown shown above. Both the district and local occupancy patterns are used to give a range.

Figure 4.2 Occupancy patterns (**all** households) – Letchworth and North Hertfordshire, 2011



Source: Census DC1402EW

4.11 Based on overall household growth of 1,581 and the project change by type, applying these occupancy patterns would suggests a need for different sized housing as shown Table 4.4. Note that this does not split housing out by type (only size), therefore 1 and 2-beds within the below analysis will include a mix of flats and houses.

Table 4.4 Housing mix sensitivity - housing mix (**all** households) using North Hertfordshire and Letchworth occupancy patterns

	Change 2020 to 2035	**North Hertfordshire** occupancy					Units				
		1 bed	2 bed	3 bed	4 bed	5+ bed	1 bed	2 bed	3 bed	4 bed	5+ bed
Single <65	157	32%	37%	24%	5%	1%	51	58	38	8	2
Single 65+	428	25%	30%	36%	7%	1%	106	131	154	32	6
Couples 65+	495	4%	23%	48%	20%	5%	21	112	239	98	25
HHs w child.	301	2%	17%	48%	24%	9%	6	51	146	72	26
Other	200	6%	24%	44%	19%	7%	12	48	88	39	14
Total	**1,581**	~	~	~	~	~	**196**	**398**	**665**	**248**	**73**
	Change 2020 to 2035	**Letchworth** occupancy					Units				
		1 bed	2 bed	3 bed	4 bed	5+ bed	1 bed	2 bed	3 bed	4 bed	5+ bed
Single <65	157	38%	32%	25%	4%	1%	60	51	39	6	1
Single 65+	428	29%	26%	38%	6%	1%	123	111	162	28	5
Couples 65+	495	6%	21%	50%	18%	4%	31	106	248	91	20
HHs w child.	301	2%	18%	57%	17%	5%	7	54	171	53	16
Other	200	7%	21%	49%	18%	6%	14	41	98	36	11
Total	**1,581**	~	~	~	~	~	**235**	**363**	**717**	**213**	**53**

Source: Lichfields analysis using PopGroup and Census

4.12 This analysis suggests an overall mix of housing as shown in Table 4.5.

Table 4.5 Housing mix sensitivity - housing mix (**all** households) outcomes

Occupancy patterns	1 bedroom	2 bedrooms	3 bedrooms	4 bedrooms	5+ bedrooms
North Herts	12%	25%	42%	16%	5%
Letchworth	15%	23%	45%	13%	3%

Source: Lichfields analysis

4.13 This shows:

- For 1-beds, an overall need of c.12-15%. This compares with 6% 1-bed flats in the market assessment (shown in Table 4.3). We would expect to see a lesser need for 1-bed flats in the market sector and more within the affordable rented sector, so the findings of the sensitivity testing are not inconsistent with the analysis of market demand;
- For 2-beds, an overall need of c.23-25%. The market analysis suggested only 8% of market demand was likely to be for 2-bed flats, albeit some of the need for homes with up to 3-bedrooms (64%) is likely to include 2-bed homes, including bungalows. Again we would expect to see a lesser need for 2-bed flats/housing in the market sector and more within the affordable rented sector, so the findings of the sensitivity testing are not inconsistent with the analysis of market demand;
- For 3-bed homes, a need for 42-45%. Affordable homes make up only a small proportion of 3-beds, with most being in the market sector. The market analysis suggested 64% of demand was for homes with up to 3-beds, so it would be reasonable to assume this comprises approximately one-third 2-bed homes and two-thirds 3-bed homes;
- For 4-bed homes, an overall need for 16% using North Hertfordshire occupancy patterns which closely aligns with the 18% for market housing specifically. Using Letchworth occupancy, this is lower (at 13%) – this is because at present the town has fewer 4-bed homes than North Hertfordshire, so a smaller proportion of households live in 4-bed homes. Projected this occupancy pattern forward then suggests a lesser need for 4-bed homes; and
- Similarly, for 5-bed homes, an overall need for 5% using North Hertfordshire occupancy patterns which aligns with the 5% for market housing specifically. Using Letchworth occupancy, this is lower (at 3%).

4.14 Overall, the results of the sensitivity analysis using local data for Letchworth and alternative data for North Hertfordshire support the findings of the assessment for market housing.

Summary

4.15 Table 4.6 summarises the assessment of market housing mix, along with the sensitivity testing (which relates to the mix for all tenures). Based on these, it gives a suggested range for market housing, of which the majority is for 3-bed housing (c.50-60%, as a suggested range). There is a need for some larger housing to cater to families (c.15-20%), and a need for some 2-beds which is likely to be mostly housing.

4.16 This mix is intended to be indicative and should not be applied too prescriptively within policy or on any individual development as it is based on currently occupancy patterns which may be different in the future. The mix achieved on any specific site will also likely be affected by wider economic factors, local market circumstances, site specific factors (including viability), local policy objectives and other factors.

Table 4.6 Summary of mix assessment and suggested mix for market housing

		Flat - 1-bed	Flat - 2+ bed	House – 2-3-bed	House - 4-bed	House - 5+ bed
Market assessment		6%	8%	64%	18%	5%
		1 bed	2 bed	3 bed	4 bed	5 bed
Sensitivity testing (all housing)	North Herts	12%	25%	42%	16%	5%
	Letchworth	15%	23%	45%	13%	3%
		1-bed*	2-bed*	3-bed	4+ bed	
Suggested range		**0-10%**	**10-20%**	**50-60%**	**15-20%**	

Source: Lichfields analysis. *Includes a mixture of flats and houses.

4.17 This suggested mix also reflects the findings of the March 2019 report; contextual analysis and interviews with local agents conducted as part of that report noted there was a particular demand for small to medium sized family homes (which attracted significant interest and often multiple bids when coming to market). The mix also reflects the perceptions of Letchworth as indicated by the survey, where many respondents perceived a lack of housing suitable for young families. Amongst smaller housing, it will be important to ensure this is still of sufficient size (with indoor and outdoor space); the survey also suggested a perception that new market housing in Letchworth was too small, often lacking outdoor space, parking and gardens.

Role of older people and downsizing

4.18 The survey conducted as part of our March 2019 research found a clear indication that older households in the owner-occupier sector did want to downsize, but with few suitable options at the correct price point downsizing was simply not possible or even financially viable. With older people making up a substantial proportion of households now and in the future, even if only a proportion of these households represented the market for downsizing, the scope to release larger family housing back into the market could be significant. The Foundation may wish to consider how it can help meet the needs of older people who wish to downsize by providing homes specifically tailored to their needs (e.g. bungalows, wheelchair housing, sheltered housing, etc). If so, this may affect the overall mix of market housing which is necessary because it would likely skew the mix towards smaller homes with a lesser need for new 3 and 4-bed homes, as these would be freed up within the existing stock.

5.0 Assessment of Affordable Need

5.1 This section considers the overall scale of affordable housing need in Letchworth and the likely mix of affordable housing which will be required. The Planning Practice Guidance (PPG) sets out guidance on how affordable housing need can be assessed, however this is based on such assessments typically being undertaken at the district level. Many of the data sources referred to are not available at a sub-district level and therefore this section uses the best available range of data sources and methods.

Overview of housing costs

5.2 Entry-level (lower quartile) private rents are £795 per month across North Hertfordshire, rising to £925 per month for median rents. Assuming a household spends up to 35% of its income on housing (this assumption is explored in more detail later in this section), this would imply a household needs an income of just over £27,000 to access entry-level rents and just under £32,000 to access median rents.

5.3 Entry-level housing across North Hertfordshire costs £300,000 as of September 2021. On the basis that first-time buyers typically have a deposit of 16%[7] and assuming they can borrow up to 4.5x their income (these assumptions reflect those applied in the March 2019 report), they would require an income of £56,000. This is the highest income shown in Table 5.1 and indicates the income needed to enter the open market.

5.4 On the basis of entry-level homes costing £300,000 this indicates a Shared Ownership home (where a household purchases a 25% share of their home) would require an income of c.£33,000. This is slightly higher than the income needed to rent at median rent levels, and suggests Shared Ownership is likely to represent a viable route to ownership for those broadly in the middle of rental market.

5.5 First Homes[8] are a new tenure of affordable home ownership product which require a minimum 30% discount, specifically sold to first-time buyers. Based on the entry-level cost of new-build housing across North Hertfordshire we estimate a household would need an income of nearly £40,000 to access these. Discount market homes, which are homes sold at a minimum 20% discount (and not necessarily subject to the same criteria as First Homes) would require c.£45,000. These types of homes are likely to cater for those living in the private sector who can comfortably rent, but do not have the income needed (£56,000) to buy in the open market.

Table 5.1 Summary of housing costs across North Hertfordshire

	Cost	Refers to…	Income	Assumption
LQ rent (per month)	£795/m	All dwellings	**£27,257**	35% of income spent on rent
Median rent (per month)	£925/m	All dwellings	**£31,714**	35% of income spent on rent
Shared Ownership	£300,000	All dwellings	**£33,286**	Own 25%, pay 3% rent per annum
First Homes	£212,800	New build, discounted by 30%	**£39,723**	16% deposit, 4.5x
Discount market	£243,200	New build, discounted by 20%	**£45,397**	16% deposit, 4.5x
Lower quartile purchase	£300,000	All dwellings	**£56,000**	16% deposit, 4.5x

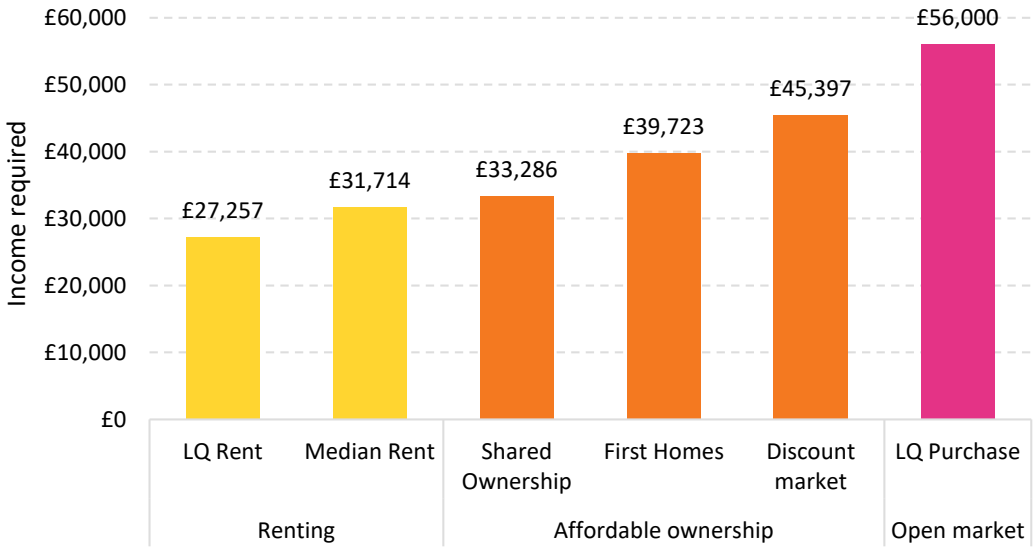
Source: Lichfields analysis of ONS. Assumptions are consistent with the EHS/those applied in the March 2019 report.

5.6 These incomes are shown in Figure 5.1. They mirror the findings of our 2019 report, which found there was an 'affordability gap' for those with an income of c.£40,000-£50,000 who were

[7] English Housing Survey data on First-Time Buyers which suggests median deposit of 15.9% (First-Time Buyer analysis 2015/16 Annex Table 3.3).
[8] See government guidance on First Homes here.

likely to struggle to afford anything larger than a 2-bed flat or small house on the open market (without a substantial deposit), but might be able to afford something larger through shared ownership. Almost all private renters who responded to the survey perceived the cost of moving to owner-occupation to be too expensive; this reflects the data which shows a household needs an income of £32,000 to afford average rents but needs almost double that income to buy in the open market. As a result, a substantial proportion (75%) of private rented indicated they wished to move, although this was also attributed to unstable tenancies and housing conditions (as well as costs).

Figure 5.1 Summary of incomes required to access housing in North Hertfordshire



Source: Lichfields analysis of ONS. Based on assumptions about the proportion of income spend on rent, deposit and income multipliers.

5.7 For the purposes of this section, we have assessed affordable rented need only, i.e. those who cannot afford entry-level rents within the open market. References to 'affordable' refer solely to affordable rented need.

Overall affordable housing need in Letchworth

5.8 The actual amount of affordable housing provided within Letchworth will be based on policy requirements of the North Hertfordshire plan and well as viability constraints and other factors. However, we have set out below an assessment of what overall affordable housing need Letchworth might be, were it not subject to these constraints.

(1) Apportionment of district future needs

5.9 As part of the evidence based for the emerging Local Plan, North Hertfordshire District Council (along with Stevenage Borough Council) commissioned a series of Strategic Housing Market Assessments. This includes an updated published in August 2016[9] which concluded that over the period 2011 to 2031 North Hertfordshire would need 215 affordable homes per annum. This represented 33% of the total need for housing across North Hertfordshire assessed within the SHMA.

5.10 On a simple apportionment basis, given that Letchworth currently (as of 2020) represents 25.7% of North Hertfordshire's population, this would suggest around 55 homes per year of this

[9] Available here, Figure 21

need is associated with Letchworth. Over the 15 year period used in this assessment (2020 to 2035) this would equate to **829 affordable homes**. This represents a substantial proportion – 51% - of the housing trajectory for Letchworth (1,613).

(2) Assessment based on income

5.11 The PPG indicates that affordable housing need can be assessed by identifying the minimum income required to access entry-level market housing and the proportion of households unable to afford this (ID: 2a-020-20190220 and ID: 2a-021-20190220). Our analysis above gives an overview of the incomes needed to access different levels of housing in North Hertfordshire, which indicated an income of c.£27,000 is needed to access entry-level rents.

5.12 For the purposes of this analysis, we have added further granularity to this, assessing the needs of different households specifically based on their likely needs (1-bed, 2-bed etc).

Affordability

5.13 Table 5.2 shows, for different household types, the likely number of bedrooms needed, monthly rental cost (lower quartile) and annual cost. This ranges from £8,340 per year for 1-beds (suitable for single people and couples) to £10,200 per year for 2-beds, for families and other households (albeit some households will be in need of more bedrooms, for example households with multiple children or adults).

5.14 The amount of income needed to afford these rents depends on how much income can be spent on housing before it becomes 'unaffordable'. There is no guidance within the PPG on this, and the SHMA does not undertake its assessment in this way. For the purposes of this assessment, we have shown need at a 30% income threshold (i.e. a household can spend 30% of its income on rent before housing become unaffordable) and a 35% threshold. For those in need of 1-bed housing, this means households with an income of up to £27,800 are unable to afford market rents (at a 30% threshold, or £23,829 at a 35% threshold). For those in need of 2-bed housing, this means households with an income of up to £34,000 are unable to afford market rents (at a 30% threshold, or £29,145 at a 35% threshold), as shown in Table 5.2.

Table 5.2 Housing need, rental costs and income required

	Need	Monthly cost	Annual cost	Income needed (at 30%)	Income needed (at 35%)
Single person	1-bed	£695	£8,340	£27,800	£23,829
Couple	1-bed	£695	£8,340	£27,800	£23,829
Couple with children	2-bed*	£850	£10,200	£34,000	£29,143
Lone Parent with children	2-bed*	£850	£10,200	£34,000	£29,143
Other	2-bed*	£850	£10,200	£34,000	£29,143

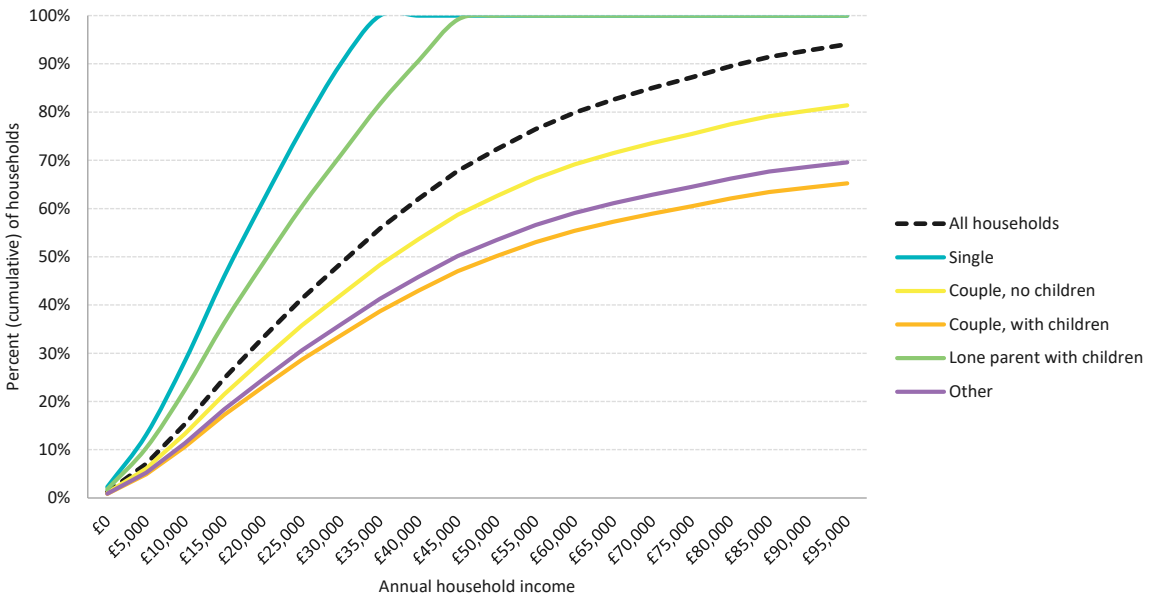
Source: Lichfields analysis using ONS Private Rent data. *This should be seen as a minimum; for some households (e.g. with multiple children or 3+ adults) the need will be greater.

5.15 Household income data has been obtained for Letchworth from CACI; this gives an income profile for all households. The English Housing Survey provides data on how household income varies across different types[10]; this has been used to create a household income profile for each type. For example, the EHS shows single people have a household income which is 54% of the overall average and lone parents with children have an income which is 68% of the overall average (this is logical, since these households will be single income). Couples with children have the highest income; 144% of the overall average (or 44% above average). Other types of

[10] See English Housing Survey Housing Costs and Affordability Report (2018/19) Annex Table 2.1

household (i.e. families with non-dependent children and multiple adult households) also have a relatively high income, which is 35% above the average.

Figure 5.2 Household income distribution by type - Letchworth



Source: Lichfields analysis of CACI data and English Housing Survey 2018/19

Current need

5.16 Based on these income profiles and the amount of income each requires to be able to afford to rent privately in the market, we can assess the proportion of each household type who would not have a sufficient income to rent. For example, a single person in Letchworth needs an income of £27,800 to rent a 1-bed home in the market privately (assuming they can spend 30% of their income on rent). Based on the income profile of single people in Letchworth 84% of single people are estimated to have an income below £27,800. There are (as of 2020) an estimated 4,389 single person households in Letchworth, suggesting 3,686 (84%) are in need of affordable rented housing. This is shown in Table 5.3. The fact that, based on our analysis, around half of households in Letchworth are unlikely to be able to afford entry-level rents mirrors the findings of the survey undertaken in the March 2019 report. This found that almost all respondents in the private rented sector perceived housing to be too expensive.

5.17 Across all households, there is an estimated need of at least 6,935 affordable homes in Letchworth as of 2020 (representing 48% of all households), although this is higher – 7,975 (55%) – if a lower income threshold is used. Of this need nearly half is associated with single person households. This assessment represents a gross, unconstrained assessment of current need, i.e. it represents the total amount of need assuming all people were housed in homes which were affordable to them.

Table 5.3 Estimate of current affordable housing need in Letchworth

	Number of households in 2020	Of which unable to afford at…			
		30% threshold		35% threshold	
Single person	4,389	84%	3,686	73%	3,204
Couple	3,933	39%	1,534	34%	1,337
Couple w. children	2,763	38%	1,050	33%	912
LP w. children	977	80%	782	69%	674
Other	2,309	40%	923	35%	808
Total	**14,370**	**55%**	**7,975**	**48%**	**6,935**

Source: Lichfields analysis using PopGroup, Census, ONS, CACI

5.18 The 2011 Census shows there were 4,345 households living in affordable rented housing as of 2011, as shown in Table 5.4[11]. Based on a 35% income threshold (which should be seen as the minimum assessment of need), this suggests there are approximately 1,500 fewer single people living in affordable rented housing than there are single people in affordable housing need. A lack of housing available for single people was a finding of the survey undertaken as part of previous work by Lichfields for the Foundation, produced in March 2019[12]. When asked about perceptions of the Letchworth housing market, many respondents noted that there appeared to be a lack of housing available which was suitable for young single people, even those with good salaries. The evidence in this report supports that observation, given only single people on the very highest incomes are likely to be able to rent affordably within the market, even at the entry-level.

5.19 Similarly, there are around 700-800 fewer couples living in affordable rented housing than there are couples who would be in affordable rented need based on their income. This suggests single people and couples (without children) are less able to access affordable housing; a substantial number of these households who should be in need of affordable housing (on the basis of their income) are not currently living in affordable housing. This leads to a number of outcomes, including some households spending a greater proportion (35+%) of their income on housing in order to access housing or households living in homes which are too small to meet their needs in order to make housing costs affordable. However, especially where couple households include two earners, it is entirely possible to spend more than 35% of overall income on housing and still live affordably (because the absolute amount of household income left after housing will be greater than a single person household and because of the cost efficiencies associated with living in a couple versus a single person).

5.20 The differences are far less significant for couples/lone parents with children and other household types (of which the majority are families with non-dependent children). This suggests that - very broadly speaking – most families (consisting of couples or lone parents, with children of any age) in Letchworth are currently being housed in accordance with their needs, based on income. However, previous work[13] by Lichfields has found issues within the affordable sector in Letchworth; our 2019 report found that c.40% of residents in the affordable rented sector who were surveyed considered that their current home did not meet their needs. The most common reason was due to adaptability, followed by size (being too small), condition and location. This illustrates that, simply because a household is in the affordable rented sector their needs may not be met. However, in most instances, were these households to move to somewhere more

[11] This has likely increased since the Census due to housing completions since 2011, however this data is unavailable and would have a minimal impact on the assessment.
[12] See Letchworth Garden City Local Housing Needs Study: Letchworth Garden City Heritage Foundation March 2019 (Lichfields), e.g. at para 6.1.
[13] See Letchworth Garden City Local Housing Needs Study: Letchworth Garden City Heritage Foundation March 2019 (Lichfields), Figure 7.1

suitable, they would then free up an affordable home for occupation by another households. The exception to this is where the condition of the home is the main reason for being unsuitable, since this would likely apply regardless of who was living there.

5.21 This assessment of affordable need alone (c.2,600-3,600) substantially exceeds the overall amount of housing to be provided in Letchworth to 2035, of c.1,600 homes. It represents such a high proportion of need because it is calculated based on the gross need associated with all households, whereas housing growth (as set out by household projections which underpin housing requirements in plans) is based on net additional change in households per year. If – hypothetically – all of this suggested affordable housing need were met in Letchworth, it would lead to a substantial outflux of households from the private rented sector, in turn lowering rents and house prices, leading to open market housing becoming more affordable. Subsequently, we would expect fewer households to be in need of affordable rented housing because of this symbiotic relationship. Whilst meeting this need in full is clearly not realistic, it does provide an indication of where the greatest gaps are likely to be (in terms of need and supply) which can inform the overall mix of affordable housing provided; something we turn to below.

Table 5.4 Comparison of estimated current need with Census

	Affordable - 2011 Census	Difference to Census at…	
		30% threshold	35% threshold
Single person	1,660	-2,026	-1,544
Couple	639	-895	-698
Couple w. children	745	-305	-167
LP w. children	657	-125	-17
Other	644	-279	-164
Total	**4,345**	**-3,630**	**-2,590**

Source: Lichfields analysis

Future need

5.22 Applying these affordability assumptions to future growth by household type suggests an additional need (between 2020 and 2035) of c.800-900 affordable homes, as shown in Table 5.5. Note that this is only additional need and does not include existing need as of 2020. However, it does align with Letchworth's share of the district's need, which has been assessed as 829 affordable homes over the period as set out above.

Table 5.5 Future need for affordable housing in Letchworth based on income threshold

	At 30% income threshold			At 35% income threshold		
	Households unable to afford in 2020	Households unable to afford in 2035	Change	Households unable to afford in 2020	Households unable to afford in 2035	Change
Single person	3,686	4,178	492	3,204	3,631	427
Couple	1,534	1,713	180	1,337	1,494	156
Couple w. children	1,050	1,128	78	912	979	68
LP w. children	782	840	58	674	724	50
Other	923	1,026	103	808	898	90
Total	**7,975**	**8,886**	**910**	**6,935**	**7,727**	**792**

Source: Lichfields analysis. May not sum due to rounding.

5.23 If current need is included, the total need to 2035 is clearly more substantial (far exceeding the 1,600 homes planned overall for Letchworth) as shown in Table 5.6, albeit this is subject to the same caveats discussed earlier regarding gross vs net housing need.

Table 5.6 Total affordable housing need based on income threshold

	At 30% income threshold			At 35% income threshold		
	Current households in affordable housing (2011)	Households unable to afford in 2035	Total need	Current households in affordable housing (2011)	Households unable to afford in 2035	Total need
Single person	1,660	4,178	2,518	1,660	3,631	1,971
Couple	639	1,713	1,074	639	1,494	855
Couple w. children	745	1,128	383	745	979	234
LP w. children	657	840	183	657	724	67
Other	644	1,026	382	644	898	254
Total	**4,345**	**8,886**	**4,541**	**4,345**	**7,727**	**3,382**

Source: Lichfields analysis. May not sum due to rounding.

Mix of affordable housing needed

Bedrooms

Housing Waiting List

5.24 As of 2020/21 there were 2,766 on the housing waiting list in **North Hertfordshire**, of which almost all (2,694) were in a reasonable preference category. The mix of housing required by these households is shown in Table 5.7. The need for 1-beds makes up over half (57%) of need, with a further 28% 2-beds. There is a fairly small need for family housing (3+ beds) which make up 15% of need.

Table 5.7 Affordable housing need based on housing waiting list (2020/21) for North Hertfordshire

	Total	1-bed	2-bed	3-bed	4+ bed
Number of households	2,766	1,582	785	272	127
Mix	~	**57%**	**28%**	**10%**	**5%**

Source: Lichfields analysis of Local Authority Housing Statistics (MHCLG). May not sum due to rounding.

5.25 Additional data has been provided by North Hertfordshire District Council for the purposes of this report, specifically for needs associated with Letchworth. This shows a very similar mix to the district, as shown in Table 5.8.

Table 5.8 Affordable housing need based on housing waiting list (April 2022) for Letchworth

	Total	1-bed	2-bed	3-bed	4+ bed
Number of households	778	422	220	88	48
Mix	~	**54%**	**28%**	**11%**	**6%**

Source: Data provided by North Hertfordshire District Council. Refers to households currently living in Letchworth or which have expressed a preference for Letchworth.

Household growth

5.26 Alternatively, an assessment of affordable housing mix can be made based on the household types currently living in affordable housing and the projected change. Our assessment of need above suggested there were currently up to c.3,630 households in need in Letchworth who do not currently have access to affordable housing. The vast majority – 80% - of these were single people and couples, likely in need of 1-bed housing. The remainder were families and other households, with a need for 2 or more bedrooms. Future need (arising from 2020 to 2035) is

skewed slightly less towards single people and couples, and slightly more towards families, suggesting a mix of 74% 1-beds and 24% 2-beds.

Table 5.9 Estimated need for affordable housing by size

	Current need Total – **3,630**	Future need Total - **910**	Total Total – **4,541**
Single person	56%	54%	55%
Couple	25%	20%	24%
Couple with children	8%	9%	8%
Lone Parent with children	3%	6%	4%
Other	8%	11%	8%
1-bed	**80%**	**74%**	**79%**
2+ bed	**20%**	**26%**	**21%**

Source: Lichfields analysis. May not sum due to rounding.

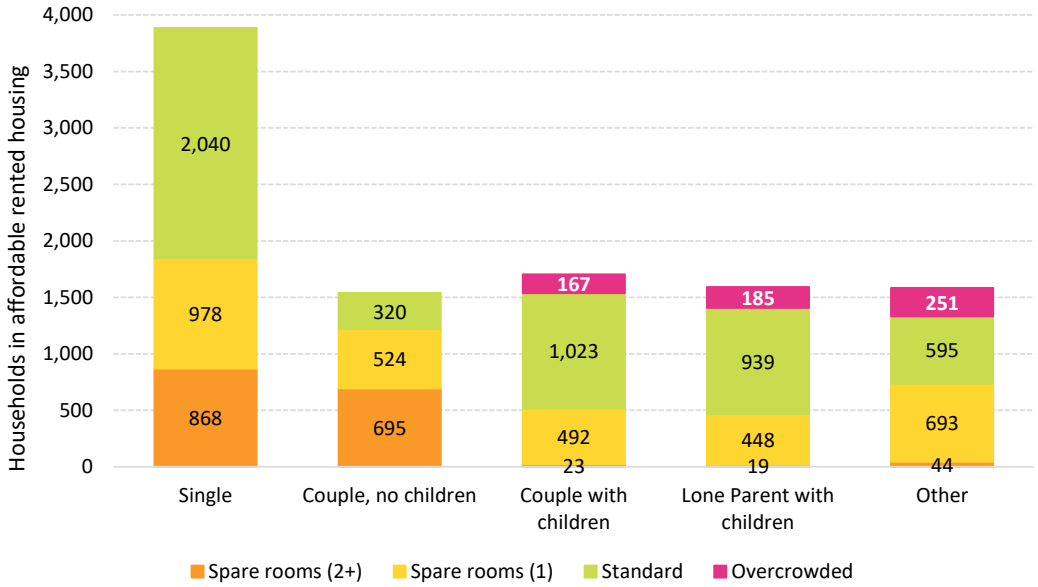
5.27 It should be noted that this assessment is based solely on the assumption that single people and couples will need 1-bed housing and all other households will require at least 2-bed housing. In reality it is possible that some single people or couples will require an additional bedroom, for example for medical reasons, to allow for visiting children to stay (where parents are separated) or for other reasons. However, it does suggest that the Foundation should consider a slightly higher proportion of smaller housing compared with the mix as indicated by North Hertfordshire's housing register.

5.28 This appears to run contrary to the findings to the survey conducted as part of the March 2019 report, where it was found that of social rented households who stated that their current home did not meet their needs, 42% said their home was too small while only 8% said their home was too big. Based on that survey there appeared to be a need for a range of housing in the affordable sector across a range of sizes. However, we would expect the survey to suggest a relatively high proportion in need (since those in need would be more inclined to respond to a survey about need), and the number who said their home was still too small was relatively small – just 10 households. The report did not take a wider view of affordable housing needs across the town and did not include income analysis, which is included in this report.

5.29 Furthermore, Census data for North Hertfordshire suggests there is scope across the district to make more effective use of the existing affordable housing stock. As shown in Figure 5.3, as of 2011 there were 868 single people living in homes with 3 or more bedrooms (i.e. they had 2 spare rooms, based on the ONS bedroom standard), with a further 978 living in homes with 2 bedrooms (i.e. they had 1 spare room). There is also under-occupancy found with couples (no children), with over 1,200 having at least one spare room.

5.30 Acknowledging that some households will have a genuine need for a spare room, the number of households with 2 or more spare rooms still far exceeds the number of households living in overcrowded housing (this totals 352 families with children and 251 other households). Even if all of these overcrowded households were swapped with single people or couples living in homes with 3 or more bedrooms, there would likely still be a substantial number of under-occupiers within the affordable rented sector. Other factors will be relevant, for example ensuring the right sized homes are available in the right location for those in need (close to work and school), ensuring homes are of a suitable condition and meet the needs of their occupants, but the potential for more efficient use of the existing stock is a relevant factor in assessing future affordable housing mix.

Figure 5.3 Occupancy patterns of households - affordable rented housing - North Hertfordshire, 2011



Source: Census. Note: Equivalent data not available for Letchworth.

5.31 A breakdown of occupancy patterns in affordable rented housing for Letchworth is shown in Table 5.10. This shows the town mirrors trends seen at the district level, with over 700 households living in affordable rented housing with 2 or more spare rooms, and at the same time 252 households living in overcrowded housing. This is reflected in the findings of the survey underpinning the March 2019 report which found that of respondents living in affordable rented housing there was a perceived lack of housing options available for downsizing.

Table 5.10 Occupancy patterns - affordable rented housing - Letchworth, 2011

	2011
Spare rooms (2+)	705
Spare rooms (1)	1,295
Standard	2,093
Overcrowded	252

Source: Census

Adaptability

5.32 Our previous work (March 2019, referred to above) found that, for those surveyed who were already living in the affordable sector, adaptability was the most common reason cited for a households' current home not meeting their needs. 46% of respondents to the survey cited adaptability as an issue (albeit this was based on a small sample size and unlikely to be representative of all households in the sector).

5.33 The prevalence of long-term health problems or disabilities amongst those living in affordable rented housing is lower in Letchworth and North Hertfordshire compared with the national average, however it still represents a significant number of residents as shown in Table 5.11.

5.34 Single people over age 65 are some of the most likely people in Letchworth to live in affordable housing; 43.8% lived in affordable rented housing as of 2011. They represent one-fifth of all households in the sector in Letchworth. Across all over 65's in affordable rented housing, 31% in

Letchworth have a long-term health problem or disability which limits their day-to-day activities a lot (equivalent to 542 people). This is broadly similar to the district level but lower than the national average (41%).

Table 5.11 Disability prevalence amongst affordable housing residents by age (day-to-day activities limited a lot)

		Letchworth	North Hertfordshire	England
Over 65s	All residents	1,749	4,348	1,347,599
	Limited a lot	542	1,377	547,470
	%	**31%**	**32%**	**41%**
All ages	All residents	9,840	23,352	8,570,417
	Limited a lot	1,125	2,680	1,336,949
	%	**11%**	**11%**	**16%**

Source: Census

5.35 Not all of those with a long term health problem or disability will necessarily require an adaptable and/or accessible home (for example, for those with learning/communication difficulties, those with mental illnesses or those with chronic illnesses which are not mobility related, such as cancer or diabetes). However, the prevalence of mobility issues specifically are likely to be an increasing issue for the town because older people make up a significant proportion of future growth, due to ageing.

5.36 The North Hertfordshire Local Plan contains a Policy – HS5 – which requires that 50% of all new homes should be built to M4(2) Accessible and Adaptable standard and that on schemes where 10 or more affordable homes are delivered, 10% of these should be built additionally to the M4(3) Wheelchair User standard. On the basis that older households in affordable rented housing are nearly three times more likely to have a long term health problem or disability that limits their day-to-day activities a lot compared with the affordable sector as a whole (31% compared to 11%), and given older people represent a substantial proportion of future household growth in Letchworth (particularly single older people, where over 40% live in the affordable sector), it would be sensible for the Foundation to seek to exceed the policy requirement for 10% of affordable housing to be M4(3) standard, where this is viable.

5.37 This would also help existing households who live in affordable housing which is unsuitable for their needs due to adaptability problems to move, in turn freeing up existing stock within the affordable sector for occupation by those without accessibility requirements (young single people, couples and families). As shown above, under-occupation of existing affordable housing - especially by single people, of which many will be elderly - is prevalent across the district and Letchworth specifically. Allowing these people to move would enable the existing housing stock to be better utilised and reduce the need to deliver family-sized affordable housing to alleviating overcrowding within the sector.

Summary

5.38 Our analysis suggests that the Foundation would justified in seeking to maximise the amount of affordable housing provided on it strategic sites, subject to viability and any other necessary factors or constraints. Whilst Letchworth currently has a notably high proportion of affordable rented housing in its housing stock (at 31%, compared with the national average of 18%), a substantial proportion of households still struggle to rent affordably within the private market, and this is particularly true for single person households.

5.39 The prominence of single people amongst current need and future need (largely due to ageing) would indicate that a substantial proportion of new affordable housing should be 1-bed. Evidence also suggests there is significant scope to make better use of the existing affordable

housing stock in Letchworth and more widely, with a significant number of households living in affordable rented housing which is likely to far exceed their needs. With older single people making up a substantial proportion of future growth, adaptable and accessible affordable housing can play a key role in freeing up larger affordable housing to meet the needs of families.

5.40 On this basis, our research suggests a substantial proportion of new affordable housing in Letchworth should be 1-bed and the Foundation should seek to exceed policy requirements for adaptable and accessible and wheelchair housing where possible. Some 2-bed housing is likely to be needed to meet the needs of families. Whilst the North Hertfordshire and Letchworth waiting list data suggests a need for c.15% homes with 3 or more bedrooms, we would suggest this need is reviewed at the time an application is brought forward on the North of Letchworth site, to confirm there is specifically a need within Letchworth which has not otherwise been met (for example, through the provision of smaller affordable housing which has freed up larger family housing in the existing stock). Given the survey indicated a few households living in Letchworth whose home was too small, in the interim a relatively small proportion (up to 5%) is suggested.

Table 5.12 Suggested range - affordable housing mix for Letchworth

	1-bed	2-bed	3+ bed
Suggested range	60-80%	20-30%	0-5%

Source: Lichfields

5.41 A high proportion of 1-bed housing does not necessarily need to result in homogenous development; new 1-bed housing should comprise a mixture of sizes and types to meet needs of different people. This will include flats, bungalows and maisonettes at a variety of sizes suitable for single people or couples, including a proportion which are adaptable and accessible and some which are wheelchair user dwellings, which include a range of private and public outdoor spaces, indoor storage and a variety of living spaces.

6.0 Wider Market Analysis

6.1 Having established the likely demand for market and affordable housing in Letchworth, this section sets out an overview of housing mix provision within nearby strategic sites. This information allows a better understanding of recent trends in provision and therefore any potential gaps in the wider market which North of Letchworth could help to address.

6.2 For the purposes of this study, the review has focused on nearby sites comprising 200 or more units which have sufficiently progressed through planning or construction such that a detailed housing mix is available. To identify these sites (shown in Figure 6.1), it has drawn upon planning applications, five-year housing land supply positions and strategic allocations in adopted and/or emerging Local Plans. Given the location of the site, different areas both within North Hertfordshire and adjacent districts have been reviewed. This includes:

- Key settlements within North Hertfordshire, such as Royston and Hitchin;
- The area immediately north of Letchworth within Central Bedfordshire, along the A1 corridor and East Coast Main Line, including Arlesey, Shefford and Biggleswade;
- Strategic sites on the edge of Stevenage; and
- Buntingford, within East Hertfordshire, which lies along A507 from Letchworth.

Strategic sites in the local area

6.3 A summary of the ten strategic sites identified in this wider area is shown in Table 6.1 and Figure 6.1. These sites range from those recently completed to under construction, recently permitted or progressing through the application stage. A more detailed table providing further background information is provided within Appendix 2, along with a list of those strategic sites discounted from this review as they do not yet provide a detailed housing mix.

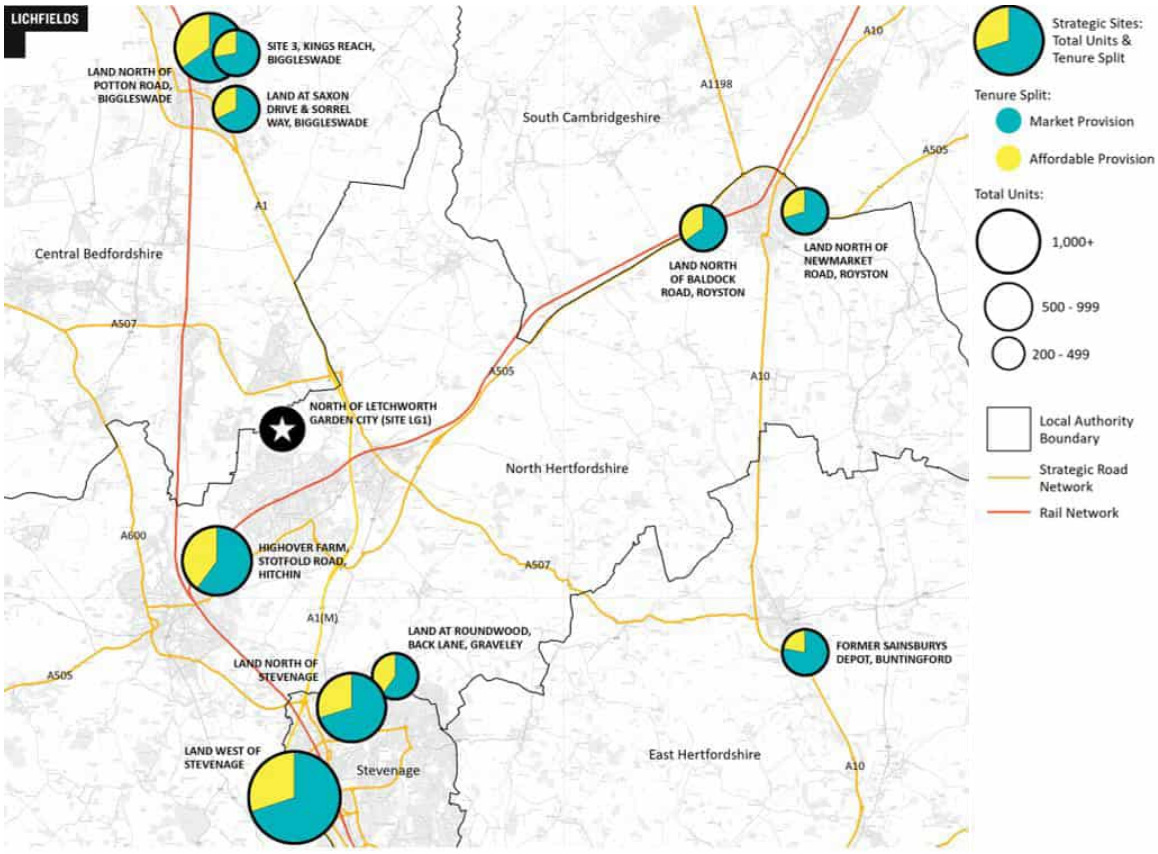
Table 6.1 Housing Mix Provision – Nearby Strategic Sites

Site		Total units	Housing Mix (Tenure & Size)
Complete			
1	North of Potton Road, Biggleswade	527	65% Market Sale, 35% Affordable (51% Affordable Rent and 49% Intermediate, including Shared Ownership and Shared Equity). **Market:** 5% 2 beds, 33% 3 beds, 60% 4 beds and 2% 5 beds. **Affordable:** 23% 1 beds, 55% 2 beds, 20% 3 beds and 2% 4 beds.
2	Former Sainsburys Depot, Buntingford	316	78% Market Sale, 22% Affordable (74% Social Rent and 26% Shared Ownership). **Market:** 21% 2 beds, 52% 3 beds and 28% 4 beds. **Affordable:** 26% 1 beds, 51% 2 beds, 20% 3 beds and 3% 4 beds.
Under Construction			
3	North of Baldock Road, Royston	279	65% Market Sale, 35% Affordable (65% Affordable Rent and 35% Shared Ownership). **Market:** 19% 2 beds, 34% 3 beds and 47% 4 beds. **Affordable:** 15% 1 beds, 40% 2 beds, 39% 3 beds and 6% 4 beds.
4	North of Newmarket Road, Royston	340	70% Market Sale, 30% Affordable (67% Affordable Rent and 33% Shared Ownership). **Market:** 9% 2 beds, 37% 3 beds, 41% 4 beds and 13% 5 beds. **Affordable:** 40% 1 beds, 41% 2 beds, 17% 3 beds and 2% 4 beds.
5	Saxon Drive & Sorrel Way, Biggleswade	293	68% Market Sale, 32% Affordable (73% Social Rent and 27% Shared Ownership). **Market:** 12% 2 beds, 45% 3 beds, 26% 4 beds and 17% 5 beds. **Affordable:** 65% 1 beds and 35% 2 beds.
6	Site 3, Kings Reach, Biggleswade	201	72% Market Sale, 28% Affordable (63% Affordable Rent and 37% Intermediate tenures).

Site		Total units	Housing Mix (Tenure & Size)
			Market: 5% 1 beds, 30% 2 beds, 45% 3 beds, 14% 4 beds and 6% 5 beds. **Affordable:** 26% 1 beds, 37% 2 beds, 34% 3 beds and 3% 4 beds.
Outline or Hybrid Application/Permission			
7	Highover Farm, Hitchin	700	60% Market Sale, 40% Affordable (65% Affordable Rent and 35% Intermediate tenures). **Market:** 2% 1 beds, 28% 2 beds, 30% 3 beds, 35% 4 beds and 5% 5+ beds. **Affordable:** 16% 1 beds, 34% 2 beds, 42% 3 beds and 8% 4 beds.
8	Land at Roundwood, Graveley	360	60% Market Sale, 40% Affordable (65% Affordable Rent and 35% Intermediate tenures). **Market:** 26% 2 beds, 55% 3 beds, 18% 4 beds and 1% 5 beds. **Affordable:** 39% 1 beds, 41% 2 beds, 18% 3 beds and 2% 4 beds.
9	Land West of Stevenage	1,500	70% Market Sale, 30% Affordable (70% Affordable Rent and 30% Shared Ownership). **Market:** 4% 1 beds, 17% 2 beds, 49% 3 beds and 30% 4 beds. **Affordable:** 16% 1 beds, 61% 2 beds, 16% 3 beds and 7% 4 beds.
10	Land North of Stevenage	800	70% Market Sale, 30% Affordable (70% Affordable Rent and 30% Shared Ownership). **Market:** up to 15% 1 and 2 bed flats, up to 30% 2 bed houses, up to 70% 3 bed houses and up to 20% 4+ bed houses. **Affordable:** 60% 1 and 2 bed flats, 25% 2 bed houses, 10% 3 bed houses and 5% 4+ bed houses.

Note: Housing mix is based on the most recent publicly available information on the relevant LPA's planning system. Refer to Appendix 2 for further detail and any assumptions that have been made regarding these sites.

Figure 6.1 Nearby Strategic Sites - Housing Mix Provision by size and tenure

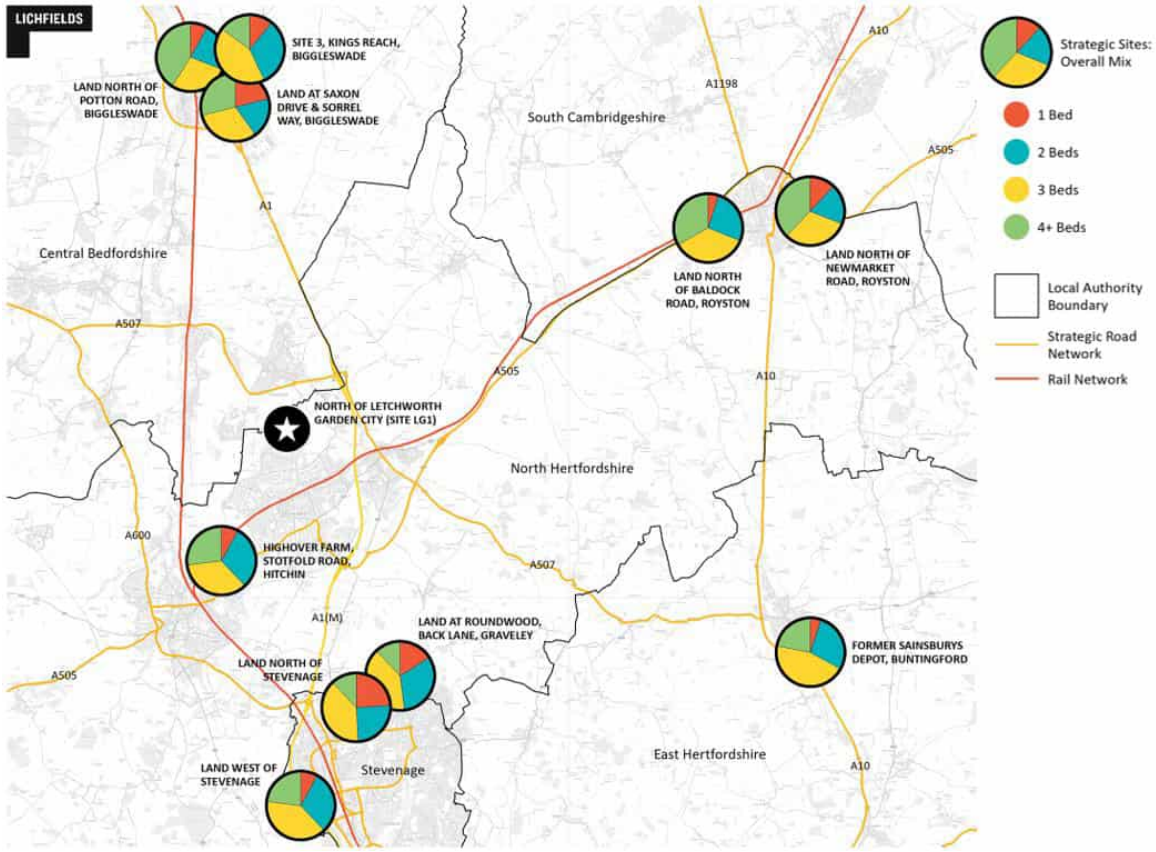


Source: Lichfields analysis

Findings

6.4 Overall, the housing mix provision within nearby strategic sites consists of primarily larger (3+ bed) properties. As shown in Figure 6.2, across almost all sites 3 bedroom and 4+ bedroom homes form over two-thirds of the housing mix permitted/delivered. In turn, a lower quantity of 1-bedroom homes have been provided (albeit a greater proportion of smaller properties are currently being sought to the north of Stevenage).

Figure 6.2 Overall Housing Mix on Nearby Strategic Sites



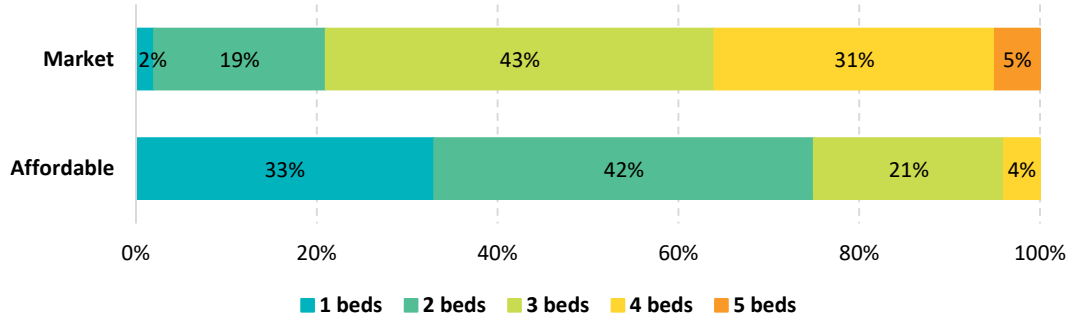
Source: Lichfields analysis

6.5 Figure 6.3 shows the average size mix by market and affordable tenures across these ten strategic sites (notwithstanding there is some variation between sites themselves). Overall, market housing in the local area is characterised by larger properties, with almost three-quarters (74%) comprising 3 and 4 bedrooms. The rest primarily consists of 2-bedroom homes, with a very limited amount of 1-bedroom properties. This suggests that recent provision on nearby strategic sites is broadly in line with the suggested mix for market housing, the majority of which should comprise 3-bedroom properties (see Table 6.2). However, the proportion of larger market properties appears to be split evenly between 3-bedroom homes and 4+ bedroom homes, offering a higher proportion of 4 and 5 bedroom homes than the suggested range.

6.6 In terms of the provision of affordable homes in the wider area, Figure 6.3 shows that this is characterised by 1-bedroom and 2-bedroom properties, which represent three-quarters of the affordable housing mix recently permitted/constructed across nearby strategic sites. The focus on smaller properties is fairly typical of affordable housing need and delivery across England, however the proportion of 1 bed homes (33%) falls notably short of the need identified within this report. As set out in Table 6.2, a substantial proportion (60-80%) of new affordable housing

in Letchworth should be 1-beds, with some (20-30%) 2 bed housing to meet the needs of families.

Figure 6.3 Average Housing Mix on Nearby Strategic Sites (Market & Affordable)



Source: Lichfields analysis of nearby strategic sites

6.7 The information available for the majority of the strategic schemes identified does not readily provide an indication of the specific type or tenure of housing provided (i.e. bungalows, flats or houses, and shared ownership, social rent). However, a high-level review suggests that the majority of homes being provided within the area are for houses, followed by flats, with a very limited provision of bungalows. Further, affordable housing provision tends to be in the form of smaller flats, while market homes are skewed towards larger detached and semi-detached houses. For example, 62% of the proposed affordable properties within Phase 1 of the Land West of Stevenage site are for 1 or 2 bedroom flats, compared to over 79% of market properties comprising 3+ bed houses. Only 4% of the market homes being sought on this site are flats.

Summary

6.8 Overall, nearby strategic sites appear to be offering a similar proportion of smaller (1-2 bed) market housing in line with our suggested range for Letchworth (Table 6.2). However, they collectively offer fewer 3-bed homes and more 4+ bed homes (particularly sites in Biggleswade and Royston). This indicates that larger families (or other households seeking to upsize) are likely to be met with a good range of options within relative proximity to Letchworth. With the affordability of open market housing being a key issue within the town and wider area especially for younger households however, and taking into account the finding of our previous survey and research, this highlights the important role that 3-bed housing will play in meeting needs within Letchworth, specifically as part of the North of Letchworth allocation.

6.9 Similarly, for affordable housing, nearby strategic sites are offering a larger mix than is suggested either by local waiting list data or our assessed mix based on future growth (albeit acknowledging that our assessment refers to Letchworth/North Hertfordshire, and some of the strategic sites lie outside the district where needs may be different). We may also expect these sites to deliver lower densities and therefore more 2-bed homes than 1-bed homes. Still, this further suggests the scale of choices for larger homes available on nearby sites, and highlights the important role North of Letchworth will play in meeting the needs for smaller affordable homes.

Table 6.2 Lichfields suggested mix for market and affordable housing for Letchworth

	1-bed	2-bed	3-bed	4+ bed
Market (including intermediate) – suggested range	0-10%	10-20%	50-60%	15-20%
	1-bed	2-bed	3+bed	
Affordable (rent) – suggested range	60-80%	20-30%	0-5%	

Source: Lichfields analysis

7.0 Summary & Conclusions

7.1 This Housing Needs Assessment has been produced by Lichfields on behalf of the Letchworth Garden City Heritage Foundation to provide an assessment of local housing needs in Letchworth, representing the latest iteration in a series of reports produced for the Foundation since November 2013 which have informed the North Hertfordshire Local Plan. This report will help to guide the masterplan and the mix of housing provided at the site North of Letchworth which is expected to deliver around 900 homes (Site LG1).

Context

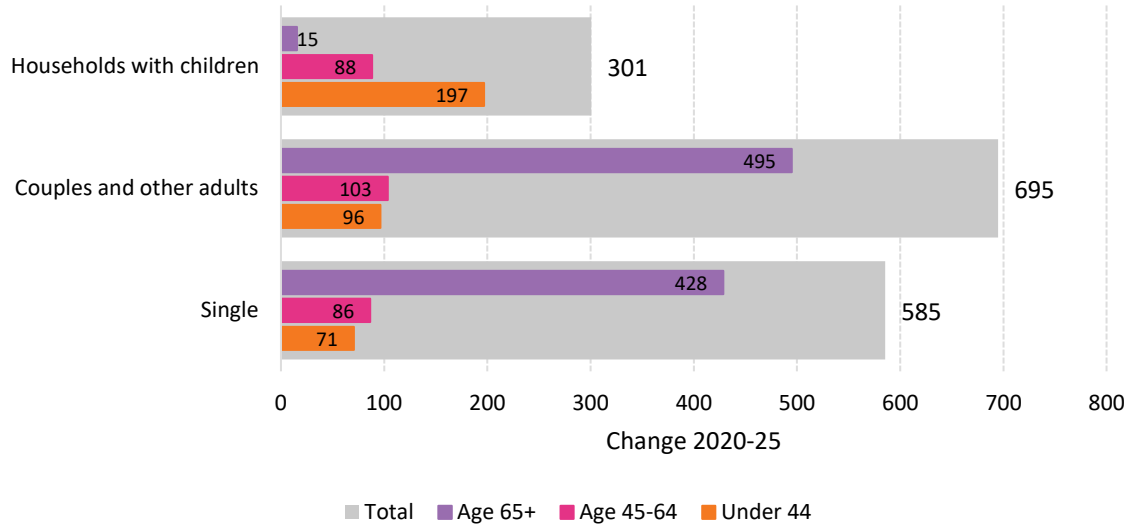
7.2 As a result of recent housing growth, the population of Letchworth reached a record high of just under 35,000 people in 2017, however this has slightly declined since. A significant proportion of this population are younger (0-18) and older (65+) residents, and the number of elderly residents is increasing rapidly. The most recent data shows that housing in Letchworth is significantly less affordable for residents and workers in the district compared to national averages, and that prices/rents are continuing to rise in line with wider trends.

7.3 The current housing stock in the town is characterised by larger properties, as well as a notably higher proportion of affordable (social rented) homes compared to district and national averages. In terms of size and type, the majority of homes in the town are terraced – which contrasts with semi-detached properties being the main housing type across both North Hertfordshire and England – and residents typically live in larger properties (65% 3+ beds, compared to 60% nationally).

Future growth

7.4 Between 2020 and 2035 Letchworth is expected to see growth of 1,600 new homes which will help reverse the recent trend of population decline and see the town's population grow to nearly 37,000 by 2035. Older people will be the fastest growing age group and this is reflected in household growth, which will largely be driven by elderly people albeit with some growth in the number of families, and (to a lesser degree) younger couples and single people. Projected household growth for the town is shown in Figure 7.1.

Figure 7.1 Projected change in households by age and type in Letchworth - 2020 to 2035



Source: Lichfields analysis using PopGroup

7.5 These trends in projected household growth will drive the need and demand for new housing in the town. Based on the way in which different households occupy housing in the market at present we can project this onto future change to understand how demand for different types and sizes of home may change in the future. We have also undertaken sensitivity testing to ensure the results are reasonable when applying an alternative methodology. This gives a suggested range for **market** housing which is heavily geared towards 3-beds, as shown in Table 7.1. This mix is intended to be indicative and may be influenced by wider economic factors, local market circumstances, site specific factors (including viability), local policy objectives and other factors.

7.6 Letchworth currently has a notably high proportion of **affordable** rented housing however a substantial proportion of households still struggle to rent affordably within the private market, and this is particularly true for single person households. This is also evident through the current housing waiting list, which has c.800 households for Letchworth. The prominence of single people amongst current need and future need (largely due to ageing) would indicate that a substantial proportion of new affordable housing should be 1-bed, as shown in Table 7.1. Evidence also suggests there is scope to make better use of the existing affordable housing stock in Letchworth and more widely, with a significant number of households living in affordable rented housing which is likely to far exceed their needs. With older single people making up a substantial proportion of future growth, adaptable and accessible affordable housing can also play a key role in freeing up larger affordable housing to meet the needs of families.

Table 7.1 Summary of suggested mix for market and affordable housing

	1-bed	2-bed	3-bed	4+ bed
Market	0-10%	10-20%	50-60%	15-20%
Affordable	60-80%	20-30%	0-5%	

Source: Lichfields analysis

Wider market analysis

7.7 Nearby strategic sites appear to be offering – in overall terms – larger market and affordable housing than our suggested range for Letchworth. This is likely to reflect the nature of most strategic sites (typically being lower density greenfield developments) but also local policies and market factors within the specific areas the sites are located in. With the affordability of open market housing being a key issue within Letchworth, and taking into account the finding of our previous survey and research, this highlights the important role that more modestly sized market housing (3-bed) and smaller affordable housing (primarily 1-bed) will play in meeting needs within Letchworth, specifically as part of the North of Letchworth allocation.

Appendix 1 Housing Trajectory

Table 7.2 Housing trajectory for Letchworth

		Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Comments and amendments
LG1	Land North of Letchworth	850								50	100	100	100	100	100	100	100	100	50	LGCHF indicated timescales from Council likely to be tight and did not factor further delays from the Local Plan Inspector. They expect some homes in 2026 so this has been reduced from 100 to 50 units for the first year and an additional 50 dwellings added in 2035 to complete
LG3	Land east of Kristiansand Way and Talbot Way	120							40	40	40									LGCHF indicated this was running slightly behind the Council's trajectory so has been moved back 1 year
LG4	Land north of former Norton School, Norton Road	45					20	25												None - LGCHF indicates site progressing
LG5	Land at Birds Hill	86									40				46					None - LGCHF has no timescale so this has been left as per NHDC trajectory
LG6	Land off Radburn Way	26					13	13												None - LGCHF indicates site progressing
LG8	Pixmore Centre, Pixmore Avenue	80									40	40								None - LGCHF has no timescale so this has been left as per NHDC
LG9	Former Lannock School	44			44															LGCHF indicates this is complete. Assumed to constitute part of 152 net completions reported in AMR for 2020/21
LG10	Former playing field, Croft Lane	37								19	18									Subject to an appeal for up to 42 dwellings. Site moved back 2 years
LG13	Glebe Road Industrial Estate	10							10											LGCHF indicates no progress/timeline and issues with noise. Moved back 2 years from NHDC assumption
LG14	Site at Icknield Way*	9			9															LGCHF indicates this is complete with 9 units. Assumed to constitute part of 152 net completions reported in AMR for 2020/21
LG15	Garages, Icknield Way	25												25						None - LGCHF has no timescale so this has been left as per NHDC
LG16	Foundation House	47					10	37												None - LGCHF comments align with NHDC trajectory. Permission granted and land has been sold
LG17	Hamonte**	32			32															LGCHF indicates this is complete. Assumed to constitute part of 152 net completions reported in AMR for 2020/21
LG18	Former Depot, Icknield Way	55						30	25											None - LGCHF comments align with NHDC trajectory
Broad location - LGC town centre					20	18	8	4												
Leys Square					47															
Dorchester House					22															
AMR total net completions (includes some sites/allocations cited above)					152															
					2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	
Housing trajectory		**1,613**	~	~	**152**	**18**	**51**	**109**	**75**	**109**	**238**	**140**	**100**	**125**	**146**	**100**	**100**	**100**	**50**	

Source: Based on North Hertfordshire housing trajectory April 2021, with amendments. Totals may differ to submitted North Hertfordshire Plan if more recent information or permissions indicate a different number of dwellings. *Included in small sites total. **Permission granted in 2017 to demolish existing 39 unit sheltered apartments and replace with 71 units hence net gain 32.

Appendix 2 Strategic Site Analysis

Site	App ref.	LPA	Name	Units	Notes
Complete					
1	16/04658/FULL & 14/02013/FUL	Central Bedfordshire	Land North of Potton Road, Biggleswade	527	Full planning permission for Phase 1, comprising 300 homes, was approved in April 2015 (S73 application 15/04897/VOC approved May 2016). Full planning permission for Phase 2, comprising 227 homes, was approved in April 2017. A review of the Council's five-year housing land supply documents indicates that all homes are now complete. The affordable tenure is the average for Phase 1 and 2 combined (i.e. 44% affordable rent and 56% intermediate in Phase 1, 58% affordable rent and 42% intermediate in Phase 2).
2	3/15/0300/OUT	East Hertfordshire	Former Sainsburys Depot, Buntingford	316	Hybrid planning application was approved in March 2016 (detailed for 316 homes, outline for employment). The Council's latest five-year supply position statement (2019) anticipated that the remaining 78 units were due for completion by April 2021 and it is assumed that the site has now completed on that basis. The housing mix is based on the tenure and unit type plans.
Under Construction					
3	19/00386/RM & 16/00378/1	North Hertfordshire	Land north of Baldock Road, Royston	279	Under construction. Reserved Matters application approved 25/10/2019 (Outline permission reference 16/00378/1). Housing mix detailed in the accommodation schedule and Design & Access Statement. The S106 for the outline permission provides details on tenure for the affordable housing.
4	14/02485/1 17/02627/1 18/00359/RM 19/02866/RM	North Hertfordshire	Land north of Newmarket Road, Royston	340	Outline planning permission (14/02485/1) was granted in 2016 and this is being delivered in 3 phases. Reserved Matters for Phase 1 for 83 units was approved May 2018 (and was nearly complete at the end of 2021); Phase 2 for 108 units in September 2018; and Phase 3 in December 2021. Two versions for Phase 3 were submitted: one including land for a care home and proposing 165 units (19/02865/RM) and one excluding land for a care home and proposing 149 units (19/02866/RM). The care home now has permission and recent condition discharge applications have been approved/submitted; there is therefore evidence that this is coming forward and as such application 19/02866/RM for 149 units in Phase 3 (which excluded the care home) will be implemented. Affordable tenure mix is provided within the S106 agreement linked to the outline planning permission.
5	19/02032/RM (17/01277/OUT) 19/02029/RM (17/01236/OUT)	Central Bedfordshire	Land at Saxon Drive & Sorrel Way, Biggleswade	293	This scheme comprises two adjacent sites, one for 200 market units to assist in meeting wider housing need and one for 93 extra care flats with the provision being entirely affordable (to meet an identified local need). Reserved Matters for 200 units was approved in November 2019 (following outline planning permission 17/01277/OUT in September 2017). As of December 2021, 39 dwellings were completed and a further 52 were under construction. The housing mix has been determined from the site layout and house type plans. Reserved matters for the affordable element, comprising a bespoke 93-unit extra care building, was approved in October 2019 (following outline planning permission 17/01236/OUT in September 2017).
6	05/01425/OUT 16/05906/RM 16/03258/RM	Central Bedfordshire	Site 3, Kings Reach, Biggleswade	201	This site forms part of the wider 'Kings Reach' development of over 2,100 homes, partitioned into over 100 land parcels and numerous corresponding applications. As of December 2021, 10 units were left to complete and under construction. Outline permission (05/01425/OUT) was granted in April 2015. Reserved matters for the first phase (16/03258/RM) of 67 homes was approved in November 2016; reserved matters for the second phase (16/05906/RM) of 134 homes was approved in August 2017.
Outline or Hybrid Application/Permission					
7	18/01154/OP	North Hertfordshire	Highover Farm, Stotfold Road, Hitchin	700	Outline application submitted in 2018 for up to 700 homes. A recently revised Planning Statement (dated December 2021) provides a detailed housing mix, stating this '*has been agreed in discussion with the case officer over the lifetime of the application submission*'. The affordable housing provision (40%) has been agreed but is subject to discussions and negotiations on other S106 obligations; the tenure is assumed to be in line with discussions with North Hertfordshire's Housing Officer.
8	16/01713/1	North Hertfordshire	Land at Roundwood, Back Lane, Graveley	360	Hybrid application submitted in 2016 for up to 360 homes (outline for 252 homes, full for 108 homes). The Planning Statement sets out a detailed tenure and size mix for Phase 1 (108 homes) and an estimated mix for later phases (forming the outline element of the application). It states that the estimates are provided so that the overall contribution of the site can be assessed.

Site	App ref.	LPA	Name	Units	Notes
9	21/00356/FPM	Stevenage	Land West of Stevenage	1,500	Hybrid planning application submitted in April 2021, seeking full permission for 390 homes (Phase 1) and outline permission for 1,110 homes (Phases 2 to 4). Received committee resolution to grant in December 2021 subject to S106 and additional conditions. The housing mix provided in the report is based on the detailed mix available for the 390 homes as the indicative outline mix for remaining phases is not yet agreed and subject to change.
10	17/00862/OPM	Stevenage	Land North of Stevenage	800	Outline planning application for 800 homes submitted in December 2017. The application received a resolution to grant in December 2020, subject to completion of the S106; it is assumed that this is still awaited. The Planning Statement contains an indicative % unit mix which has been developed through discussions with SBC housing and planning officers (for private units, an 'up to' % is provided to allow for flexibility in developing the detailed design at RM stage e.g. 'up to 70% 3 beds').
Discounted sites					
North Hertfordshire					
21/02586/OP	Land east of Knebworth (KB4)			230	Outline application. No detailed housing mix available.
21/00765/OP	Land Off Barkway Road, Royston			280	Outline application. No detailed housing mix available
17/04420/OP	North of Baldock (BA1)			2800	Outline application. No detailed housing mix available
17/04417/OP	Land off Clothall Road (BA2, 3, 4 & 10)			495	Outline application. No detailed housing mix available
17/00830/1	Luton East (EL1 & 2)			1,400	Outline application. No detailed housing mix available
16/02014/1	Luton East (EL3)			660	Outline application which only provides an illustrative mix based on 2015 SHMA.
17/00110/1	South of Newmarket Road, Royston (RY10)			325	Outline permission with no detailed housing mix. Phase 1 RM submitted for 83 homes.
Central Bedfordshire					
CB/17/01158	Land at Chase Farm, Arlesey (MA8)			1,030	Outline permission. No detailed housing mix available; no RM submitted yet.
CB/20/00959	East of Biggleswade (SA4)			1,500	Revised access proposed to unimplemented Outline PP 18/02458/OUT. No detailed housing mix provided.
MB/05/01423	Site 4, Land South of Potton Road (HO8(8))			354	5yhls site – part of a larger allocation which is already under construction. Outline doesn't appear to be approved.
CB/21/02409	Land to the East of Barton le Clay (HAS05)			500	Outline application. No detailed housing mix available
9/04301/OUT	Land North of Biggleswade (HAS06)			416	Outline application. No detailed housing mix available

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Appendix N

Housing needs survey

Letchworth Garden City Local Housing Needs Study

Letchworth Garden City Heritage Foundation

March 2019

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Executive Summary

This Local Housing Needs Study has been produced by Lichfields on behalf of the Letchworth Garden City Heritage Foundation to provide an assessment of affordable housing needs in Letchworth in the context of the allocation of land North of Letchworth, which is expected to provide c.900 new homes. This study is one of several reports prepared by Lichfields over recent years for the Foundation.

Background

The purpose of this study is to help the Foundation understand in more detail, the housing needs of its residents (particularly for affordable housing) and how the allocation North of Letchworth can best serve these needs. In mid-2018 the Foundation commissioned Lichfields and Meeting Place Communications to undertake this research; Lichfields prepared the questions for a housing needs survey ("the survey") which was then distributed to Letchworth residents by Meeting Place Communications. Lichfields then analysed the results.

Previous research – what we know

Lichfields' previous reports reviewed publicly-available information and conducted interviews with local agents to build a picture of Letchworth and its housing market. The findings of our previous work are summarised in this study, and are used to identify gaps in our knowledge which the survey could help to fill.

We know that in the mid/late-2000s Letchworth Garden City saw relatively little population and housing growth. In recent years, housing development has picked up which has led to the town's population reaching a record high of just under 35,000 people. Whilst house prices in Letchworth are similar to the District average, prices across the District have risen sharply in recent years and the ratio of house prices to earnings is now at the highest ever. Entry-level house prices in Letchworth and North Hertfordshire are now around £260,000.

Our work has highlighted several gaps which could be filled by undertaking a local survey. These gaps included the perception of Letchworth, the housing needs of existing households, newly-forming households, elderly households and other types of housing needs (namely self-build and CLT).

Survey findings and implications

The survey achieved good coverage with a range of responses from all tenures and households from different incomes. However, there may be some under-representation of those in the social rented sector in our responses, which should be noted when interpreting results.

New households

Newly-forming households are those (individuals, couples or families) which are currently living as part of another household but would like to move into their own home in the near future. This could be, for example, an adult child (or couple) living in the family home with parents. By undertaking a survey, it is possible understand what sort of income these people would have and what type of housing they want, which can inform decisions about future housing provision in Letchworth.

The survey found that most newly-forming households wanted to remain living in Letchworth. There is a need for a range of tenures to accommodate newly-forming households; from social rented housing for those with lower incomes and affordable purchase options for those on average (or higher) incomes. There appears to be an affordability 'gap' for those on incomes of around £40k-£50k; these households may struggle to obtain anything larger than a 2-bed flat/small house on the open market (without a substantial deposit), but could afford a larger home through shared ownership (where households part own and part rent their home) or discounted market housing (where homes are sold with at least a 20% discount on the market value).

Single person households typically wanted smaller housing, whether owner or rented. For those wanting to move into ownership, shared ownership or discounted market housing might be an option as those in incomes of around £30k might be able to afford a 1-2 bed flat with either discounted market or shared ownership housing. Households forming with others had higher incomes as expected (these were more likely to be dual-income), and these typically expressed a preference for owner-occupied or shared ownership housing. None of these households expressed a preference for flats, which suggests if affordable homes for purchase are provided in Letchworth they should be small family homes with outdoor space suitable for young couples and families.

Older households

In line with national trends, North Hertfordshire and Letchworth are expected to see significant growth in the number of older households in the future, and it is important that their needs are understood. As may be expected, the survey has found that the majority of older households (especially owner-occupiers living in larger housing) typically do not want to move. This may be due to costs/hassle associated with moving, wanting to maintain a large home/extra rooms for visitors or for sentimental reasons, since many will still be living in the family home.

Of those that do want to move, many noted there was a lack of options available currently in Letchworth. Around half stated they would prefer a home on one level (e.g. ground floor flat or bungalow), with around one-third being open to sheltered housing options. The lack of downsizing options highlighted by survey respondents correlates with our research of homes currently for sale in Letchworth, which suggests that there is very little availability of small bungalows available in Letchworth and those that are, are very expensive. Even an older (owner-occupier) household living in a 3-4 bed home is unlikely to be able to raise enough capital to buy bungalows currently on offer in Letchworth, without raising additional funds (e.g. through a mortgage – which is likely to be difficult for older households). Given that the movement of older households out of family homes will subsequently increase the supply of such homes available for families to occupy, the Foundation should consider how the provision of new housing can address the demands of downsizers.

Self-Build and Community Land Trust (CLT) Housing

Finally, the survey suggested that there was some appetite for self-build housing and to a lesser extent CLT housing. Some households were ready immediately to pursue self-build housing, others were still in the planning stage.

Contents

1.0 Introduction 1

Context 1

Previous work 1

Purpose of this report 2

Report structure 2

2.0 People and households 5

Population growth 5

Households 9

3.0 The housing stock, prices and affordability 13

Housing stock 13

House prices 14

Affordability 17

Part 1 - Summary 18

4.0 Survey background 21

Areas for further research 21

Purpose of the survey 21

Circulation and responses 22

Survey coverage 22

Affordability assumptions 23

5.0 Context 24

Current residence 24

6.0 Perceptions of Letchworth 26

Summary 27

7.0 Needs of existing households 28

Current housing 28

Moving intentions 30

Summary 32

8.0 Newly-forming households 33

Context 33

Income and housing needs 34

Summary 38

9.0 Elderly and other needs 39

Elderly needs 39

Self-build/CLT 40

10.0 Summary 41

What we know 41

Survey findings and implications 41

Appendices

Appendix 1: Letchworth Housing Survey

Appendix 2: Summary of Survey Outputs

Appendix 3: Review of additional responses

1.0 Introduction

1.1 This Local Housing Needs Study has been produced by Lichfields on behalf of the Letchworth Garden City Heritage Foundation ("LGCHF", "the Foundation") to provide an assessment of affordable housing needs in Letchworth. This is in the context of the emerging North Hertfordshire Local Plan and the provision of affordable housing on the strategic allocation North of Letchworth. The Foundation wishes to understand in more detail the housing needs, particularly affordable housing need, of its residents and how the allocation North of Letchworth can best serve these needs.

1.2 Letchworth Garden City was founded in 1903 by First Garden City Ltd under Ebenezer Howard's vision to create a 'third alternative' way of living which encompassed the benefits of town and country living through zoning, careful design and affordable housing combined with local jobs. In addition, the central ethos was that all profits were reinvested back into the estate; the assets and responsibilities of First Garden City Ltd were transferred to a public-sector organisation in 1962 (the Letchworth Garden City Corporation) and today those responsibilities lie with the Letchworth Garden City Heritage Foundation. Through generation of revenue from its land, the Foundation supports and funds activities in the local community, ranging from the environment, heritage, culture, leisure and wellbeing.

Context

1.3 The North Hertfordshire Local Plan ("the Local Plan") was submitted to the Secretary of State for examination in June 2017. The Hearing Sessions took place between November 2017 and March 2018, and in November 2018 the Council published its proposed schedule of Main Modifications (MMs). As of March 2019, the North Hertfordshire District Council is consulting on the MMs to the Local Plan.

1.4 The MMs clarify that between 2011 and 2031 Letchworth Garden City is expected to see the delivery of 2,167 homes in total (Policy SP2 of MMs). This includes completions and sites with permission to date (totalling 592 homes), 900 homes at North of Letchworth, a further 623 homes on 13 other allocated sites, and 50 homes in the town centre (broad location) (see MMs para 13.214 and Policies LG3 to LG18). Policy SP15 relates to the allocation North of Letchworth and confirms that the site will be expected to deliver a new 2 form of entry primary school, neighbourhood retail and community space, a GP surgery, plots for self-build housing and a care home. As per Policy HS2, 40% of dwellings will need to be affordable, with an expectation that 65% of these will be rented and 35% will other forms of affordable housing.

Previous work

1.5 This report represents one of a series of reports prepared by Lichfields on behalf of the Foundation in recent years:

1 LGCHF Economic Assessment of Growth Options, November 2013. This Report undertook an assessment of the present socioeconomic position of Letchworth Garden City and an assessment of the impact of different scales of expansion. This was undertaken in the context of the then-emerging North Hertfordshire Local Plan;

2 LGCHF Economic Assessment of Growth Options Update, April 2016, which was an update to the November 2013 Report; and

3 LGCHF Local Housing Study, August 2016. This report undertook a more detailed assessment of the current local housing market in Letchworth, reviewed the need for

affordable housing and undertook several further scenarios for future housing needs in the town. This report is herein referred to as the "LHS".

Purpose of this report

1.6 In mid-2018 the Foundation commissioned Lichfields to undertake research and analysis on local housing needs in Letchworth. Having previously prepared a number of reports for the Foundation, Lichfields prepared the questions for a housing needs survey ("the survey") which was then distributed to Letchworth residents by Meeting Place Communications. The survey was distributed between October and December 2018 and closed to responses on 3rd January 2019. This report represents the next stage in the process.

1.7 The purpose of this report is two-fold:

1 To summarise – and update where possible – research undertaken to date reviewing the housing market context of Letchworth, including housing completions, socio-economic characteristics and house prices; and

2 To analyse data collected by Meeting Place Communications and the Foundation as part of the survey conducted in Letchworth in October-December 2018. This is to:

a Understand the needs – specifically for affordable housing - of households currently living in Letchworth;

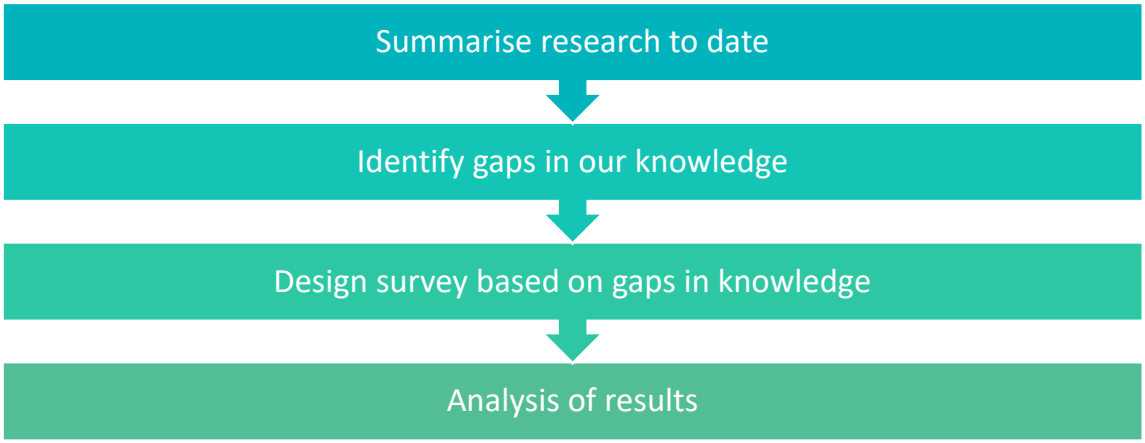
b Understand in more detail the needs associated with other types of affordable housing, including shared ownership and other affordable homes for purchase, particularly associated with concealed and newly-forming households; and

c Identify whether there are any other specific housing needs which the allocation North of Letchworth could help to address.

Methodology

1.8 This report has been prepared based on a broad methodology as set out in Figure 1.1.

Figure 1.1 Broad methodology for Local Housing Needs study



Source: Lichfields

Report structure

1.9 This report is set out in as follows:

1 **Part 1: Letchworth's Housing Market** – provides a brief summary of the local housing market context (including the findings of our interviews with estate agents undertaken as

part of the LHS), summarising previous work undertaken by Lichfields on behalf of the Foundation (in August 2016) and providing updates where possible. This section also highlights gaps in existing data which the survey will help to fill. Amongst other indicators, it reviews completions in Letchworth, house prices and turnover, migration, income and affordability and demand for affordable housing;

2 **Part 2: Local housing needs** – summarises and analyses the findings of the survey which was undertaken in Letchworth;

3 **Summary and Conclusions** – summarises the findings of Parts 1 and 2, including the implications of the findings for future provision of housing in Letchworth.

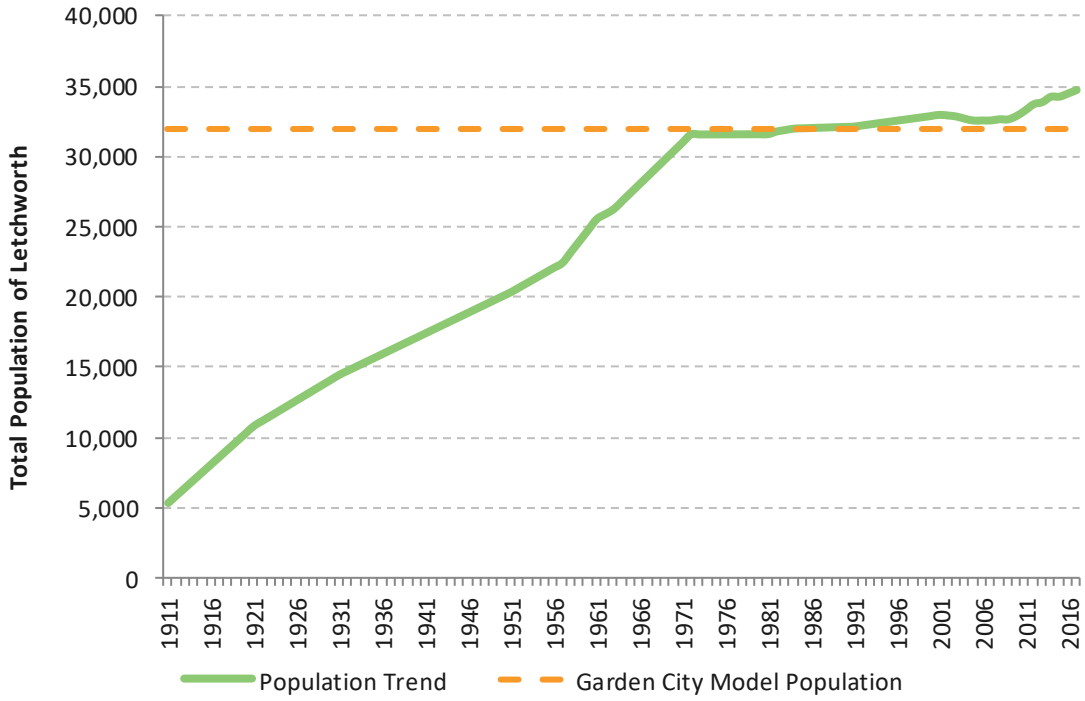
Part 1 – Letchworth's Housing Market

2.0 People and households

Population growth

2.1 Letchworth's population grew steadily from around 5,000 in 1911 to around 32,000 by 1971. This was driven by the original development of Letchworth as a Garden City, with various extensions taking place in the 1940s, 1960s and early 1970s. After 1971, population growth was almost flat, and reached 33,000 30 years later in 2001. The town has seen more population growth in the last recent years than was seen in the 1970s, 1980s and 1990s, as shown in Figure 2.1, likely due to housing development.

Figure 2.1 Population Change in Letchworth - 1911 to 2017



Source: ONS Mid-Year Estimates, the Foundation

2.2 Recent data on housing completions in Letchworth is published by North Hertfordshire District Council. Between 2013/14 and 2016/17 Letchworth saw 189 net completions, including 64 affordable homes, the majority of which were completed in 2016/17 at Blackhorse Road. Last year (2016/17) a total of 110 dwellings were completed in Letchworth, accounting for one-fifth of all completions in the District, as shown in Table 2.1.

Table 2.1 Recent housing development in Letchworth

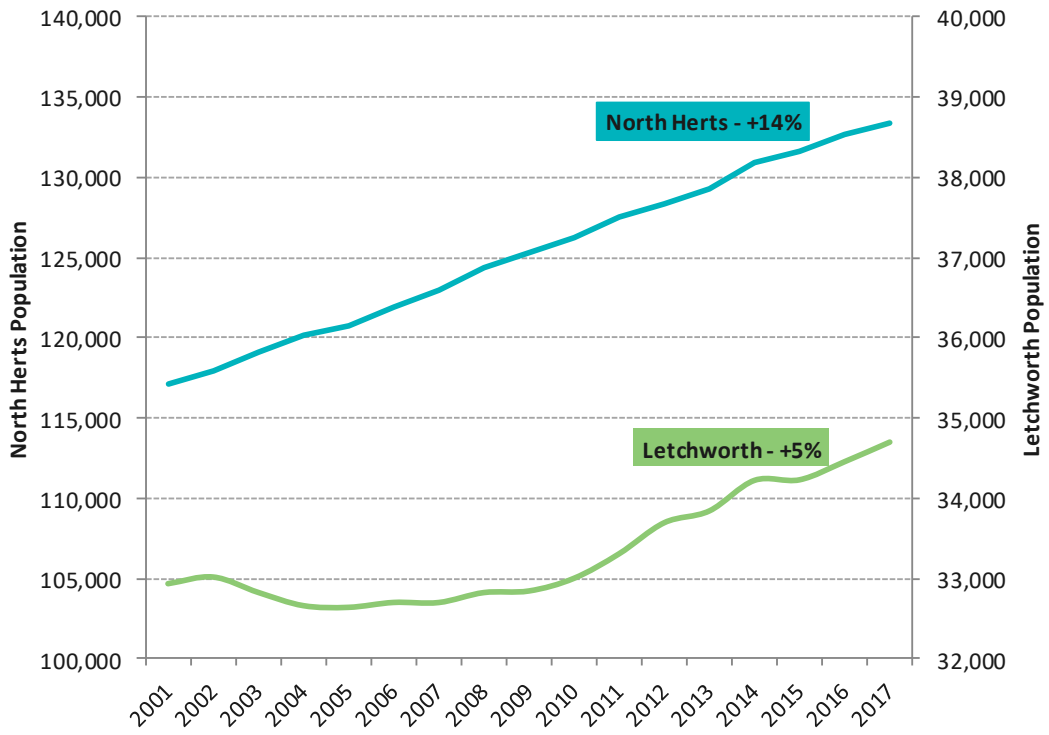
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Net Completions - Letchworth	~	~	27	7	45	110
of which affordable	~	~	1	0	8	55
North Herts total	384	291	259	180	341	539
Letchworth as a % of District total	~	~	10%	4%	13%	20%

Source: North Hertfordshire Annual Monitoring Reports 2013/14 to 2016/17. Data for completions in Letchworth is not available prior to 2013/14.

Letchworth today

2.3 The population of Letchworth currently (at 2017) stands at 34,697; its highest population to date. However, despite recent growth, population growth in Letchworth has fallen significantly behind North Hertfordshire since 2001, with Letchworth growing by just 5% since 2001 compared to North Hertfordshire's growth of 14%, as shown in Figure 2.2. Letchworth currently represents just over one-quarter of North Hertfordshire's population of 133,300.

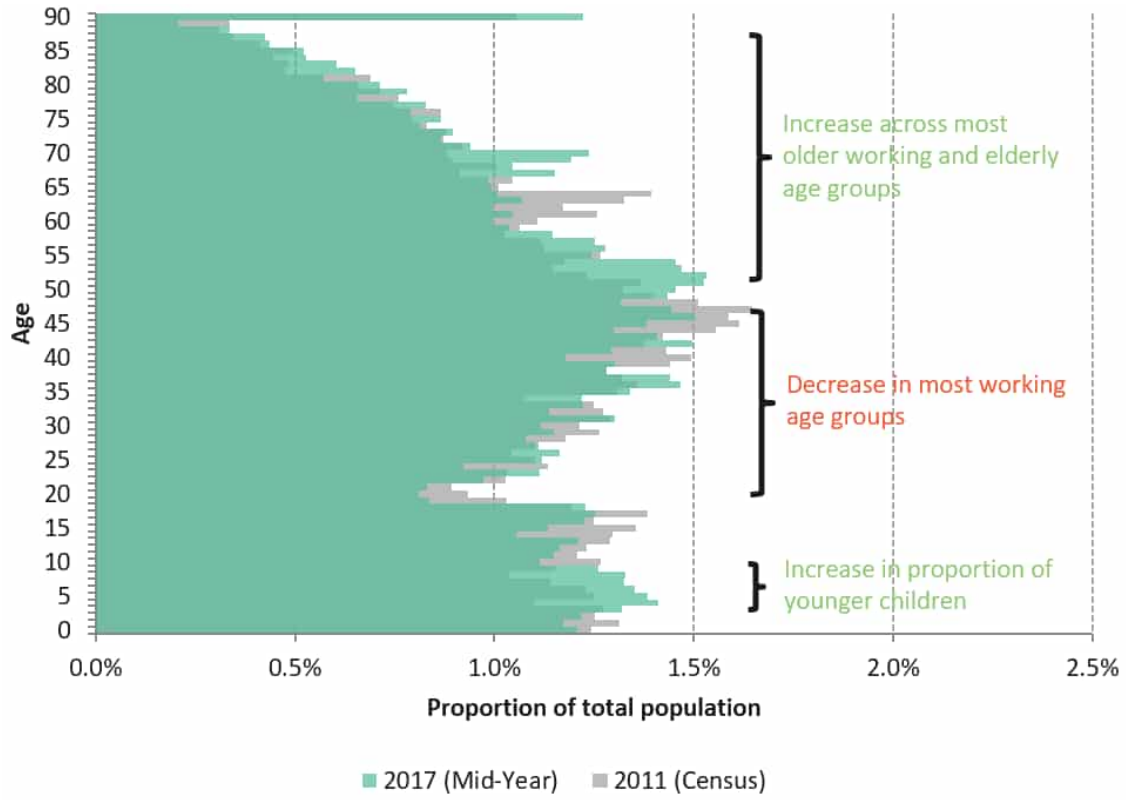
Figure 2.2 Total Population - North Hertfordshire and Letchworth - 2001-2017



Source: Lichfields based on Census/ONS Mid-Year Estimates. Letchworth Population for 2001 taken from 2001 Census, all other values taken from ONS Mid-Year Estimates

2.4 The provision of new housing in the town in recent years appears to have helped attract new families to the area, as evident from the increase in the proportion of children living in Letchworth over the last 6 years, as shown in Figure 2.3. There have been slight declines in the proportion of residents who are around age 18-34, which is likely to be associated with young adults moving away to attend university and/or for employment opportunities in larger nearby cities, e.g. London and Cambridge. The town has also not been immune from wider trends around ageing, with increases in almost all age groups above 65 – this is consistent with trends seen nationally.

Figure 2.3 Age Structure of Letchworth - Change 2011-2017



Source: Lichfields based on 2011 Census and ONS 2017 Mid-Year Estimates

2.5 According to the most recent population projections, the population of North Hertfordshire is expected to increase by 16% by 2041 to around 154,000. Growth is expected across all age groups, as shown in Table 2.2, albeit in the younger working age group (18-44) this growth is only marginal. The fastest growth is expected in the number of 65+ year olds which will increase from around 25,000 to 39,000 by 2041, reflecting wider trends of ageing. This means although the number of children (0-17) and working age adults (18-64) are expected to increase, as a *proportion* of the total population they will see an overall decline. The number of elderly residents is expected to increase from around 19% of the total population currently to 25% in 2039.

Table 2.2 Change in population by broad age group - North Hertfordshire 2016-41

	2016 Population	2041 Population	Absolute Change	Age Structure	
				2016	2041
0-17	29,051	30,724	1,673	22%	20%
18-44	43,700	43,777	77	33%	28%
45-64	35,218	40,014	4,796	27%	26%
65+	24,686	39,128	14,442	19%	25%
Total	132,655	153,642	20,987	100%	100%

Source: Lichfields based on ONS 2016-based SNPP

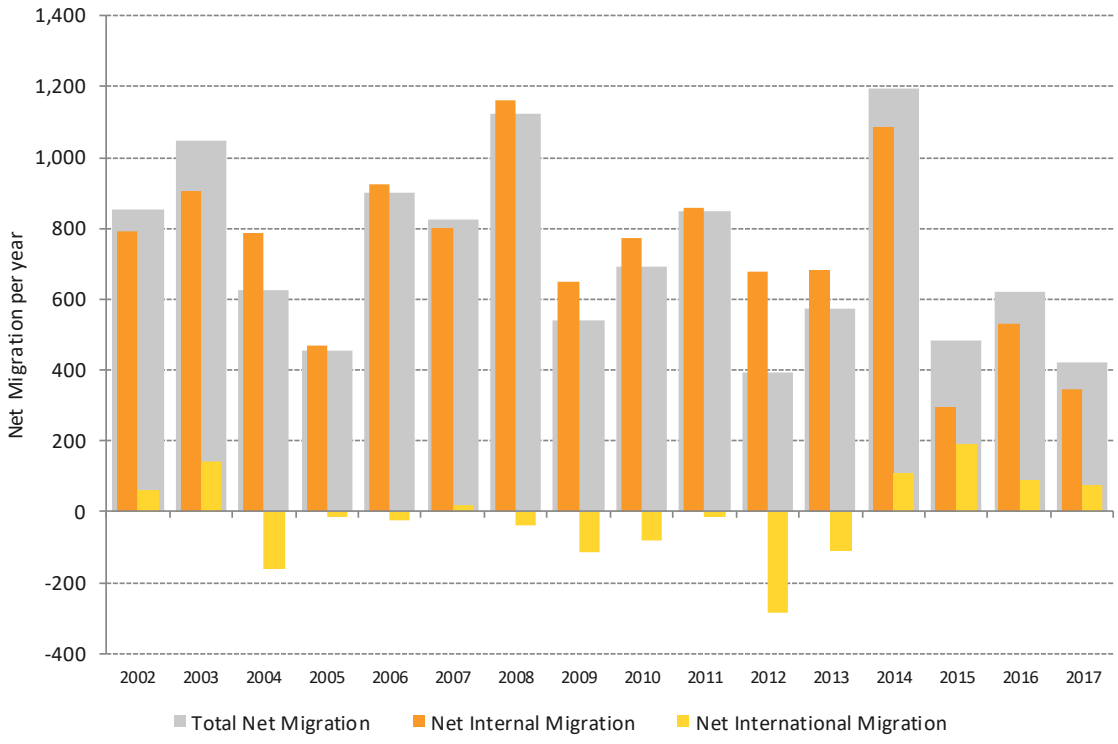
Areas for further research

Information on population and housing growth provides a starting point for understanding Letchworth today. One aim of the survey is to understand (qualitatively) what current residents think of the town and its housing. Residents are given the opportunity to provide any comment on Letchworth's housing market and/or the needs of the town's residents.

Migration

2.6 Migration levels to North Hertfordshire have been relatively low in recent years at around 400-600 persons per annum; several times in the last 15 years the District has seen net migration in excess of 1,000 per annum, as shown in Figure 2.4. Typically the District sees net in-migration from the rest of the UK (internal migration), ranging from around 300-1,200 per annum. The District sees little net migration from overseas; this ranges from around -300 to 200 per annum.

Figure 2.4 Annual Net Migration - Internal, International and Total - North Herts - 2001/02 to 2016/17



Source: ONS 2017 Mid-Year Population Estimates

2.7 The 2011 Census provides the most recent detailed information on migration to/from North Hertfordshire and to Letchworth. Whilst ONS publishes annual migration estimates for local authorities, these do not give detailed information such as age, household characteristics or migration at a sub-district level. A detailed review of migration using 2011 Census data was undertaken in the LHS, at paras 3.5-3.19 (for migration to North Hertfordshire) and 3.20-3.29 (for migration to Letchworth). In summary, the LHS found that:

1 North Hertfordshire typically had lower levels of self-containment than nearby towns (e.g. Milton Keynes, Luton, Bedford and Stevenage) but higher self-containment than South Cambridgeshire and Uttlesford (see LHS Figure 3.2);

2 Families with children typically had the highest self-containment rate of all households in North Hertfordshire (LHS para 3.8);

3 North Hertfordshire's strongest migration links (in terms of gross flows) are with Stevenage, Central Bedfordshire and London (LHS Figure 3.6). 45% of migrants to North Hertfordshire came from neighbouring local authorities; and a further 20% came from London. Compared to neighbouring authorities a relatively small proportion of North Hertfordshire's migrants come from further afield (LHS Figure 3.8). The District does however see overall out-migration of 15-19 year olds, including to University towns and cities such as Leeds, Nottingham, Bristol, Canterbury and Brighton;

4 In the future, the latest population projections expected net migration to North Hertfordshire to be steady at around 900-1,000 per annum;

5 In Letchworth, over half of households which moved into the town originated either in Letchworth itself or elsewhere in North Hertfordshire (this reflected the findings of estate agent surveys, which suggested around half of those in search of housing came from the local area, with the rest coming from areas to the south along the A1 corridor and London);

6 Families with children and single person households were most likely to move, and were also most likely to remain in North Hertfordshire (including remaining in Letchworth) (see LHS Table 3.3);

7 Couples over 65 and young couples without children were most likely to move out of North Hertfordshire (see LHS Figure 3.10). For retirees, this is likely to reflect longer distance moves for lifestyle purposes, e.g. to retirement destinations such as coastal areas. In younger couples, moves out of Letchworth are likely to be associated with movements for lifestyle and/or employment opportunities; and

8 Compared to nearby towns Hitchin and Royston, households moving into Letchworth were more likely to be from the local area – 59% of in-migrating households originated from within North Hertfordshire compared to 52% for Hitchin and 46% for Royston.

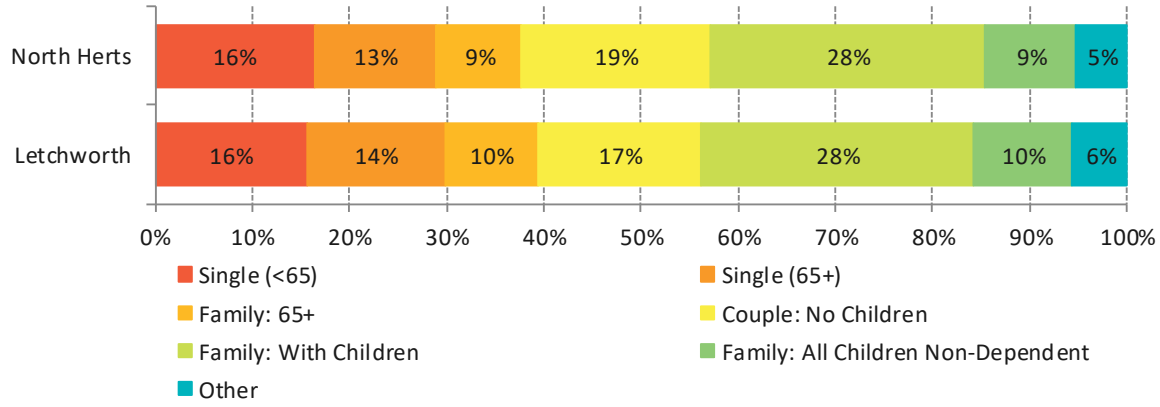
Areas for further research

Information from the Census provides a clear picture of where people move to and from, in North Hertfordshire and Letchworth. As part of the survey we will seek to understand whether residents' current housing meets their needs, and if not, why this is. We will interrogate whether households plan on moving in the near future, including where they want to move to, what income they have and what type/tenure they would prefer to move to.

Households

2.8 Information on households is only available in detail from the 2011 Census, therefore there is no more up-to-date information which has become available since the publication of LHS. The LHS found that between 2001 and 2011, the household profile of Letchworth remained fairly stable and that the household profile of Letchworth was similar to the District, regional and national averages, as shown in Figure 2.5. Families with children make up the largest group in Letchworth, representing around one-third of all households, which is the same as the District average. Letchworth has slightly more single person/family households age 65+ and families with all children non-dependent than North Hertfordshire, and fewer couples (<65) without children.

Figure 2.5 Household profile – Letchworth and North Herts - 2011



Source: Lichfields based on Census 2001 and 2011

2.9 Similarly, the most up-to-date information on occupancy patterns (i.e. what type of homes do households live in) is also only available from Census data. As set out in the LHS[1] there had been an increase in levels of overcrowding in Letchworth between 2001 and 2011, with families with children seeing the greatest increases in overcrowding. At 2011, this meant that there were almost 360 families with children living in overcrowded housing[2].

2.10 The LHS also found that there were a number of small households living in very large housing – known as 'under-occupancy'[3]. In the case of older residents (where these households are sometimes known as 'empty nesters') it is possible that a lack of suitable options for downsizing is limiting the ability of such households to move (in turn, releasing larger housing for families). Research undertaken for the LHS (interviews with local agents) found that smaller housing which could specifically cater for elderly residents, e.g. bungalows, rarely came onto the market in Letchworth and generated a lot of interest when they did[4]. Estate agents noted that those looking to move typically sought small, manageable homes which would be suitable for those with mobility impairments (i.e. single-storey) and with a small amount of outdoor space. Given growth in the number of older households in Letchworth and across North Herts in the future, the provision of housing which specifically caters for the needs of older households seeking to downsize is likely to be of increasing importance in meeting local housing needs, and this is an area which is explored further in the survey.

Areas for further research

In undertaking the survey we hope to identify concealed households which would like to move in the near future and if those households wish to remain in Letchworth. The survey will also ask what income they would have; which would help us understand what type and tenure of housing would be affordable.

There is also currently a lack of information on whether the needs of older households are met through their existing housing, and if not what options those households would consider when moving. The survey will aim to fill this gap in the data.

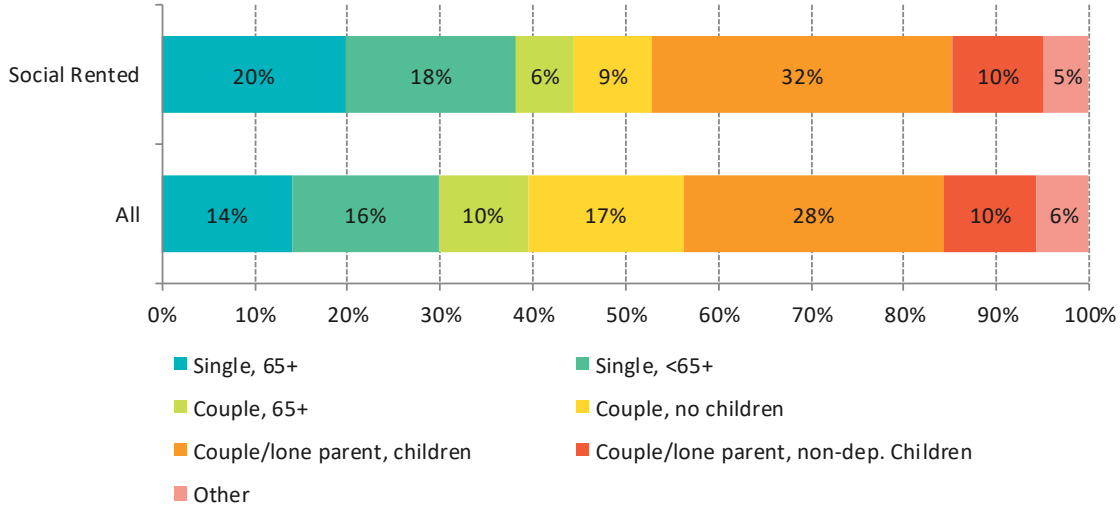
[1] See LHS paras 4.5-4.12
[2] See LHS Table 4.1
[3] See LHS Table 4.2
[4] See LHS para 4.11

Households in affordable housing

2.11 The LHS did not provide a detailed review of households specifically living in affordable housing Letchworth. However, this is of relevant context for the purposes of this study, therefore we set out below in more detail what we can discern about the current profile of households living in affordable housing in Letchworth[5]. The information provided in the Census provides a starting point for context.

2.12 Letchworth contains a much higher proportion of households in the social rented tenure than North Hertfordshire and England, representing **31%** of households at the time of the 2011 Census compared to **19%** across the District and **18%** nationally. Households in social rented housing in Letchworth are more likely to be older single person households and families, particularly lone parents with children, as shown in Figure 2.6. In Letchworth, over half (881 out of 1,534) of lone parent households were in social rented housing at the time of the Census, which is similar to the case across North Hertfordshire and reflects the fact that lone parent households are single earners but have a need for at least a 2-bed home, making it difficult to afford rents in the open market. There are a lower proportion of couples of all ages in social rented housing compared to overall; such households are most likely to be dual earner (or at least dual income, in the case of pensioner households) meaning they are less likely to need social rented household compared to other households.

Figure 2.6 Household composition in Letchworth - Social Rented households and all households

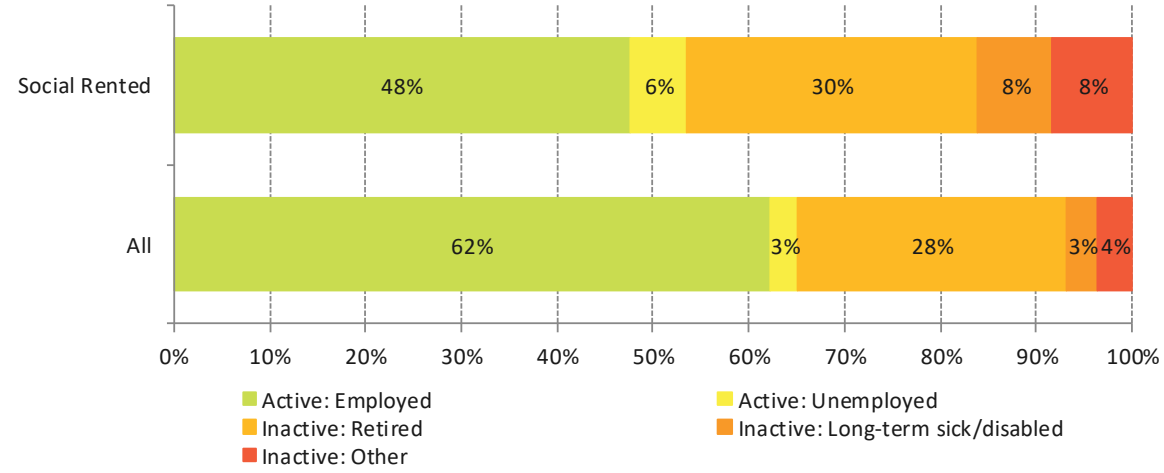


Source: Lichfields based on 2011 Census

2.13 Looking at economic activity, households in the social rented sector are more likely to be retired than all households, although this reflects the fact that the social rented sector contains more older households (particularly single person households). The majority (around 90%) of households in the social rented sector in Letchworth which are economically active are in employment; around 2,100 households out of 2,300. As expected, the proportion of households in the social rented sector which are inactive either due to being long-term sick/disabled or looking after the home/family is higher than the average for all households, as shown below.

[5] The most up-to-date information on household characteristics is available from the Census. In most of its datasets, the Census combines shared ownership housing with 'owner-occupiers', therefore for the purposes of this study 'affordable housing' refers to the tenure of 'social rented' set out in the Census 2011 (either rented from a Council or other provider).

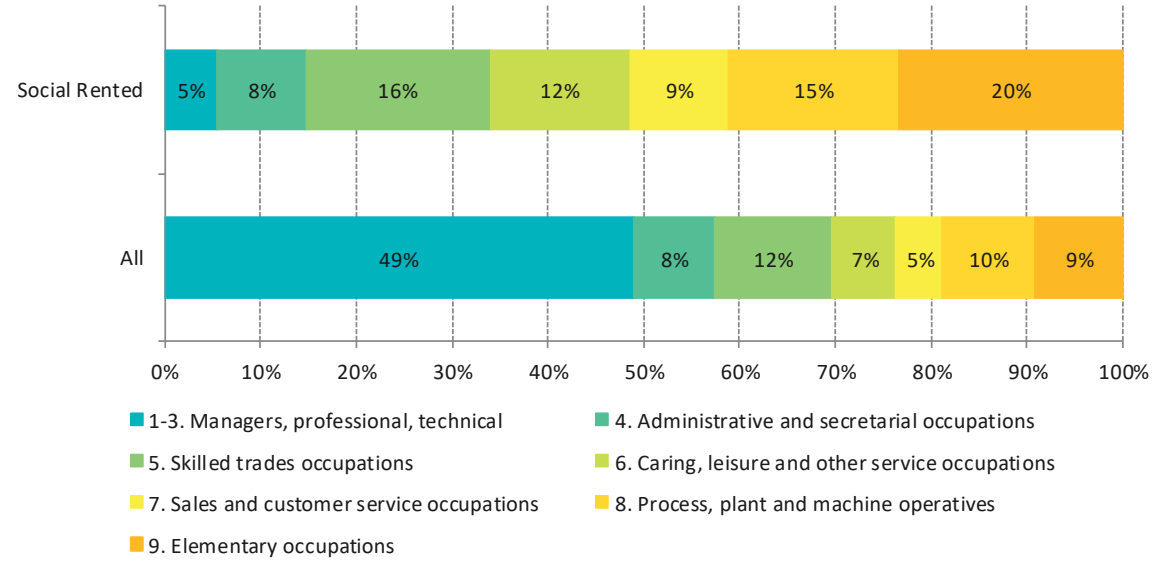
Figure 2.7 Economic Activity (of household reference person) - Letchworth, 2011 - by tenure



Source: Lichfields based on 2011 Census

2.14 Figure 2.8 shows how social rented households in Letchworth compare to all households in NS-SeC (national statistics socio-economic classification, which indicates socio-economic classification based on occupation). As expected social rented households are significantly less likely to be managers, directors, senior officials, or those in professional/technical occupations, and are far more likely to be in elementary occupations (for example retail workers, cleaners, refuse collectors, and some factory jobs). Social rented households are also more likely to be employed in caring, leisure and other service occupations.

Figure 2.8 NS-Sec - Social Rented Households and all households - Letchworth, 2011



Source: Lichfields based on 2011 Census

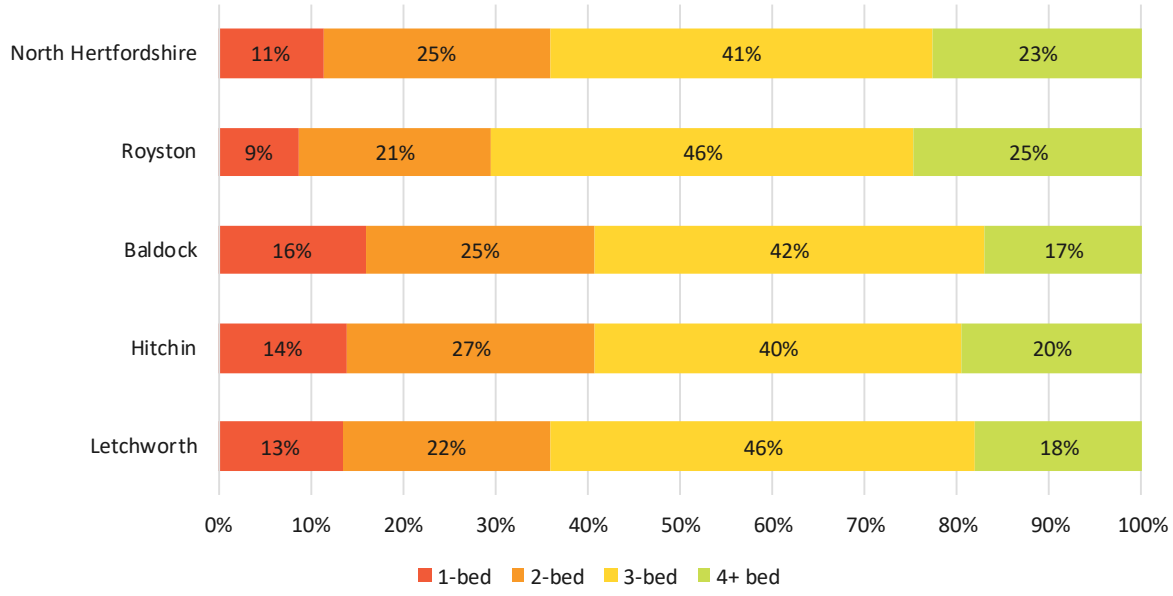
3.0 The housing stock, prices and affordability

3.1 The need for housing across North Hertfordshire is well established in the Council's evidence base and in its emerging plan. Housing is needed across North Hertfordshire to cater for population and household growth, address supressed household formation and to improve affordability. The North Hertfordshire Plan expects to deliver 15,950 homes between 2011 and 2031, of which just over 2,100 (13%) will be in Letchworth.

Housing stock

3.2 The 2011 Census provides the most recent detailed picture of the housing stock in Letchworth. It identified just under 14,000 dwellings in the town, albeit this has likely increased since then due to recent development in the town. Like Hitchin and Baldock, Letchworth has more 1-bed dwellings than the District average. However, Letchworth has fewer 2-bed dwellings than the District average or other towns (except Royston), as shown in Figure 3.1. Letchworth's housing stock is more skewed towards 3-bed dwellings compared to Hitchin, Baldock or North Hertfordshire, with almost half of all homes in the town being 3-bed (the same as in Royston). There are a similar proportion of 4-beds in Letchworth to other towns, with the exception of Royston where the stock is skewed more toward larger dwellings compared to the rest of North Hertfordshire.

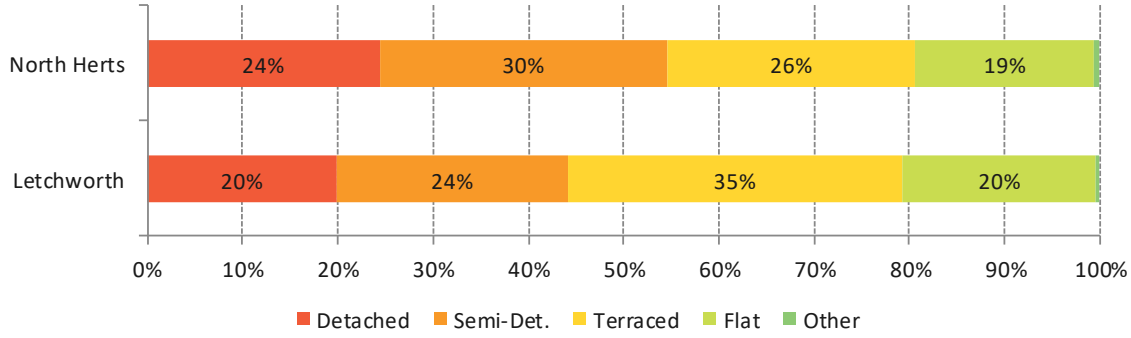
Figure 3.1 Dwelling stock - Letchworth, Hitchin, Baldock, Royston and North Hertfordshire - 2011



Source: Census 2011 QS411EW

3.3 Letchworth contains a relatively high number of terraced housing compared to the District average, with fewer detached and semi-detached homes and marginally more flats (Figure 3.2). Despite the fact that Letchworth has a relatively high number of terraced homes, it was noted by estate agents (in the LHS) that there appeared to be a shortage of mid-range terraced housing suitable for young families coming to the market. This could be because there are a shortage of homes coming to the market and/or those which are coming to the market are not at affordable price points.

Figure 3.2 Dwelling stock by type - Letchworth and North Herts (2011)



Source: Census 2011

3.4 As noted in the LHS, the level of housing growth in Letchworth has fallen behind that of nearby towns (e.g. Hitchin) between 2001 and 2011 (para 2.3/Table 2.1 of LHS). However, housing growth has picked up in recent years. Primary research undertaken as part of the LHS found that according to estate agents there was significant interest and demand for mid-range small to medium sized family homes. Estate agents stated that such homes often attracted significant attention and multiple bids when they became available, and that there was a lack of such homes coming to the market in general. It is possible that the provision of new housing in Letchworth in recent years has helped meet some of this demand, given the growth in the number of children seen since 2011, albeit such demand is likely to continue given the number of children and young working age people is expected to continue growing across North Hertfordshire in the future.

Area for further research

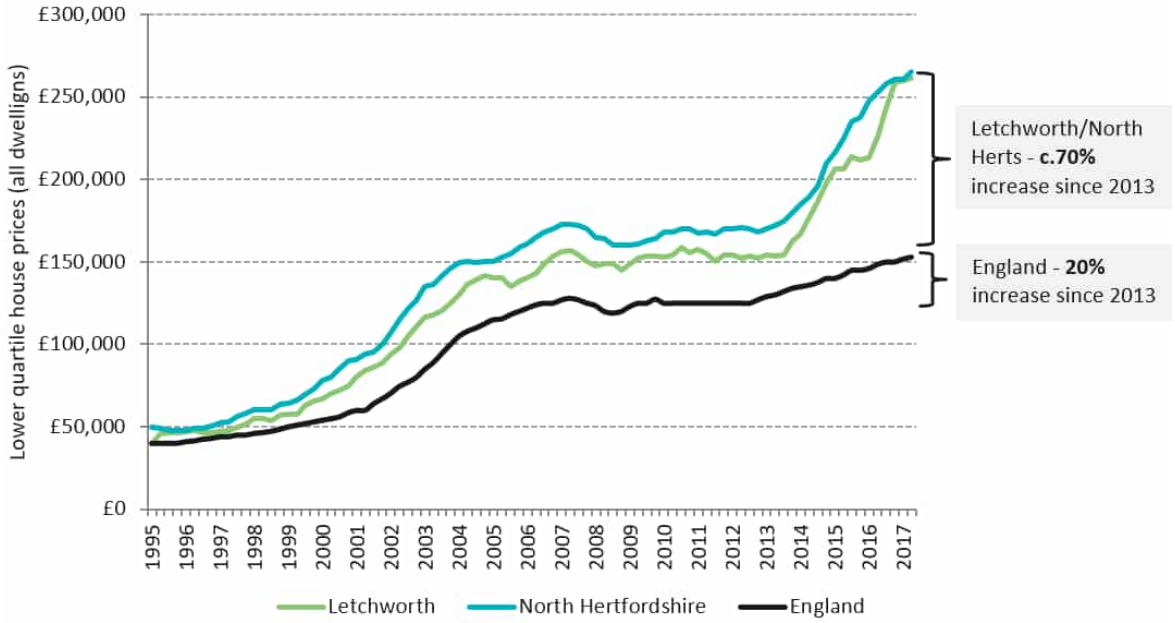
Contextual analysis and our interviews with agents undertaken in the LHS suggested that there was a particular demand for small to medium family-sized homes (amongst other types of housing, such as bungalows). By undertaking the survey, we will seek to confirm whether this is the case, and understand what type of housing households are looking for if planning on moving in the near future.

House prices

3.5 House prices in Letchworth have broadly followed trends across North Hertfordshire historically, as shown in Figure 3.3. However, house prices across North Hertfordshire and Letchworth have significantly outpaced national growth in recent years.

3.6 Following the recession, lower quartile house prices at the national level were fairly steady at around £125,000. In 2013, national prices began to rise slowly and now stand at just over £150,000 – an increase of around 20% in the last 5 years. In Letchworth, lower quartile house prices were fairly steady at around £150,000 following the recession, with prices across North Hertfordshire over the same period slightly higher at around £160,000. However, since 2013, house prices in Letchworth and North Hertfordshire have increased by around £100,000 – an increase of over 70% in just 5 years. Lower quartile house prices in Letchworth (and North Hertfordshire) now stand at around £260,000 – over £100,000 more than the national average.

Figure 3.3 Lower Quartile House Prices - Letchworth, North Hertfordshire and England, Quarterly, 1997 to March 2018



Source: Lichfields based on ONS HPSSA Datasets 4 and 15. Letchworth estimate obtained using average of MSOAs North Herts 003, 006, 007, 008 and 009

3.7 Figure 3.4 shows lower quartile house prices for Letchworth and North Hertfordshire by type of housing; evidently trends in Letchworth have closely followed the District average over recent years. As at March 2018, prices ranged from around £175,000 for flats, around £270,000 for terraced house up to around £500,000 for detached housing. Prices has risen sharply in the last 5-6 years in Letchworth, for example:

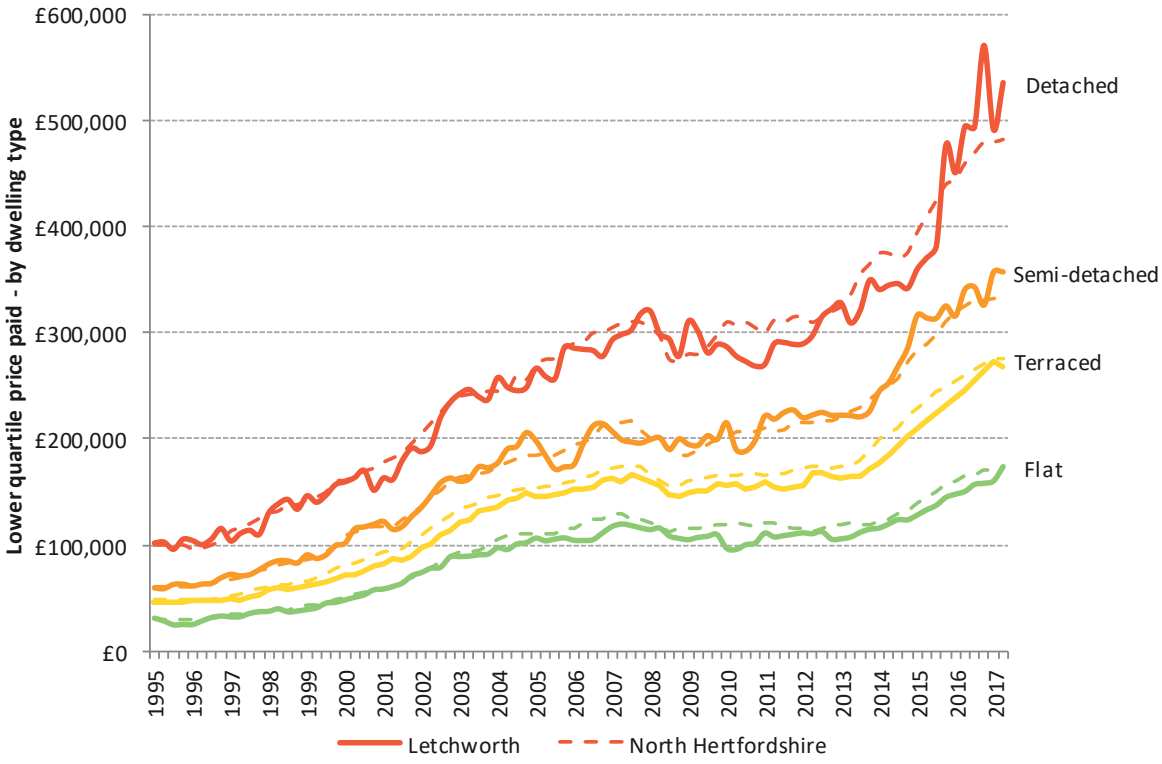
1 The cost of **flats** has risen **56%**, from just over £110,000 in 2012 to almost £175,000 in March 2018;

2 The cost of **terraced** housing has increased from £155,000 in 2012 to almost £270,000 in 2018 – an increase of **73%**;

3 The cost of **semi-detached** housing has increase by **63%** from £220,000 in 2012 to £358,000 in 2018; and

4 The cost of **detached** housing (which has seen the biggest increase of any type) has increased by **85%** from £290,000 in 2012 to just over £535,000 in 2018.

Figure 3.4 Lower Quartile House Prices by type - Letchworth, North Hertfordshire and England, Quarterly, 1997 to March 2018



Source: Lichfields based on ONS HPSSA Datasets 4 and 15. Letchworth estimate obtained using average of MSOAs North Herts 003, 006, 007, 008 and 009

3.8 Looking at the different parts of North Hertfordshire, Letchworth is the most expensive area to buy detached housing and the second most expensive area for semi-detached housing and flats. Terraced housing in the town is less expensive than the other parts of North Hertfordshire, and estate agents (in the LHS) noted that this was typically in highest demand. This could be because local wages (or the wages of those looking to buy in Letchworth) may be lower than other parts of the District, meaning that although terraced housing is cheaper, it may not be more affordable.

Table 3.1 Lower Quartile house prices by type within North Hertfordshire – year ending March 2018

	Detached	Semi-detached	Terraced	Flats
Letchworth	£536,000	£358,000	£269,000	£174,000
Hitchin	£523,000	£387,000	£323,000	£196,000
Rural area	£514,000	£357,000	£287,000	£159,000
Royston	£400,000	£281,000	£272,000	£148,000
Baldock	£402,000	£295,000	£248,000	£167,000
Rank				
Letchworth	1	2	4	2
Hitchin	2	1	1	1
Rural area	3	3	2	4
Royston	5	5	3	5
Baldock	4	4	5	3

Source: Lichfields based on ONS HPSSA Dataset 15 - Lower Quartile House Price by MSOA

3.9 A review of properties listed for sale on Rightmove as at January 2019 shows:

1 **1-bed properties** – there are two 1-bed properties listed for sale at around £130,000 on the edge of the town (both flats). Most 1-bed flats are listed for around £170,000-£200,000, although some are listed for c.£230,000+;

2 **2-bed properties** – there are numerous 2-bed flats listed for sale, starting at around £200,000 and with many listed at around £230,000. There is one shared ownership 2-bed flat listed for a 50% shared at £105,000. There are several 2-bed houses, with the cheapest starting at £250,000 with most listed at between £275,000 and £300,000. There are four 2-bed bungalows for sale, the cheapest listed at £330,000 (in need of modernisation) rising to £450,000-£475,000;

3 **3-bed properties** – 3-bed houses were the most common type of listing with over 70 properties for sale as at January 2019. Some were listed for around £260,000-£270,000 (these were typically smaller and/or lower quality than average) although the vast majority were listed at around or over £300,000. There are a few 3-bed bungalows listed for sale, all listed at over £500,000;

4 **4-bed properties** – there are around 30 4-bed houses listed for sale, starting at around £425,000 (this includes detached and semi-detached homes, including some new builds). 4-bed homes with larger gardens/garages etc are typically listed at around £575,000-£600,000, rising to £1m+.

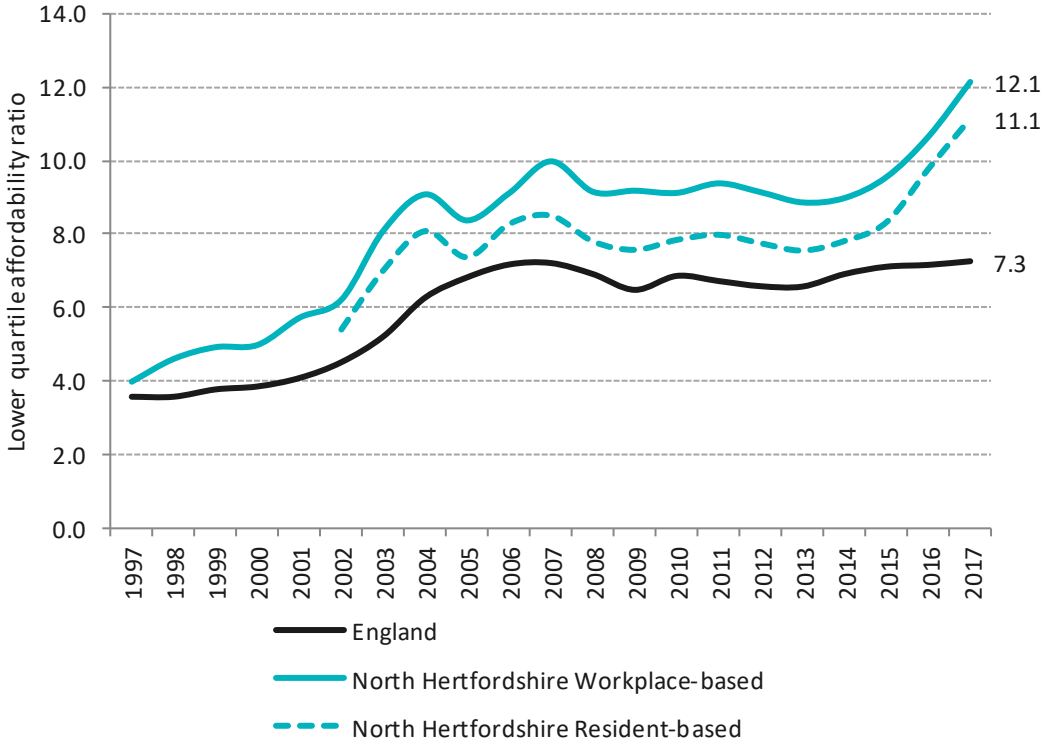
Affordability

3.10 At a national level, growth in wages has broadly kept pace with growth in house prices, with the ratio of house prices to wages remaining at around 7 since the recession (currently standing at 7.3). However, this clearly masks geographical differences, with some areas experiencing poor and worsening affordability, including North Hertfordshire.

3.11 As expected, growth in wages has not kept pace with the growth in house prices in North Hertfordshire in recent years, and as a result lower quartile house prices are currently (as at 2017) 12.1 times workplace-based earnings and 11.1 times resident-based earnings. By both measures, North Hertfordshire has now met and exceeded its pre-recession peak. The fact that housing is less affordable to those working in the District suggests that those residents from outside with greater purchasing power are moving into the District and commute to higher paid jobs elsewhere (including those moving from London, who might have higher income and/or equity from a previous home).

3.12 The significant worsening of affordability in recent years in North Hertfordshire is primarily due to the sharp increase in house prices. Having a sufficient supply of housing which is affordable to those on all incomes in a central facet of any efficiently functioning economy. A lack of housing which is affordable to those working locally could lead to an increase in unsustainable commuting patterns (and increases in transport costs, putting pressure on incomes), an ability for local businesses to attract and maintain workers and pressure on local services (e.g. schools and healthcare) which rely on lower paid workers.

Figure 3.5 Affordability Ratio - North Hertfordshire and England



Source: ONS Affordability Data

3.13 The fact that affordability pressures are becoming increasingly acute in North Hertfordshire is not only likely to disadvantage lower paid workers but also young people, particularly those looking to take their first step on the housing ladder. High house prices relative to local earnings is likely to mean households need to find even bigger deposits to find their first home. Without assistance from family, these households would likely need to continue living in the private rented sector (or even in the family home) for longer than expected in order to find enough money.

Areas for further research

In light of the contextual analysis around prices and affordability, we will seek to gain a more in-depth understanding of the incomes of those looking to move or set up a new household in Letchworth. This will help understand what type of housing existing and newly-forming households can afford and whether the provision of specific types of housing, including affordable homes or purchase, might help address these needs.

Part 1 - Summary

3.14 By the mid/late-2000s Letchworth Garden City was seeing relatively little population and housing growth. In recent years, housing development has picked up which has led to the town's population reaching a record high of just under 35,000. Still, the town has seen a much slower rate of growth compared to the District as a whole since 2001 and is not immune to wider trends of ageing.

3.15 Letchworth has a significantly higher proportion of social rented homes compared to the District and national averages, with 31% of households in social rented housing as at 2011. In

line with wider trends, social rented households in Letchworth are more likely to be older single person households and lone parents with children compared to all households; notwithstanding almost half of all social rented households are in employment.

3.16 The town contains a greater proportion of 3-bed homes than nearby towns and the District average, and house prices are similar to the District average across all types. However, prices across North Hertfordshire have risen sharply in recent years and affordability ratio is now at the highest ever. Entry-level house prices in Letchworth and North Hertfordshire are now around £110,000 more than the national average, at £260,000.

Gaps in existing information

3.17 Our research and analysis using publicly available information and primary research carried out as part of previous work has highlighted several gaps in the information which can be filled by undertaking a local survey. These cover five key areas:

1 **Perceptions of Letchworth –** there is a significant amount of quantitative information about Letchworth and its housing market; its population and age profile, its dwelling stock, house prices, etc. However, the survey affords us an opportunity to understand how residents in Letchworth perceive their town and its housing market, and identify common areas which residents perceive positively/negatively.

2 **Needs of existing households –** information from the Census and other ONS data provides information on household composition and migration patterns. However, we hope to understand in more detail whether or not households' current housing meet their needs, and if not, why this is the case.

3 **Newly-forming households –** there is currently a lack of information on concealed households, particularly those which want to form their own household in the near future. There is no information on what incomes these households would have (and therefore what type/tenure housing would be best suited to them) and what aspirations they have, nor what type of household they would form and where they want to live. The survey provides an opportunity to fill these gaps.

4 **Elderly households –** some contextual information is available from existing data and information has been gathered through interviews with agents about demand for housing from older households. However, there is a lack of understanding of the reasons why current housing might not be meeting needs, whether older households plan on moving and the type housing options they would consider if moving.

5 **Other needs** – limited information from secondary sources is available on interest in self-build and community land trust housing. We hope to understand whether or not there is interest in these types of housing through the survey, and whether households are/are considering actively pursuing these options.

Part 2 – Local Housing Needs

4.0 Survey background

Areas for further research

4.1 The analysis in sections 2 and 3 highlighted where there were gaps in the existing data and areas requiring further research. The survey questions were therefore structured based on addressing these broad themes:

1 **Perceptions of Letchworth –** What are residents' perceptions of Letchworth and its housing market? What are the perceptions of affordable housing on offer?

2 **Needs of existing households –** Do households' current housing meet their needs? If not, why? What are the incomes of these households and what type/tenure of housing are they looking to move to?

3 **Newly-forming households –** What types of household contain concealed families which want to move out in the near future? What income would they have and what type of housing?

4 **Elderly households –** Are the needs of elderly households met in existing housing? If not, why not? What options would those households consider moving to in the future?

5 **Other needs** – Are households interested in self-build housing? Are households interested in Community Land Trust (CLT)[6] housing?

Purpose of the survey

4.2 This purpose of the survey was to supplement information about Letchworth which was already available in order to understand:

1 Understand the needs – specifically for affordable housing - of households currently living in Letchworth;

2 In more detail the needs associated with other types of affordable housing, including shared ownership and other affordable homes for purchase, particularly associated with concealed and newly-forming households;

3 Whether there are any other specific housing needs which the allocation North of Letchworth could help to address.

4.3 The scope, methodology and content of the survey was agreed in collaboration with North Hertfordshire District Council Planning and Housing Departments, Settle and Howard Cottage Housing Associations. The results from the survey will be shared with these local organisations as part of a wider collaborative exercise.

4.4 The findings of the survey should not be interpreted as a direct indication of what new housing should be provided on the allocation at Land North of Letchworth and should not be used to unduly restrict the type of development provided. The final mix of housing to be provided on the site will be influenced by a wide range of factors beyond the needs identified in the survey, such as viability, environmental factors, locational factors and wider policy requirements. Rather, the findings of the survey can inform discussions about development and help identify issues which the development could seek to address. It also provides a baseline 'snapshot in time' which could be updated in the future.

[6] A community land trust (CLT) is a non-profit corporation that develops and manages housing (including affordable housing) and other community assets (gardens, commercial spaces, etc).

Circulation and responses

4.5 The survey was circulated in paper form (by Meeting Place Communications) and online and to all households in Letchworth in October 2018 and responses were open until 3rd January 2019. A copy of the survey is included for information at Appendix 1. A total of 516 responses were received, representing a response rate of around 4% of all households in Letchworth which is considered a good response rate for such an exercise and is comparable to response rates received for Parish Housing Needs Surveys in North Hertfordshire[7]. The quantum of responses adds meaningful inputs to the wider discussion.

4.6 Whilst the total number of surveys received back was 516, not all respondents answered all questions, and therefore there are not necessarily 516 completed responses to every question (some questions are also not applicable to all respondents). For some questions, some respondents listed more than one answer; for this reason totals do not always sum to 516.

4.7 A summary of the responses received to each question is set out in Appendix 2. This shows that the survey achieved a good cross-section of the town covering a variety of households in different tenures/types of housing.

Further responses received

4.8 Following the initial drafting of this report, which covered all responses received up to 3rd January 2019, a further 9 responses were received. These 9 responses are not included in the analysis set out in Sections 5.0 to 9.0 however have been reviewed in Appendix 3 to confirm consistency with the main findings.

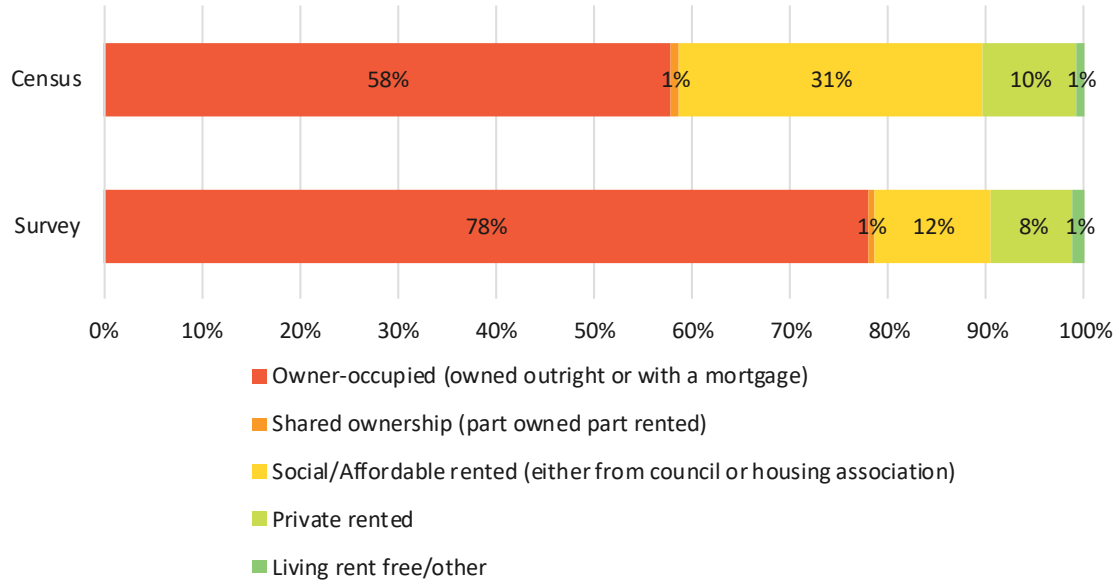
Survey coverage

4.9 The survey achieved good coverage, receiving responses from households in all tenures across a range of incomes, household types and house sizes. However, a comparison with the household profile based on the Census gives an indication of how representative the survey is likely to be of the town.

4.10 Figure 4.1 compares the tenure profile of Letchworth from the Census and from the survey. The most significant differences are the coverage of the social rented and owner-occupied sectors; whilst the Census identified that 31% of households in Letchworth were in the social rented sector, only 12% of survey respondents were. On the contrary, the survey achieved a disproportionately high response from the owner-occupied sector (78%, compared to 58% in the Census). Therefore, it should be noted that the survey and its findings might be under-representative of the social rented sector.

[7]See Census 2011 data on number of households by Parish (QS113EW - Household composition - Households) and https://www.north-herts.gov.uk/home/housing/housing-strategies-and-plans/housing-need-north-hertfordshire

Figure 4.1 Comparison of tenure - Survey and Census



Source: Letchworth Housing Survey and 2011 Census (KS402EW)

Affordability assumptions

4.11 Respondents were asked to provide information about their income so that assumptions could be made about what type/tenure of home that household could likely afford. In all cases, the following assumptions have been made:

1 For open market housing, households can borrow 4.5x their annual household income and have a 15% deposit[8];

2 For discounted market housing/started homes, we assume a 20% discount is offered;

3 For shared ownership housing, we assume households purchase a 25% (with 15% deposit and borrowing 4.5x their income) and pay rent on the remaining 75% at a rate of 3% per annum, with rent taking up 30% of annual household income[9].

4.12 It is acknowledged that households which may be equity rich (e.g. older households) but have lower incomes might not conform to these affordability assumptions, however these are considered reasonable for assessing affordability associated with first-time buyers and most other households.

[8] For context, the English Housing Survey (2015/16) analysis of First-Time Buyers found the median deposit for first-time buyers was 15.9% nationally.

[9] It should be noted that providers can offer for sale equity of between 25% and 75% so the actual percent purchased may be higher. However, we have assumed that 25% is purchased on the basis that this will give the maximum total property value a household can purchase on their stated income (given that to buy a greater share of a home of the same value, a greater income would be needed).

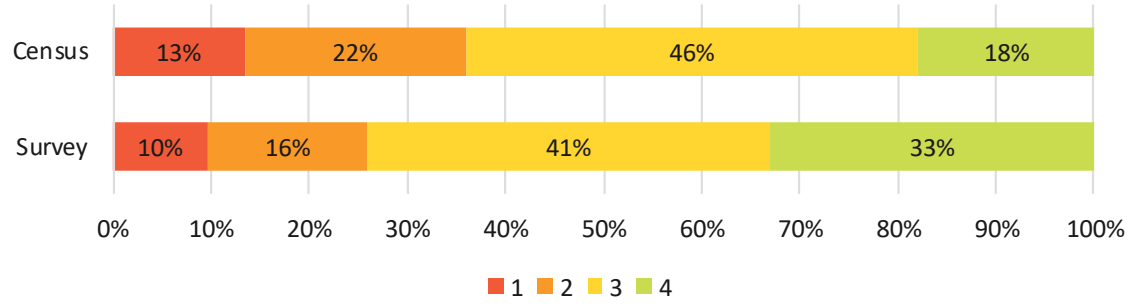
5.0 Context

Current residence

5.1 Households were asked information about their current residence; this was to ensure a good cross-section of the town was covered and to provide context for other questions (e.g. newly-forming households and elderly needs). The results are set out in detail at Appendix 2 and are summarised below for context.

5.2 The survey covered a range of households living in 1 to 4+ bed homes, as shown in Figure 5.1. The survey covered a greater proportion of households living in larger homes compared to the Census, as shown below. Households in larger homes are more likely to contain families with older children (and therefore newly-forming households) or older households (who may wish to downsize), and this may explain why this yielded a greater response rate.

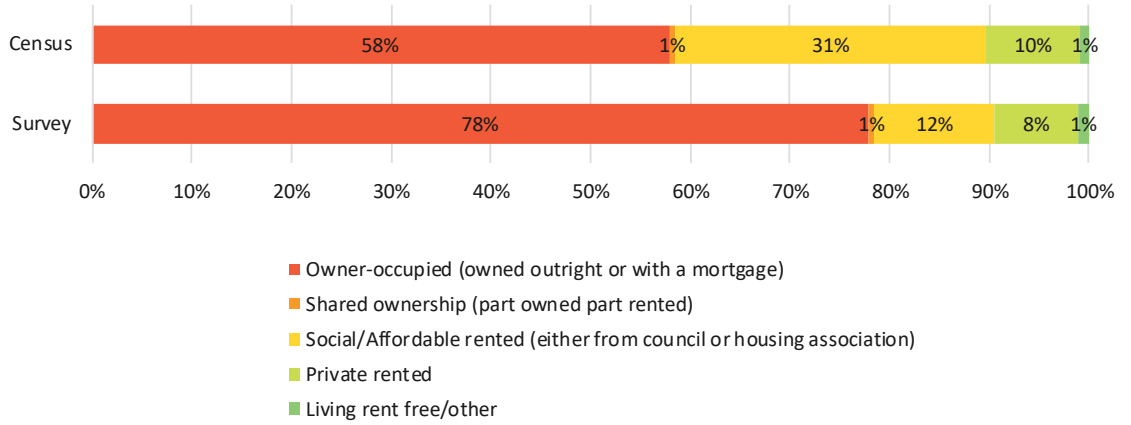
Figure 5.1 Number of bedrooms - Survey and 2011 Census



Source: Census 2011/Letchworth Housing Survey

5.3 Similarly, the survey also covered more households living in houses rather than flats (compared to the Census). The survey also covered more respondents living in owner-occupied housing and fewer living in social/affordable rented housing, as shown in Figure 5.2. Coverage of private rented households was consistent with the Census.

Figure 5.2 Household Tenure - Census and Survey



Source: Census 2011 and Letchworth Housing Survey

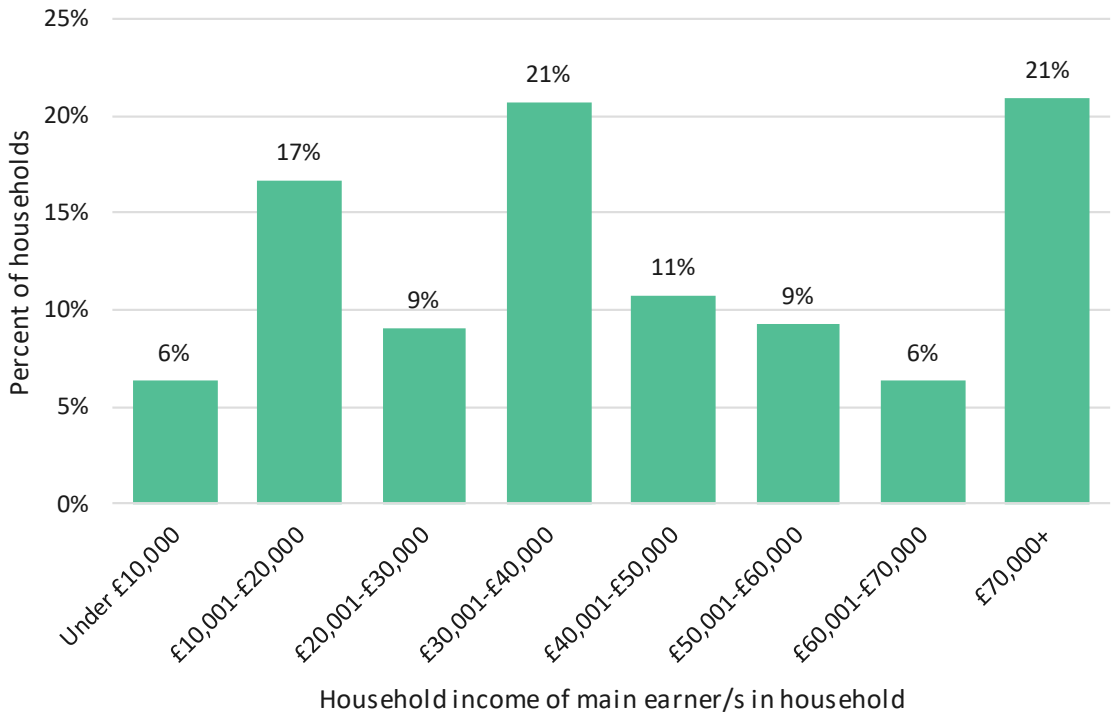
Household income

5.4 The household income distribution of survey respondents is shown in Figure 5.3. This relates to the income of the main earner/s in a household. Such data on household income is not publicly

available so it provides useful context for the analysis however it is not possible to compare this to another data source. Notwithstanding, the survey appeared to achieve good coverage, with incomes of households ranging from under £10,000 to over £70,000.

5.5 The survey also asked respondents about the household income of any newly-forming households in order to understand if their preferred tenure/type of home was likely to be affordable to them. This information is set out later in this part of the report.

Figure 5.3 Household income distribution of Survey respondents (income of main earner/s in household)



Source: Letchworth Housing Survey

6.0 Perceptions of Letchworth

6.1 Respondents were asked about their perception of the available housing stock in Letchworth (in terms of cost, availability, types etc) and their perception of affordable housing in particular. In relation to housing in general, there was a mix of positive and negative responses, albeit mostly were negative and related to housing cost, choice and availability. Many respondents noted that there appeared to be a lack of available housing which was suitable either for young single people (even those with good salaries) or young families, and that much development which has taken place in Letchworth had been larger, executive housing. This perception is interesting given that Letchworth has a significantly greater proportion of 3-bed homes than nearby towns and North Hertfordshire as a whole, with just under half of all homes being 3-bed. A lack of 3-bed housing could be being perceived because of a lack of 3-bed homes coming to the market and/or those which are being too expensive. The demand for 3-bed homes was also apparent in interviews with estate agents who noted that small to medium family-sized housing attracted significant attention. Notwithstanding, it should be noted that many respondents believed there to be a variety of stock available at a range of price points.

6.2 Another area where perceptions varied was price; some respondents perceived prices to be rising sharply, while others perceived prices to be fairly flat. Several respondents stated that whilst prices in Letchworth might appear high, in the context of its location and transport links to London this was not surprising, and reflective of wider market circumstances (including nearby towns such as Hitchin) in the wider South East. Respondents noted other issues for example the location of housing and local infrastructure, such as issues around street lighting and safety, as well as issues around the condition of homes (especially older homes which may have issues with insulation, damp or being in general disrepair).

6.3 Owner-occupiers had mixed views on housing in Letchworth – some believed there to be a good choice of homes at all price points, others believed most housing to be too expensive and with prices rising quickly. Some perceived there to be gaps in the market (particularly for young families starting out and larger family homes in the range of £500,000-£600,000), and others noted that houses for sale in Letchworth often needed complete renovation or some degree of modernisation, adding to costs. Respondents also commented on new housing in Letchworth, believing that newer stock was too small with a lack of outdoor space for parking and gardens.

6.4 Some households (most of which were older) noted a lack of housing for older people including sheltered housing or small homes (e.g. 2-bed homes and bungalows) suitable for downsizing. Some of these households stated they had attempted to downsize but had given up due to a lack of availability and associated costs. Such concerns appear to reflect the reality – a review of bungalows available for sale in Letchworth (as set out in Section 2.0) found very few for sale, with most exceeding the cost of a typical 3-bed home. This suggests that for many looking to downsize, the costs would likely be more than their current home, making downsizing difficult or not possible.

6.5 Almost all households in the private rented sector perceived housing to be too expensive in Letchworth, whether that related to households' current housing costs or the cost of moving into owner-occupation. Households perceived there to be a shortage of good quality affordable homes available either for young single households or young families, even for households on modest incomes. This appears to be reflect the availability of housing in Letchworth currently as per the review of properties listed for sale in Letchworth, which found that 2-bed homes were typically listed at around £275,000-£300,000, and 3-bed homes at £300,000+. Without substantial deposits, these prices are likely to be out of reach for households with incomes of £40,000-£50,000. Even households on the highest incomes (£50,000-£70,000+) which were

renting perceived housing in Letchworth to be too expensive with a lack of mid-range 3-bed homes, with some noting the value for money in Letchworth to be poorer than nearby towns, e.g. homes lacking parking and space (outdoor and indoor).

6.6 Households in social rented housing which were content with their current circumstances were more likely to perceive the available stock of social housing positively, noting that there was a good availability of social rented housing at acceptable rent levels. Conversely, households in social rented housing which did not meet their needs, e.g. because they did not have enough bedrooms or because of the condition of their home, were more likely to perceive the availability of social housing more negatively – as expected. Similar to owner-occupiers, some older households in social rented housing (including those in large houses, including 3-beds) perceived there to be a lack of housing suitable for downsizing, particularly bungalows. Social rented households also noted issues with the overall condition of their home; an issue which is explored in more depth later in this section.

Summary

6.7 The perception households have of housing in Letchworth varies, in many instances based on a household's current circumstances. A common theme was that housing – whether privately rented or for purchase – was out of reach to young households, and that housing was generally affordable only to those with the highest incomes – this being despite the fact that Letchworth has a disproportionately high proportion of 3-bed housing and prices not being significantly different to the District average. Notwithstanding, some perceived there to be a range of stock available at all price points. Another common theme amongst older households in all tenures was a perception that there was a lack of housing suitable for downsizing, which appears to reflect reality based on our preliminary research.

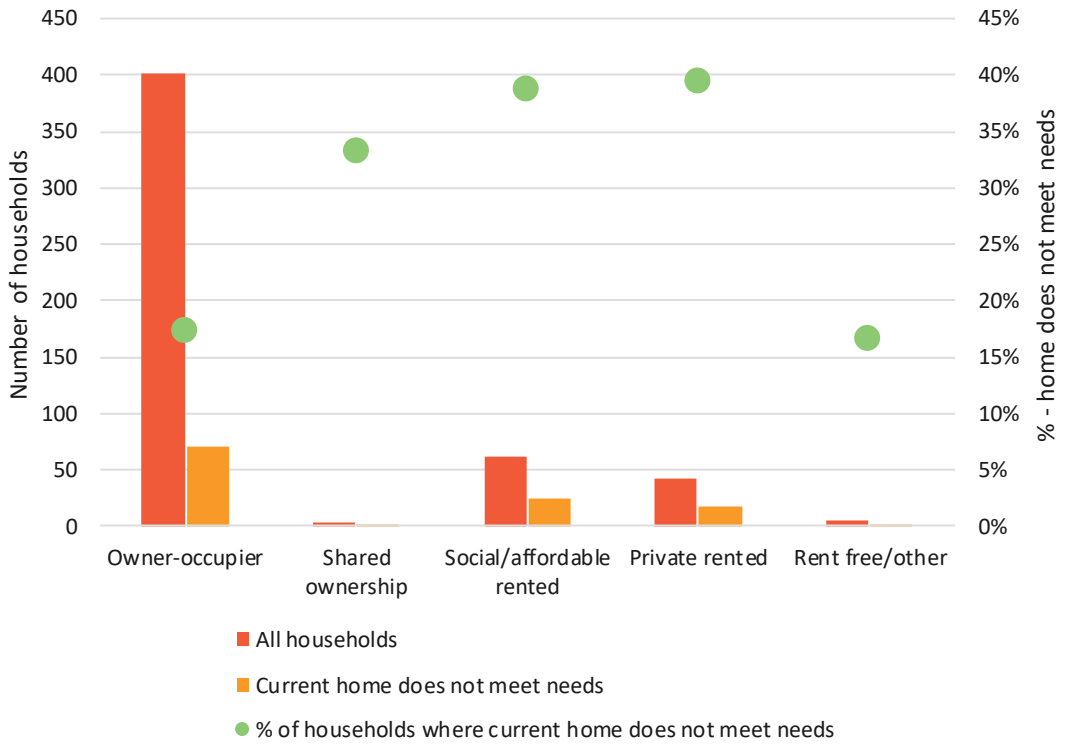
6.8 Many perceive also there to be issues with the condition of housing stock in Letchworth, whether those were households in social rented housing with issues with their current home or households believing that homes for sale are sometimes in poor condition. The issue of the condition of social rented housing is explored in more detail later in the report.

7.0 Needs of existing households

Current housing

7.1 Households were asked if their current home met the needs of all members now and in the immediate future; 78% of respondents stated that their home did, while 22% (113 households) stated that their home did not. Social and private rented households were most likely to state that their household did not meet their needs (with around 40% of households in both tenures stating their home did not meet their needs), as shown in Figure 7.1.

Figure 7.1 Responses to whether current home meets needs of household by tenure



Source: Letchworth Housing Survey

7.2 It is important to note that where households have indicated their current home does not meet their needs, this does not necessarily need to be reflected in new housing provision in Letchworth. Many households are likely to be able to meet their needs in the existing market by moving or through changes to their existing home. However, where households persistently note issues which are unlikely to be sufficiently met by existing housing, the Foundation may wish to use this information to inform the mix of new development. In addition, some of the issues with existing housing cited could be used to inform the layout and design of new housing schemes to avoid such issues persisting.

Social rented households

7.3 The reasons given by social rented households for why their existing housing did not meet their current needs, grouped by broad theme, are summarised in Table 7.1. Adaptability (and accessibility) was the most common issue, cited by almost half of all households. A high proportion (42%) stated their existing home was too small; mostly these were couples and families living in 1-2 bed homes. 17% of households highlighted issues with the condition of

their home, and 13% issues with location (all related to the lack of public transport). 2 households stated their home was too large, although 1 of these households is expected to move out imminently.

Table 7.1 Reason current home does not meet household needs by number of bedrooms - social rented households

	Adaptability	Size (too small)	Condition	Location	Size (too big)	Other
1-bed	2	2	0	0	0	2
2-bed	3	4	1	2	0	0
3-bed	6	3	2	1	2	0
4-bed	0	1	1	0	0	0
Total	11	10	4	3	2	2
% mentioning issue	**46%**	**42%**	**17%**	**13%**	**8%**	**8%**

Source: Letchworth Housing Survey. Note: Households were able to cite more than one reason, hence total does not sum to 100%.

All households

7.4 Looking more generally across all households in Letchworth helps build a broader picture of why residents do not think their current household meets their needs. It should be noted that many households, particularly owner-occupiers, may be able to move to address issues with their current home in the existing market, and therefore the findings set out below should not be taken as a direct indication of what new housing in Letchworth should seek to address.

7.5 Of the 113 households (across all tenures) which stated their current home did not meet their needs, 110 provided information on why. The reasons noted by these households are shown below in Table 7.2 (households could give more than one reason).

Table 7.2 Reason/s house does not meet current household needs – all households

	Size (too small)	Adaptability	Location	Size (too big)	Condition	Other
No. times mentioned	57	25	16	13	11	16
% mentioning issue	**52%**	**23%**	**15%**	**12%**	**10%**	**15%**

Source: Lichfields analysis of Letchworth Housing Survey (Q8 responses). Percentages do not add to 100% as respondents were able to give more than one reason.

7.6 The key themes cited by households as to why their household did not meet their needs were:

1 **Size (too small) –** as expected most households commenting that their current housing was too small were couples and families. The vast majority wanted at least an extra bedroom, although households noted other size issues for example wanting a separate dining room, larger kitchen or extra bathroom. Overall, the survey suggests a wide range of households are seeking to upsize;

2 **Adaptability –** 23% of households noted issues with adaptability/accessibility of their home, with many currently living in the social rented sector. Notwithstanding, owner-occupiers noted similar adaptability issues, with many citing the need for an additional and/or downstairs bathroom/wet room;

3 **Location –** 15% of households cited location issues, ranging from the distance to schools, transport links (e.g. buses) and to the town centre. Whilst some location issues (e.g. distance to schools) cannot be addressed for existing households, the Foundation may wish to take such factors into account when designing the development north of Letchworth (e.g.

ensuring schools, shops and services are well-linked to houses, and coverage of transport links);

4 **Size (too big)** – almost all of these respondents were older households from the owner-occupied sector living in 3-4 bed houses. Many noted a lack of suitable smaller alternatives and some also stated that downsizing would be costly and a hassle – this reflects existing knowledge about downsizing options in Letchworth. A household in a modest 3-bed home or even a 4-bed home at the lower end of the market would likely struggle to raise the required capital to downsize to a bungalow, as these typically start at around £450,000-£500,000;

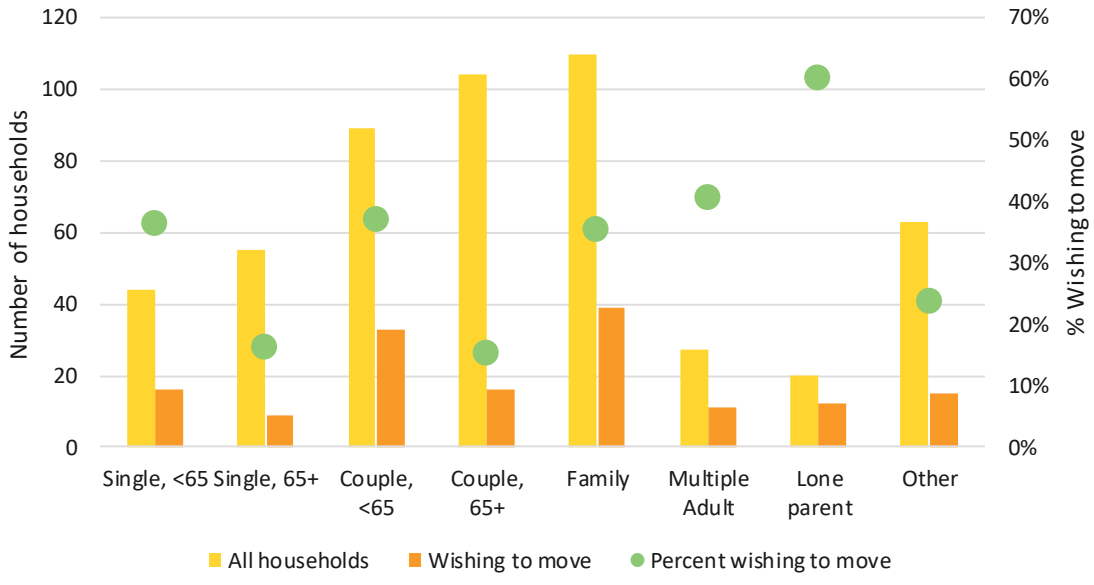
5 **Condition** – most respondents citing issues with the condition of their home were from the social rented sector, noting issues of mould, damp and general disrepair. Of the few owner-occupiers citing issues with their homes' condition, all related to insulation; and

6 **Other reasons** – some of the other reasons households stated their home was not suitable included households in the private rented sector stating their rent was too expensive and/or did not provide long term stability, issues with parking space, traffic and driveway/road conditions and issues with the layout of homes.

Moving intentions

7.7 A total of 151 households (29%) stated that they would like to move now or in the immediate future, and would either like to remain in Letchworth or had no preference on location[10]. Figure 7.2 shows the breakdown by household type[11]; the results follow wider trends, notably that older households are the least active in the market and families the most active.

Figure 7.2 Households wishing to move (either within Letchworth or with no preference) by household type

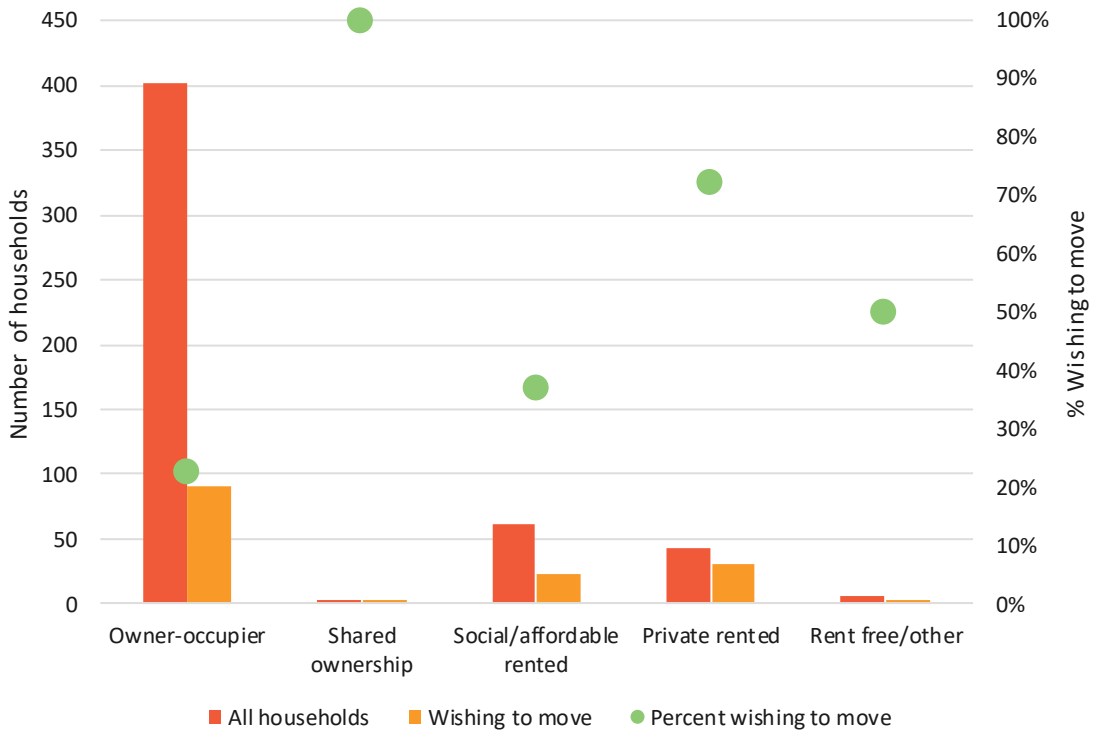


Source: Letchworth Housing Survey

[10] Those households which stated their preference was to move out of Letchworth were not included in the analysis.
[11] Respondents were asked to provide the number of residents in the household by age; unlike the Census the Survey did not ask information on the relationships between different household members. For the purposes of this analysis and for ease of understanding we have grouped households according to the number of members and their age and have named each according to the household type that household is most likely to be. Further detail is set out in Appendix X. However, it is acknowledged that not all households in this group will fit exactly the description, as the relationship between household members is unknown.

7.8 Figure 7.3 shows the breakdown of households wishing to move by tenure; owner-occupiers were the least likely to want to move, and this reflects the fact that owner-occupiers were the least likely to say their current home did not meet their needs. Interestingly, those in shared ownership housing were most likely to want to move – 100% of households in this group stated a desire to move (albeit the sample size was small, with only 3 shared ownership households responding to the survey). Almost three-quarters of private rented households stated they wished to move, however these households are typically the most active in the market so this is to be expected. 37% of social rented households stated they wished to move – this is similar to the proportion of social rented households who said their current home does not meet their needs.

Figure 7.3 Households wishing to move (either within Letchworth or with no preference) by tenure



Source: Letchworth Housing Survey

7.9 Looking at the reasons household want to move and where/what they want to move to reveals the following:

1 Of owner-occupiers, most younger couples wanted to upsize, either for more bedroom/s, larger living space and/or outdoor space. Where older households wanted to move, most cited maintenance issues or the need for adaptations. The vast majority indicated they would prefer modern, single storey accommodation with 2-3 bedrooms with good access to shops and services.

2 The number of respondents in shared ownership housing in the survey was small, however all stated that they wished to move. All had incomes of £30k -£40k. Most wanted to upsize to either a 2 or 3-bed house (for shared ownership, a household on £30k-£40k would be able to afford a home with an open market value of £245,000-£327,000).

3 Of those in social rented housing, couples typically expressed a preference for small homes, bungalows, more manageable outdoor space and/or accessible homes (some were living in

2-3 bed homes which they considered too large). There were also several families which lived in flats who had a preference to move into 2-bed housing with a garden.

4 Private rented households – most households wishing to move were younger couples, who wanted to move due to unstable tenancies, costs and living conditions. Most stated a preference to move to either shared ownership or owner-occupied housing, either into flats or small to medium sized family housing (2-3 beds). Households in the private rented sector wishing to move had incomes ranging from £10,000-£20,000 up to £70,000+. Those with incomes of around £30k or more are likely to be able to afford discounted market or shared ownership housing, and those with higher incomes potentially open market housing.

Summary

7.10 The survey suggests that to help meet the needs of existing households wishing to move, the Foundation could consider the following options:

1 Housing specifically designed to meet the needs of older households wishing to downsize, particularly single storey accommodation with manageable outdoor space. In the open market and in the social rented sector this could help free up larger homes currently occupied by older households for younger couples and families to move into;

2 Shared ownership options for households wanting to move into small family sized housing. As households do not have incomes above £40,000, these homes would need to have market values of around £327,000 at most. Lower cost shared ownership options (at around £150,000-£250,000) could also help meet the needs of those in private rented housing on lower incomes of around £20k-£30k; and

3 In the social rented sector there appears to be a need for a range of housing, from small homes suitable for downsizers to family homes with 2-3 beds to accommodate families currently living in accommodation which may be too small for their needs.

8.0 Newly-forming households

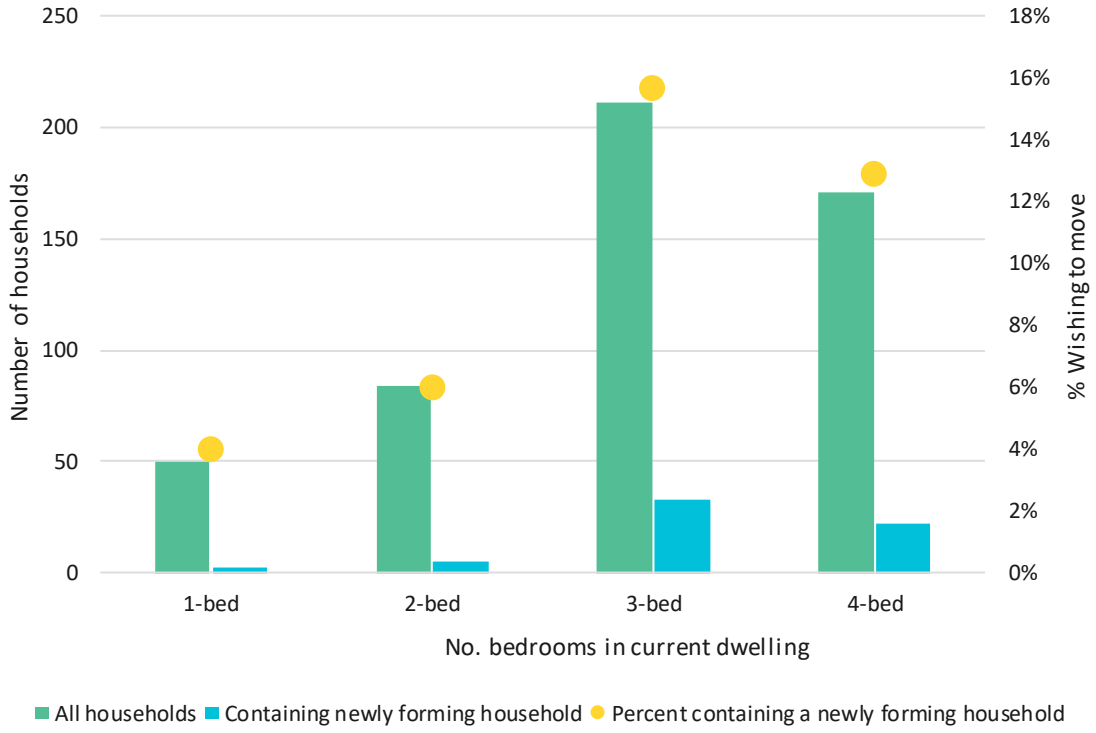
8.1 The survey asked households if anyone in the household planned to move out in the near future to set up their own home. Respondents were asked where this household would prefer to live, what type of home and number of bedrooms they would prefer, who they would be forming the new household with and what tenure they would be moving into.

8.2 For the purposes of understanding housing needs in Letchworth, this analysis focuses only on those households who stated a preference for living in Letchworth (this amounted to **55** households), or who currently did not plan to live in Letchworth but would if a suitable/affordable home were provided (amounting to **7** households). This amounts to 62 households in total. Respondents who stated the new household would not plan to live in Letchworth even if suitable/affordable housing were available were not included in the analysis – such households would move away from the town regardless of whether suitable housing were available (e.g. moving for employment reasons).

Context

8.3 The survey found that 12% of all households in Letchworth contained at least one member who intended to move out and form a new household now or in the near future. Households living in larger homes were most likely to contain a newly-forming household, with 16% of households in 3-bed homes and 13% of households in 4-bed homes containing at least one member looking to move in the near future, as shown in Figure 8.1. This is because larger homes are more likely to contain families with older children or multiple adult households.

Figure 8.1 Households containing newly-forming households by number of bedrooms



Source: Letchworth Housing Survey

8.4 As expected, multiple adult households (which includes families where all children are adults) were the most likely contain newly-forming households, along with 'other' households. Almost

one-quarter of family households with older children contained newly-forming households. Half of all newly-forming household would form a single person household, as shown in Table 8.1. A quarter would form a household with others from a different household in Letchworth, and very few would form a new household with someone from outside Letchworth. This shows that there is a need for housing to meet the needs of those already living in Letchworth, either in shared housing or with family. Without suitable and affordable housing in Letchworth, these newly-forming households would almost certainly be forced to look elsewhere to more affordable locations (or continue living in sub-optimal living conditions). This could have knock-on implications for the local economy, for example reducing the local labour force, lower spending (in turn leading to the decline of local shops and services) and population decline.

Table 8.1 Who newly-forming household would form with

	Number
Alone	31
Alone or With others from the current household	1
With others from the current household	8
With others from a different household in Letchworth	15
With others from a different household not in Letchworth	4
Not stated	3
Total	**62**

Source: Letchworth Housing Survey

Income and housing needs

8.5 When households express a preference for a specific tenure, it is important to consider whether their preferred tenures and their incomes are aligned. This helps determine the types of price points new homes of different tenures may need to be in order to be affordable to new households.

8.6 Table 8.2 shows the preferred tenure by household income of the 62 newly-forming households. Those expressing a preference for owner-occupied housing (25 households) had widely varying incomes, from £10,000-£20,000 up to £70,000+. Whilst this suggests market housing at a range of price points would be appropriate, for households on the lowest incomes it might not be possible to offer market housing at a low enough cost to be affordable. For these households, shared ownership or discounted market housing could provide a suitable alternative. However, it is possible that households on lower incomes could be equity rich (particularly if they are older) and therefore be able to afford owner-occupation even with a lower household income.

8.7 Overall the tenure preferences of respondents broadly correlate with household income, i.e. respondents typically stated a preference for a tenure which was likely to reflect their income circumstances. We take a more detailed look at the needs of different types of newly-forming households below.

Table 8.2 Preferred tenure by household income of newly-forming households

Preferred tenure	Income of newly-forming household									
	Under £10,000	£10,001-£20,000	£20,001-£30,000	£30,001-£40,000	£40,001-£50,000	£50,001-£60,000	£60,001 - £70,000	£70,000+	Not stated	Total
Owner-occupied		5	7	4	3	2	1	3		**25**
Owner-occupied or shared ownership				1	1	1			2	**5**
Shared ownership	1	3	2	2						**8**
Private rented		1	1		1	1				**4**
Social/Affordable rented	2	6	4	1					2	**15**
Not stated									2	**2**
Any		3								**3**

Source: Letchworth Housing Survey

8.8 For context, Table 8.3 below shows some of the costs households on different incomes can afford. For example, a household with an income of £40,000 would likely be able to afford a home on the open market with a value of around £212,000. If discount market housing (or starter homes) were available with a 20% discount, that same household could afford a home with an open market value of £265,000. With shared ownership, that household could afford a home with an open market value of £327,000.

Table 8.3 Affordability by household income - open market, discount market/started homes and shared ownership

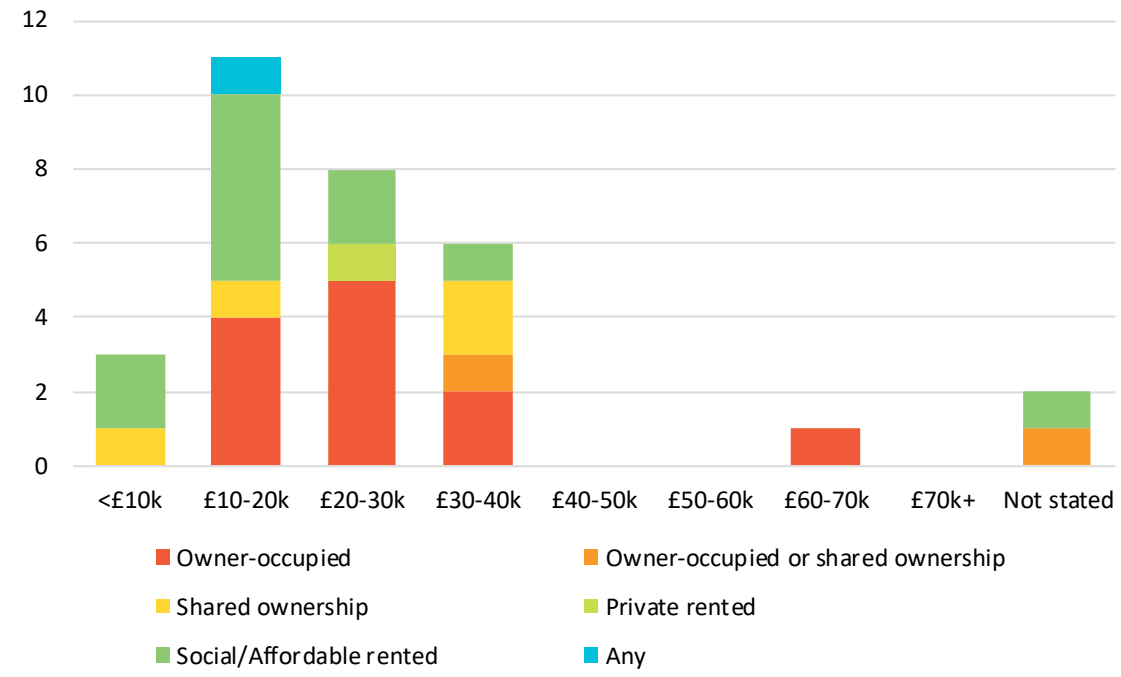
Household income	Open market house	Discount market/Starter Homes (full market value)	Shared ownership (full market value)
£10,000	£53,000	£66,000	£82,000
£20,000	£106,000	£132,000	£164,000
£30,000	£159,000	£199,000	£245,000
£40,000	£212,000	£265,000	£327,000
£50,000	£265,000	£331,000	£409,000
£60,000	£318,000	£397,000	£491,000
£70,000	£371,000	£463,000	£573,000

Source: Lichfields analysis

Single person households

8.9 As set out above, half of newly-forming households stated that they would be living alone. Figure 8.2shows the tenure preferred of single person households by household income; most would have incomes of between £10,000 and £40,000.

Figure 8.2 Single person newly-forming households - preferred tenure by income



Source: Letchworth Housing Survey

8.10 Looking at tenure preferences of single person newly-forming household shows that:

1 Of those stating a preference for **owner-occupied** housing, many specifically stated that they currently had adult children living at home who wanted to move out. The most common preference amongst single person households was for a 2-bed house. With incomes of up to £40k (with which a household is likely to be able to afford a home of around £212,000 in the open market), these needs might be better met through shared ownership or discounted market housing, for example:

   a A single person household on around £25k would be able to afford a shared ownership home with a market value of £210,000, which represents roughly the cost of a 2-bed flat; and

   b A household on a slightly higher income of £35k would be able to afford a home with a value of around £230,00 if offered at a 20% discount and a home worth around £280,000 if offered with shared ownership. This represents the cost of a 2-bed flat or potentially a 2-bed house;

2 Of single person households stating a preference for the **social/affordable rented** sector, most had incomes of £10k-£20k, and stated a preference for 1-bed housing (including flats);

3 Of single person households stating a preference for **shared ownership**, there was variation amongst the size/type of housing preferred, reflecting income. For example:

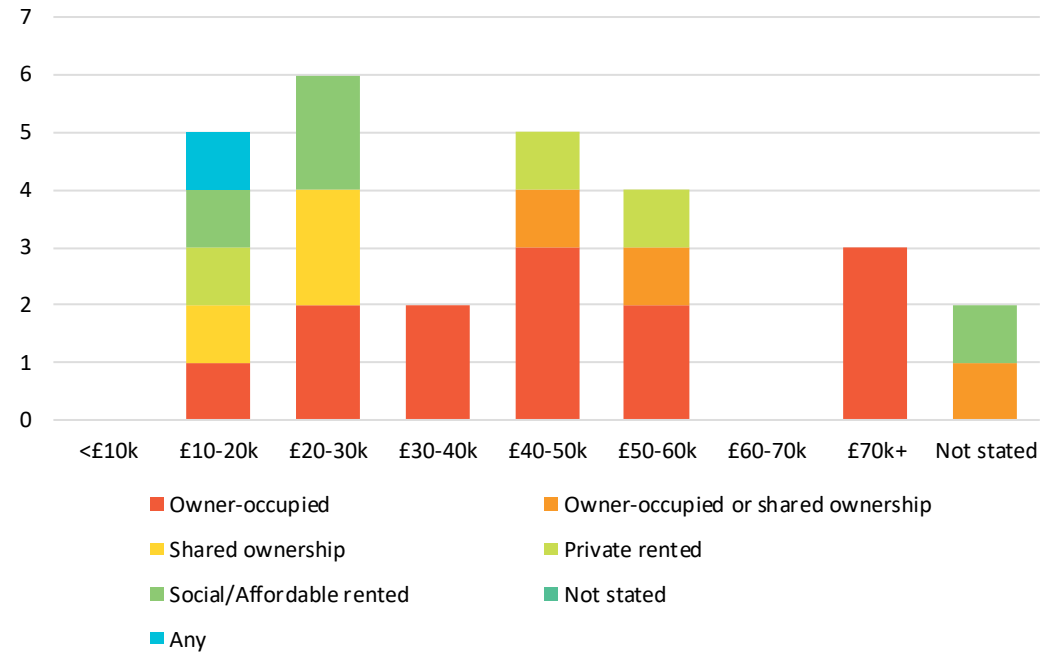
   a Households on lower incomes (e.g. £10-20k) stated a preference for 1-2 bed housing (either flats or houses). Those with incomes of £20k would like be able to afford shared ownership housing of homes with a market value of up to £164,000, so a 2-bed home is potentially out of reach unless other options (e.g. rent-to-buy) were available; and

b Households on £30-40k stated a preference for 2-3 bed housing, which is likely to be possible given such households could afford homes with a value of around £245,000-£327,000.

Other newly-forming households

8.11 Of households forming with others, around half were looking to move into the owner-occupied sector and typically had higher incomes than single person households (this is to be expected given they are likely to be dual-earner). Some households on lower incomes expressed a preference for social/affordable rented or shared ownership housing. This is shown in Figure 8.3. Few households provided detail of the age/relationships of newly-forming households but of those who did, these were typically young couples.

Figure 8.3 Newly-forming households forming with others - preferred tenure by income



Source: Letchworth Housing Survey

8.12 Looking at preferences of households by tenure shows:

1 Of newly-forming households expressing a preference for **owner-occupation** or **shared ownership,** all expressed a specific preference for a house (or stated no preference). Households wanting to move into shared ownership had incomes from £10k to £30k; whilst shared ownership might not be possible at the lower end of this range, those on £30k would likely be able to afford a home with a market value of around £245,000. Discounted market housing could also provide an option for households wanting to move into 2-3 bed housing with incomes of around £40k.

2 Newly-forming households preferring **social/affordable rented** had incomes of less than £30,000, with some specifically stating that they had adult children (including some in couples or with families) in their current household living at home who were unable to move out;

3 Newly-forming households stating a preference for **private rented** housing stated a preference for 1-2 bed housing, including flats. Some noted that whilst it would in fact be preferable to buy a home, renting is currently the only affordable option. These households

may be able to move into ownership through other means, particularly those with incomes of £40-£60k, which would be able to afford around £265,000 to £409,000 through discount market or shared ownership.

Summary

8.13 The survey has found that housing aspirations of newly-forming households typically reflect a household's income, with those in lower incomes stating a preference for social rented housing and those on higher incomes stating a preference for owner-occupied housing. Overall there appears to be an affordability gap, whereby households on incomes of up to around £40-£50k would struggle to obtain anything larger than a 2-bed flat/small house on the open market, but could afford significantly more through shared ownership or discounted market housing. This gap is unsurprising, given entry-level house prices in Letchworth have increased over 70% in the last 5 years alone (from around £150,000 in 2013 to £260,000 currently).

8.14 Single person households typically wanted smaller housing, whether owner or rented. For those wanting to move into ownership, shared ownership or discounted market housing might be an option as those in incomes of around £30k might be able to afford a 1-2 bed flat with either discounted market or shared ownership housing. Households forming with others had higher incomes as expected (these were more likely to be dual-income), and these typically expressed a preference for owner-occupied or shared ownership housing. None of these households expressed a preference for flats, which suggests if affordable homes for purchase are provided in Letchworth they should be small family homes with outdoor space suitable for young couples and families.

9.0 Elderly and other needs

Elderly needs

9.1 The survey asked if the respondents' household contained any resident/s over age 65 which intended to move in the near future (this could be either the entire household moving or moving into a new household, e.g. out of a larger family home).

9.2 A total of 24 respondents stated that their household contained at least one member looking to move in the near future, and households were asked whether they would consider one or more of a range of housing options. All but one provided at least one response, and Table 9.1 summarises the type of housing households preferred (more than one option could be selected). The majority of these households came from the owner-occupied sector.

9.3 As expected based on earlier responses to the survey, around half of older households wishing to move expressed a preference either for a home on a single-level and/or a smaller home. This does not necessarily mean a home with fewer bedrooms; for example an older household living in a 2 or 3-bed home currently may wish to stay in a home with 2-3 bedrooms, but move into a bungalow with a more manageable garden. This highlights the importance of responding to the demands of those wishing to downsize through housing which specifically meets the needs of older households, rather than attempting to encourage downsizing by the provision of typical 2-3 bed housing (which may be unsuitable for older households due to being on 2 levels or having too much outdoor space). Interestingly, only one-quarter of households would consider an adaptable/accessible home, which suggests that having a manageable sized home on one-level was significantly more important than having a home which is adaptable or accessible.

9.4 After a smaller home (or one on a single-level), the next most common preference was for some form of retirement housing where some on-site assistance was provided. Very few households expressed a preference for care/nursing homes, which could reflect the fact that older households typically prefer to maintain a degree of independence for as long as possible[12].

9.5 The moving patterns of older households in the social rented sector typically reflected the overall average; most wanted to move either to a home on a single level or to retirement/sheltered housing.

[12] This could also be because those households more likely to be planning to move into nursing homes might not have been covered by the Survey.

Table 9.1 Moving preferences of older households

	Number	% (out of 23 respondents)
Home on single level (e.g. bungalow/ground floor flat)	12	52%
Smaller home (e.g. smaller garden, smaller living space)	11	48%
Home with fewer bedrooms	8	35%
Sheltered housing with some on-site assistance (e.g. warden)	8	35%
Accessible/adaptable home	6	26%
Retirement housing with on-site assistance	6	26%
Similar home to current (but, for example, in a different location)	4	17%
Larger home (more bedrooms, more living space, etc)	2	9%
Extra-care housing with 24-hour assistance (including on-call nurse)	2	9%
Care or nursing home	1	4%

Source: Letchworth Housing Survey

Self-build/CLT

9.6 A total of 112 respondents expressed an interest in self-build or CLT (community land trust) housing. However, some respondents simply provided comments, for example stating it would be good for the community to have a CLT, that self-build offers the opportunity to build energy-efficient and eco-friendly homes and expressing an interest in helping run a local CLT. These were typically households on lower incomes who said that whilst interested, they would be unlikely to be able to afford self-build housing.

9.7 Around half of respondents specifically stated they would consider (or are actively pursuing) self-build or CLT housing, most of which were on the highest incomes. There were some households who stated they were currently preparing for self-build and would be ready as soon as land became available. Some stated that they had attempted to pursue self-build previously but had been unable to secure land locally. Other respondents also stated that younger members of their household may be interested in self-build in the medium to longer term. There were also some older households who were interested in self-build as a way of designing a home which would meet their specific needs throughout retirement and old age.

9.8 Overall self-build housing appeared to be more popular than CLT; several respondents highlighted potential concerns about CLT, for example whether it would maintain Garden City principles and the desire to own the freehold to reduce household expenses.

Table 9.2 Self-build/CLT interest

	Number	% (out of 112)
Yes – Self Build	59	53%
Yes – CLT	36	32%
Yes - Self Build and Yes - CLT	14	13%
Yes - Preference not stated/Yes and No	3	3%

Source: Letchworth Housing Survey

10.0 Summary

10.1 This Local Housing Needs Study has been produced by Lichfields on behalf of the Foundation to provide an assessment of affordable housing needs in Letchworth. The Foundation wishes to understand in more detail the housing needs, particularly affordable housing need, of its residents and how the allocation North of Letchworth can best serve these needs.

What we know

10.2 In the mid/late-2000s Letchworth Garden City saw relatively little population and housing growth. In recent years, housing development has picked up which has led to the town's population reaching a high of just under 35,000. The town has a significantly higher proportion of social rented homes compared to the District and national averages, with 31% of households in social rented housing as at 2011.

10.3 The town contains a greater proportion of 3-bed homes than nearby towns and the District average, and house prices are similar to the District average across all types. However, prices across North Hertfordshire have risen sharply in recent years and affordability ratio is now at the highest ever. Entry-level house prices in Letchworth and North Hertfordshire are now around £110,000 more than the national average, at £260,000.

Gaps in existing information

10.4 Our research and analysis using publicly available information and primary research carried out as part of previous work has highlighted several gaps which could be filled by undertaking a local survey. These covered; perceptions of Letchworth, the needs of existing households, newly-forming households, elderly households and other needs (namely self-build and CLT).

Survey findings and implications

10.5 The perception of housing in Letchworth varies significantly, with some households believing there to be a wider variety of housing available whilst others identified specific gaps where there were apparent shortages, for example options for young families and for older households looking to downsize.

10.6 The survey suggests that to help meet the needs of existing households wishing to move, the Foundation could consider housing specifically designed to meet the needs of older households wishing to downsize, shared ownership options (ranging from homes with values of £200,000 up to around £327,000) and a range of homes in the social rented sector, suitable for downsizers and families.

10.7 The survey has found there to be a need for all tenures from newly-forming households, social rented housing for those in lower incomes and affordable purchase options for those on average (or higher) incomes. There appears to be an affordability 'gap', whereby households on incomes of up to around £40-£50k would struggle to obtain anything larger than a 2-bed flat/small house on the open market, but could afford significantly more through shared ownership or discounted market housing. This gap is unsurprising, given entry-level house prices in Letchworth have increased over 70% in the last 5 years alone (from around £150,000 in 2013 to £260,000 currently).

10.8 As expected, the survey has found that the majority of older households typically do not want to move. However, of those that do, many noted there was a lack of options available. This appears justified, given a household living in a 3-4 bed home is unlikely to be able to raise enough capital to buy bungalows currently on offer in Letchworth, without raising additional funds (e.g.

through a mortgage). Given that the movement of older households out of family homes will subsequently increase the supply of such homes available for families to occupy, the Foundation should consider how the provision of new housing can address the demands of downsizers.

10.9 Finally, the survey suggested that there was some appetite for self-build housing and to a lesser extent CLT housing. Some households were ready immediately to pursue self-build housing, others were still in the planning stage, whilst for others it was an option which may be pursued in the future if land were available and it was viable.

Appendix 1: Letchworth Housing Survey

Appendix 2: Summary of Survey Outputs

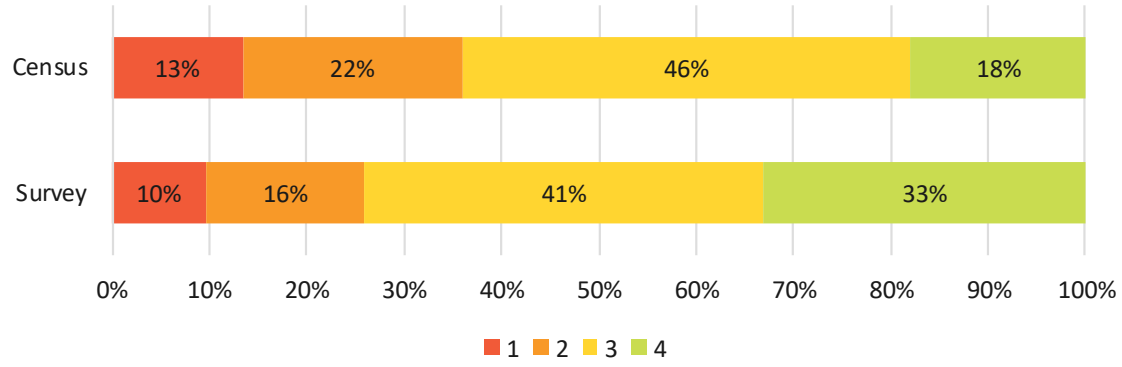
Q3. How many bedrooms does your current home have?

Table A2.1 Q3 Responses

	N	%
Total responses to question (response rate)	516	100%
1 bedroom	50	10%
2 bedrooms	84	16%
3 bedrooms	211	41%
4+ bedrooms	171	33%
Total	516	100%
Average number of bedrooms	2.97	

Source: Letchworth Housing Survey

Figure A2.1 Comparison of number of bedrooms - Survey and Census



Source: Letchworth Housing Survey and 2011 Census (Qs411EW)

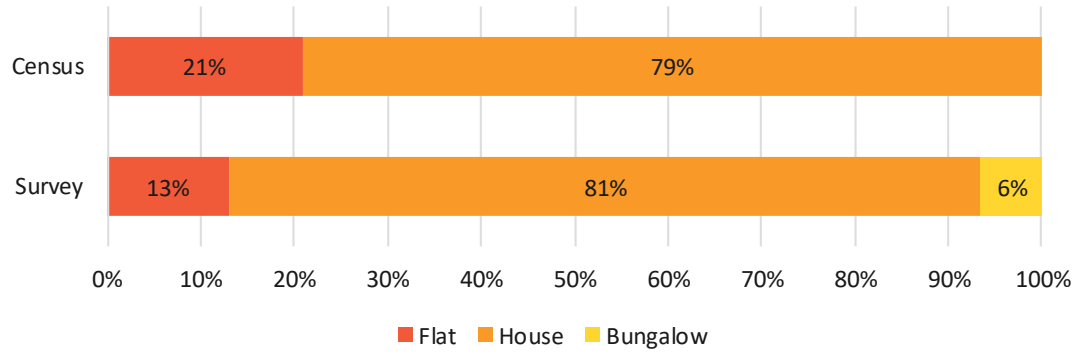
Q4. What type of property do you live in?

Table A2..2 Q4 Responses

	N	%
Total responses to question	513	99%
Flat	67	13%
House	413	81%
Bungalow	33	6%
Total	**513**	**100%**

Source: Letchworth Housing Survey

Figure A2.2 Comparison of house type – Survey and Census



Source: Letchworth housing survey and 2011 Census (KS401EW) *Note: The Census does not distinguish between houses and bungalows

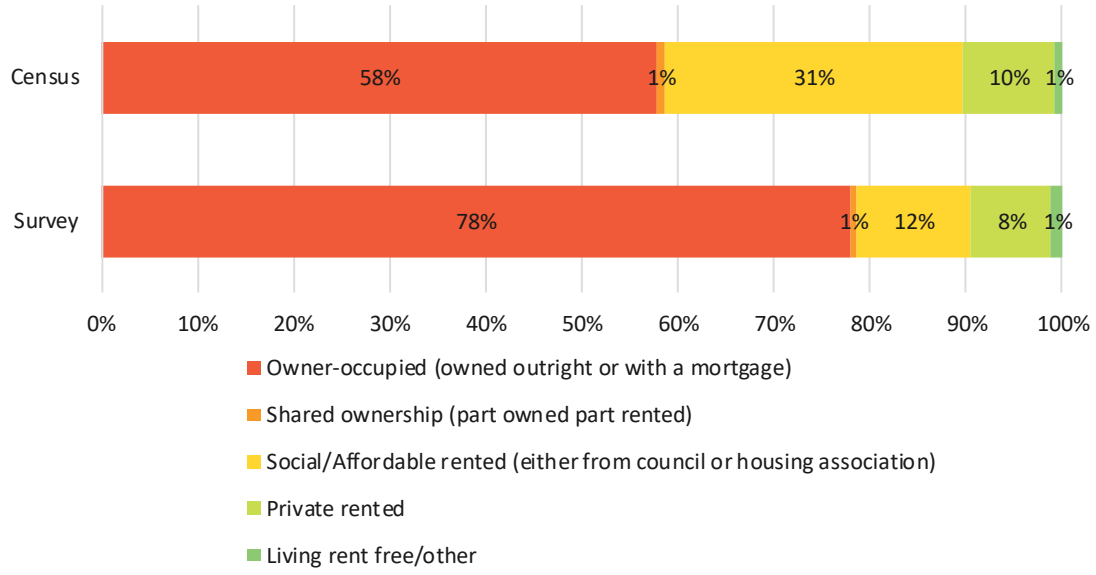
Q5. What tenure is your current residence?

Table A2.3 Q5 Responses

	N	%
Total responses to question	516	100%
Owner-occupied (owned outright or with a mortgage)	402	78%
Shared ownership (part owned part rented)	3	1%
Social/Affordable rented (either from council or housing association)	62	12%
Private rented	43	8%
Living rent free/other	6	1%
Total	**516**	**100%**

Source: Letchworth Housing Survey

Figure A2.3 Comparison of tenure - Survey and Census



Source: Letchworth Housing Survey and 2011 Census (KS402EW)

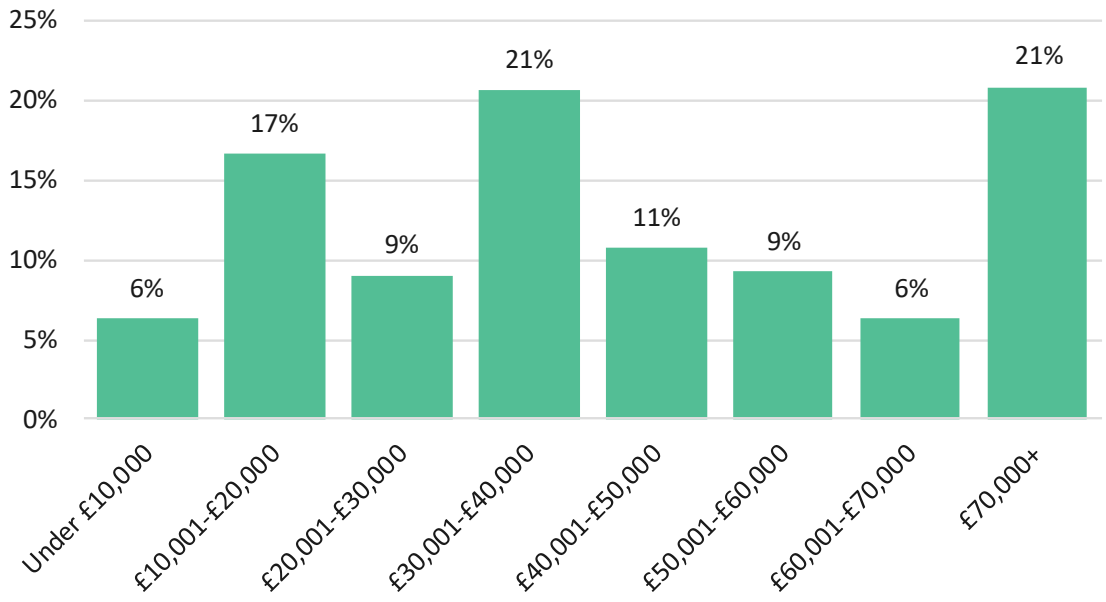
Q6. What is the approximate gross annual income of the main earner/s in your household?

Table A2.4 Q6 responses

	N	%
Total responses to question	474	92%
Under £10,000	30	6.3%
£10,001-£20,000	79	16.7%
£20,001-£30,000	43	9.1%
£30,001-£40,000	98	20.7%
£40,001-£50,000	51	10.8%
£50,001-£60,000	44	9.3%
£60,001-£70,000	30	6.3%
£70,000+	99	20.9%
Total	**474**	**100%**

Source: Letchworth Housing Survey

Figure A2.4 Q6 Responses - Income distribution of households



Source: Letchworth Housing Survey

Q7. What are the ages of residents in your households?

This question asked respondents to provide the number of residents in the household by age – 0-10 years, 11-20 years, 21-64 years and 65+ years. Unlike the Census, the Survey did not ask information on the relationships between different household members (in part to prevent the survey from becoming too long). From the responses, households were grouped according to type. These groupings are set out in the table below.

For the purposes of this analysis and for ease of understanding we have labelled each of the above types according to the household type that household is most likely to be (the 'general

term' shown below), however it is acknowledged that not all households in this group will fit exactly the description, as the relationship between household members is unknown.

Table A2.5 Grouping of households - composition and general term

Grouping	Composition	General term
One member age 21-64 years	Single person <65	Single person <65
One member age 65+ years	Single person 65+	Single person 65+
Two household members age 21-64	Two adults. Most likely to be a couple but could be two unrelated adults or a lone parent with an adult child	Couple
Two household members age 65+	Most likely to be elderly couple, but could also be unrelated adults or a single person living with a parent	Couple, 65+
Two members age 21-64 and at least one member age 0-10	Most likely to be a couple with a child, but could be lone parent with child and another related or unrelated adult or a multi-generation family	Family, young children
Two members age 21-64 and at least one member age 11-20 years	Most likely to be a couple with a child, but could be lone parent with child and another related or unrelated adult or a multi-generation family	Family, older children
Two members age 21-64 and two or more members of 0-10 and 11-20 years	Most likely to be a couple with children, but could be lone parent with child and another related or unrelated adult or a multi-generation family	Family, children
More than 2 members aged 21-64 years	This could be sharing households (e.g. a group of young adults living together) or could be families with adult children living at home	Multiple adult
One member age 21-64 years and any member age 0-10 or 11-20 years.	Most likely to be lone parents with children	Lone parent with child/ren
Any other composition	Any other composition	Other

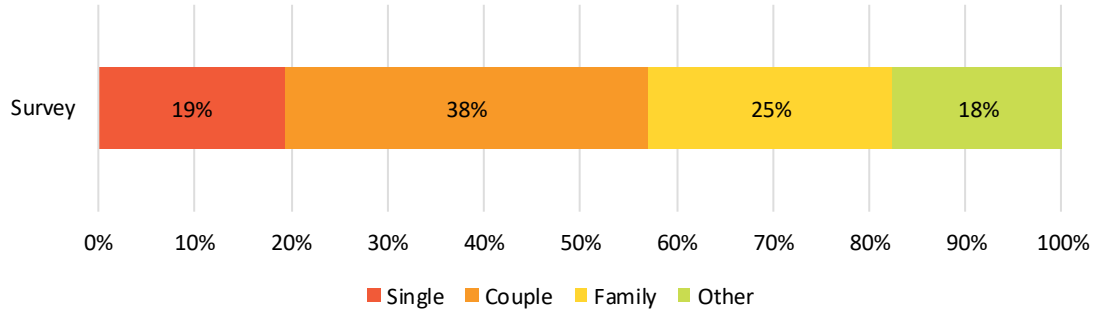
Source: Lichfields

Table A2.6 Q7 Responses (derived)

	N	%
Total responses to question	44	9%
Single <65	55	11%
Single 65+	89	17%
Couple	104	20%
Couple, 65+	49	10%
Family, young children	45	9%
Family, older children	16	3%
Family, children	27	5%
Multiple adult	20	4%
Lone parent with child/ren	63	12%
Other	44	9%
Total	**512**	

Source: Lichfields based on Letchworth Housing Survey

Figure A2.5 Q7 Responses (derived) – household (broad type)



Source: Lichfields analysis of Letchworth Housing Survey

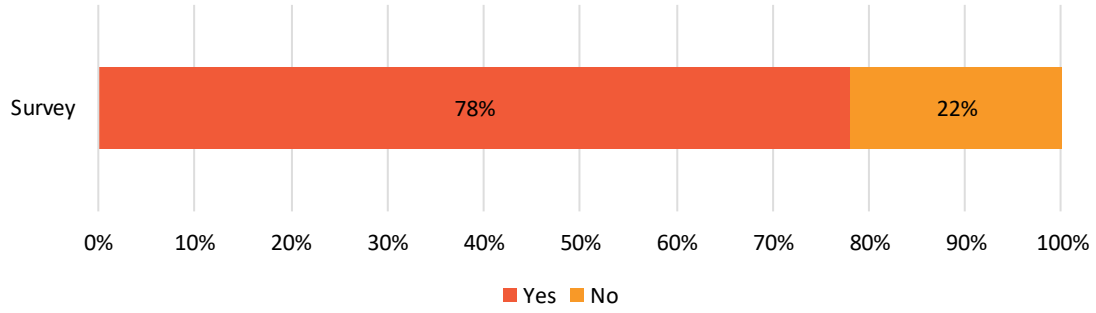
Q8. Does your home meet the needs of all occupants now and in the immediate future?

Table A2.7 Q8 Responses

	N	%
Total responses to question	515	99.8%
Yes	402	78%
No	113	22%

Source: Letchworth Housing Survey

Figure A2.6 Q8 Responses – does your home meet needs



Source: Letchworth Housing Survey

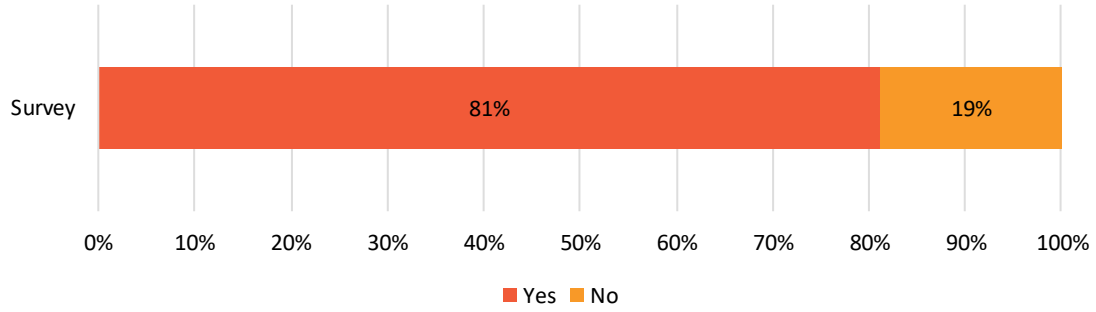
Q9. In your view, are your current housing costs affordable?

Table A2.8 Q9 Responses

	N	%
Total responses to question	512	99%
Yes	415	81%
No	97	19%

Source: Letchworth Housing Survey

Figure A2.7 Q9 Responses – are costs affordable



Source: Letchworth Housing Survey

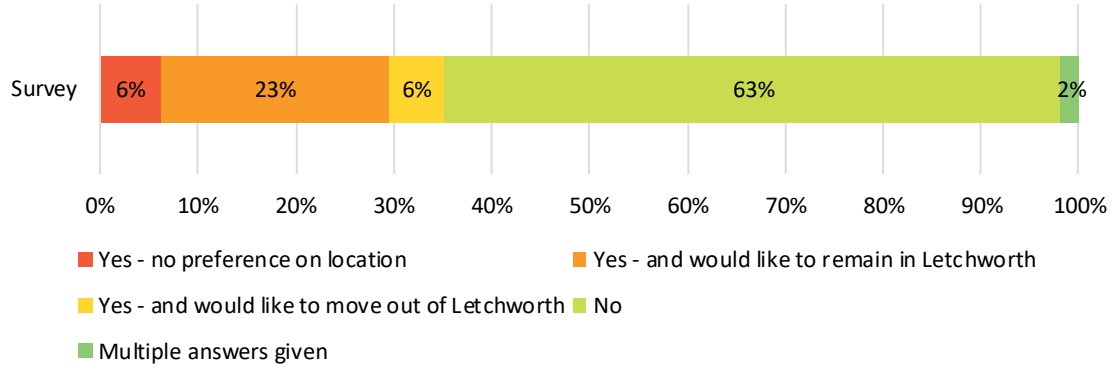
Q10. Would you and those living in your home like to move now or in the immediate future?

Table A2.9 Q10 Responses

	N	%
Total responses to question	512	99%
Yes - no preference on location	32	6%
Yes - and would like to remain in Letchworth	119	23%
Yes - and would like to move out of Letchworth	29	6%
No	323	63%
Multiple answers given	9	2%
Total	**512**	

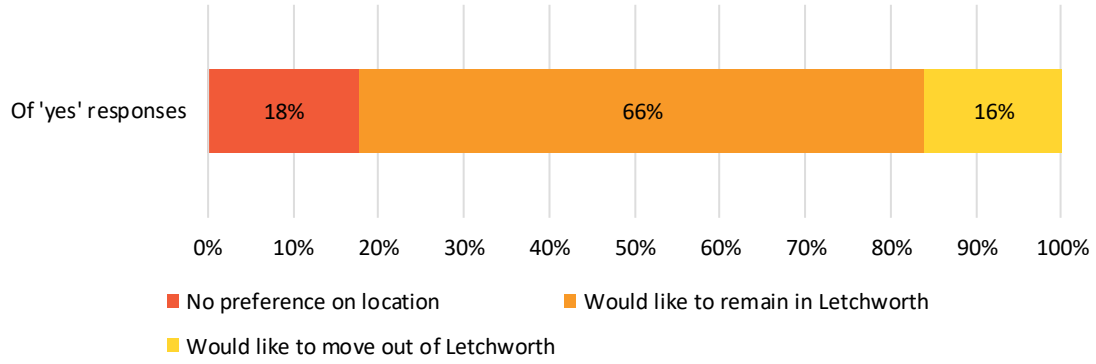
Source: Letchworth Housing Survey

Figure A2.8 Q10 Responses - would household like to move



Source: Letchworth Housing Survey

Figure A2.9 Q10 Responses - breakdown of those who answered 'yes' by preference on location



Source: Letchworth Housing Survey

Q11. Does anyone living in your home wish to leave now or in the immediate future to set up their own home?

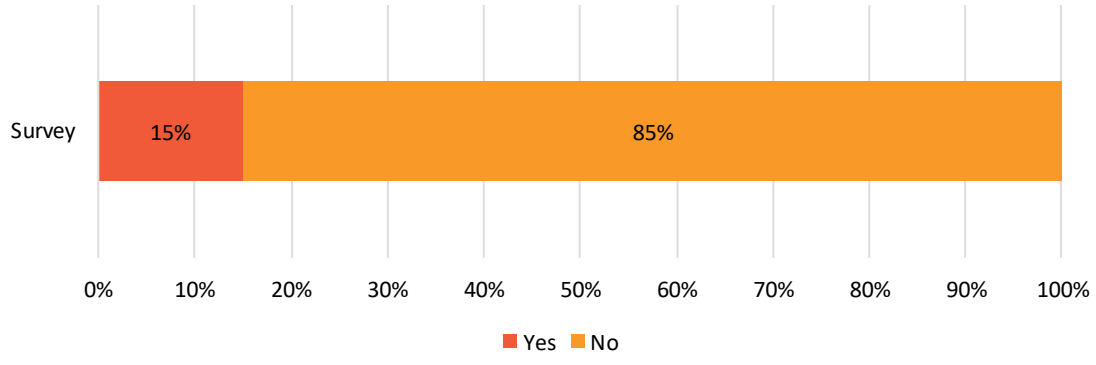
Note – single person households who responded 'yes' to this question were replaced with 'no' as their moving intentions were already captured in their response to Q10. The purposes of Q11 was to identify where new households would be created as a result of one or more household members moving out (not where existing households are looking to move, which would occur if a single person household moved).

Table A2.10 Q11 Responses

	N	%
Total responses to question	489	95%
Yes	73	15%
No	416	85%

Source: Letchworth Housing Survey

Figure A2.10 Q11 Responses - does anyone wish to leave to set up own home



Source: Letchworth Housing Survey

Q12. Would those setting up a new home plan to live in Letchworth?

Responses of those who indicated 'yes' when asked Q11 – whether anyone in their household planned to move out and set up their own home in the near future.

Table A2.11 Q12 Responses

	N	%
Yes	55	75%
No	18	25%
Total	**73**	

Source: Letchworth Housing Survey

Q12. (cont.) Would they consider living in Letchworth if a suitable and/or affordable home were available?

Responses of those who indicated that someone in their household did plan in moving out to set up their own home, but stated that they did not plan to live in Letchworth.

Table A2.12 Q12 (cont.) Responses

	N	%
Yes	7	39%
No/not stated	11	61%
Total	18	

Source: Letchworth Housing Survey

Q13. Which tenure would this household be looking to move into?

Table A2.13 Q3 Responses

	N	%
Owner-occupied	25	40%
Owner-occupied or shared ownership	5	8%
Shared ownership	8	13%
Private rented	4	6%
Private rented or Social/Affordable rented	0	0%
Social/Affordable rented	15	24%
Any	3	5%
Not stated	2	3%
Total	62	

Source: Letchworth Housing Survey

Q14. Who would they be moving in with?

Table A2.14 Q14 Responses

	N	%
Alone	31	50%
With others from the current household	8	13%
With others from a different household in Letchworth	15	24%
With others from a different household not in Letchworth	4	6%
Alone or With others from the current household	1	2%
Not stated	3	5%
Total	62	

Source: Letchworth Housing Survey

Q15. What would be their annual income?

Table A2.15 Q15 Responses

Under £10,000	3
£10,001-£20,000	18
£20,001-£30,000	14
£30,001-£40,000	8
£40,001-£50,000	5
£50,001-£60,000	4
£60,001 - £70,000	1
£70,000+	3
Not stated	6
	62

Source: Letchworth Housing Survey

Table A2.16 Comparison of household income - existing households and newly-forming households

	New households	Existing households
<£10k	5%	6%
£10k-£20k	32%	17%
£20k-£30k	25%	9%
£30k-£40k	14%	21%
£40k-£50k	9%	11%
£50k-£60k	7%	9%
£60k-£70k	2%	6%
£70k+	5%	21%

Source: Lichfields analysis of Letchworth Housing Survey

Figure A2.11 Comparison of household income - existing households and newly-forming households

Source: Lichfields analysis of Letchworth Housing Survey

Q16. How many bedrooms would they require?

Table A2.17 Q16 Responses

	N	%
1	20	32%
2	30	48%
3	8	13%
4+	1	2%
Not stated	3	5%
Total	**62**	

Source: Letchworth Housing Survey

Q17. Would this household prefer a house or a flat?

Table A2.18 Q17 Responses

	N	%
House	23	37%
Bungalow or House	1	2%
Bungalow	3	5%
Flat	9	15%
Not stated	26	42%
Total	**62**	

Source: Letchworth Housing Survey

Q18. Is anyone living in your home who is over the age of 65?

Table A2.19 Q18 Responses

	N	%
Yes - in either a single person or couple household	96	19%
Yes – living as part of a larger household	5	1%
No	415	80%
Total	516	

Source: Letchworth Housing Survey

Q19. Does the location of your home suit your needs?

Responses only relate to those who indicated that someone over age 65 was resident in their household.

Table A2.20 Q19 Responses

	N	%
Yes	93	92%
No	6	6%
Not stated	2	2%
Total	**101**	

Source: Letchworth Housing Survey

Q20. Does your current home meet your accessibility needs?

Table A2.21 Q20 Responses

	N	%
Yes	90	89%
No	10	10%
Not stated	1	1%
Total	**101**	

Source: Letchworth Housing Survey

Q20. (cont.) If not, could your home be adapted to meet your needs in the future?

Table A2.22 Q20 (cont.) responses

	N	%
Yes	7	7%
No	3	3%
Not stated	1	1%
Total	**11**	

Source: Letchworth Housing Survey

Q21. Does any elderly member/s of your household currently, or in the immediate future, intend to move?

Table A2.23 Q21 Responses

	N
Yes	24
Yes – and indicated at least one preference	23

Source: Letchworth Housing Survey

Table A2.24 Q21 (cont.) Responses

	Number	% (out of 23 respondents)
Home on single level (e.g. bungalow/ground floor flat)	12	52%
Smaller home (e.g. smaller garden, smaller living space)	11	48%
Home with fewer bedrooms	8	35%
Sheltered housing with some on-site assistance (e.g. warden)	8	35%
Accessible/adaptable home	6	26%
Retirement housing with on-site assistance	6	26%
Similar home to current (but, for example, in a different location)	4	17%
Larger home (more bedrooms, more living space, etc)	2	9%
Extra-care housing with 24-hour assistance (including on-call nurse)	2	9%
Care or nursing home	1	4%

Source: Letchworth Housing Survey. Respondents could indicate more than one preference

Q22. Would you be interested in a self-build housing scheme or involvement in a Community Land Trust (CLT)?

Table A2.25 Q22 Responses

	N	%
Yes – Self Build	59	53%
Yes – CLT	36	32%
Yes - Self Build and Yes - CLT	14	13%
Yes - Preference not stated/Yes and No	3	3%
Total	112	

Source: Letchworth Housing Survey

Table A2.26 Income of households which expressed an interest in Self-Build/CLT Housing

	Interest	
Under £10,000	3	3%
£10,001-£20,000	16	15%
£20,001-£30,000	6	5%
£30,001-£40,000	18	16%
£40,001-£50,000	12	11%
£50,001-£60,000	16	15%
£60,001-£70,000	11	10%
£70,000+	28	25%
	110	

Source: Lichfields analysis of Letchworth Housing Survey

Appendix 3: Review of additional responses

Review of responses

Following the drafting of this report (which covered all responses to the survey up to 3rd January 2019), a further 9 responses were received. These responses included:

1 3 older households (singles/couples ages 65+) living in 1-2 bed housing. 2 households were owner-occupiers with incomes of £10,000-£20,000 and 1 household was a social renter and did not provide their income;

   Only 1 of these households provided responses on whether their current home met their needs (this households' response was 'yes')

   None of the 3 households indicated they planned to move in the near future

2 2 single person households (under 65) both on low incomes and living in 1-bed housing. 1 was in the social rented sector (with an income of <£10,000) and 1 was in the private rented sector (with an income of £10,000-£20,000).

   The household in the private rented sector was the only household which indicated their home did not meet needs now and in the future, and that its current housing costs were not affordable. This household planned to move into the social rented sector upon retiring (preferably a 1-2 bed ground floor flat/bungalow with some outdoor space);

3 3 family/multiple adult households, 2 owner-occupiers and 1 privately renting, all with incomes of £40,000+;

   1 of these households indicated that someone wanted to move out in the near future – this person would be living alone, plans to live in Letchworth, would have an income of £30,000-£40,000 and would prefer a 2- bed home (owner-occupied, no preference for house or flat);

   All of these 3 households expressed an interest in CLT housing, with 1 also expressing an interest in self-build housing, however none provided further comments.

4 1 household who did not provide information on its member/s, but was living in a 1-bed social rented flat an income of <£10,000.

Overall the additional 9 responses received subsequent to 3rd January were consistent with the main responses and findings.

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London
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Newcastle
0191 261 5685
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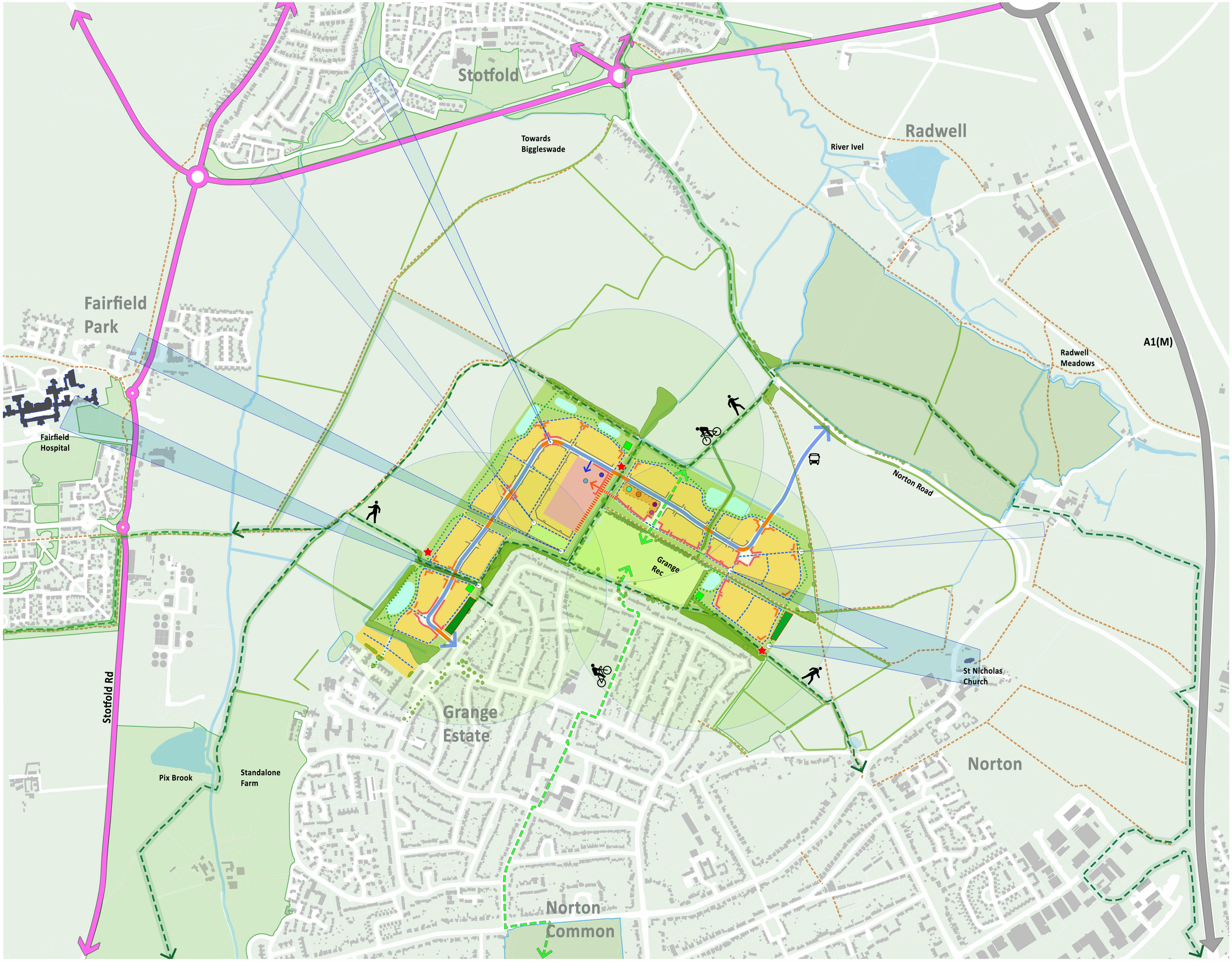
Thames Valley
0118 334 1920
thamesvalley@lichfields.uk

Appendix O

LG1 strategic masterplan framework plans



MASTERPLAN FRAMEWORK

Key

- Existing trees, hedgerows
- Peripheral green belt
- LEAPs
- Traffic calming
- Primary / main streets
- Walking / cycle route
- Garden City Greenway
- Etonbury Green Wheel
- Public Right of Way
- Car-free school access
- Vehicular access to school
- School
- Mobility hub
- Childcare facility
- Retail
- Community hub
- Care home
- Frontage along main street
- Primary frontages
- Secondary frontages
- Primary views
- Secondary views
- Community allotment
- Pop-up event / activity hot spots

Scale on A1 1:5000

0 100 300 M

Revision	Date	Description
P1	06/02/2024	Revisions following QRP comments and public consultation.

Drawing title	Site LG1 - Preferred Option		
Project no.	1001		
Project title	Site LG1	Date	26/02/2024
Client	LGCHF	Revision	P1

EcoResponsive Environments

86-90 Paul Street,
London EC2A 4NE
ecoresponsiveenvironments.com

Note: The proposed framework plan takes account of the preliminary assessment of the Surface Water Flooding Constraints and Flood Risk Assessment and Drainage Strategy (January 2023/ Appendix L). This is further being reviewed by Stantec (January 2024 onwards) in response to initial discussions with the County Council (response letter December 2023). More detailed assessment and design coordination for Flood Risk and Surface Water Management will be required at subsequent design stages.

NORTON ROAD

GRANGE RECREATION GROUND

WESTERN WAY

GAUNTS WAY

GRANGE ACADEMY

AVOCET

NORTHFIELDS

EASTERN WAY

CROFT LANE COMMUNITY ORCHARD

PELICAN WAY

LANDSCAPE AND GREEN INFRASTRUCTURE FRAMEWORK PLAN

- Site boundary
- Existing trees, hedges and vegetation
- Attenuation basin (SuDS)
- Linear park
- Streets with swales (SuDS)
- Peripheral green buffer
- Tree-lined avenue
- Amenity green space
- School building and play ground
- Local Equipment Area for Play (LEAP)
- Allotments
- Greenway
- Pedestrian friendly secondary streets

NOTES:

Please note that the North arrow orientation is based on the OS map true North orientation. For additional information, please refer to survey drawings.

1. Do not scale from this drawing.
2. Always work to noted dimensions.
3. All dimensions are in metres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read in conjunction with all relevant specification clauses and other consultants' information.
7. Order of construction and setting out to be agreed on site.

N

0 100 200 M

Drawing title	LANDSCAPE AND GREEN INFRASTRUCTURE FRAMEWORK PLAN		
Project no.	1001	Scale	1:5000 @ A3
Project title	Site LG1	Date	03/05/2024
Client	LGCHF	Revision	

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Note: Refer to TEP Feasibility Stage BNG Report and analysis drawings for detailed habitat descriptions including: Baseline UK Habitats (G9546.05.003A) and Proposed UK Habitats G9546.05.005A),December 2023 or revised.

The proposed framework plan takes account of the preliminary assessment of the Surface Water Flooding Constraints and Flood Risk Assessment and Drainage Strategy (January 2023/ Appendix L). This is further being reviewed by Stantec (January 2024 onwards) in response to initial discussions with the County Council (response letter December 2023). More detailed assessment and design coordination for Flood Risk and Surface Water Management will be required at subsequent design stages.

HABITAT AND BIODIVERSITY FRAMEWORK PLAN

- Site boundary
- Existing native broadleaved woodland, dense scrub and native hedgerows
- Proposed native green buffer incorporating broadleaved woodland, mixed scrub, hedgerows and species-rich grassland
- Neutral grassland (linear park)
- Modified grassland (play areas)
- Attenuation pond (SuDS system)
- Swale (SuDS System)
- Allotments
- Developable land parcels

NORTON ROAD
GRANGE RECREATION GROUND
WESTERN WAY
GAUNTS WAY
GRANGE ACADEMY
AVOCET
NORTHFIELDS
EASTERN WAY
CROFT LANE COMMUNITY ORCHARD
PELICAN WAY

NOTES:

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7. Order of construction and setting out to be agreed on site.

N

0 100 200 M

Drawing title	HABITAT AND BIODIVERSITY FRAMEWORK PLAN		
Project no.	1001	Scale	1:5000 @ A3
Project title	Site LG1	Date	03/05/2024
Client	LGCHF	Revision	

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88-90 Paul Street,
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Note: The proposed framework plan takes account of the preliminary assessment of the Surface Water Flooding Constraints and Flood Risk Assessment and Drainage Strategy (January 2023/ Appendix L). This is further being reviewed by Stantec (January 2024 onwards) in response to initial discussions with the County Council (response letter December 2023). More detailed assessment and design coordination for Flood Risk and Surface Water Management will be required at subsequent design stages.

MOVEMENT FRAMEWORK PLAN

TOWARDS STOTFOLD

TOWARDS RADWELL

GREENWAY PEDESTRIAN/ CYCLE CROSSING – POTENTIAL IMPROVEMENT

NORTON ROAD

TOWARDS LETCHWORTH

SPEED MANAGEMENT MEASURES TO BE INCLUDED TO REDUCE DIRECTNESS OF THE ROUTE

TOWARDS FAIRFIELD

GRANGE RECREATION GROUND

WESTERN WAY

GAUNTS WAY

GRANGE ACADEMY

AVOCET

NORTHFIELDS

ORCHARD

TOWARDS LETCHWORTH TOWN CENTRE, SECONDARY SCHOOLS AND STANDALONE FARM

PELICAN WAY

- Site boundary
- Green open space
- Developable land parcels
- Primary active travel route (3m dedicated cycle path)
- Secondary active travel route (shared between pedestrians and cyclists)
- Main street (for bus access and shared usage by cyclists)
- Secondary street (shared surface including walking and cycle)
- Edge street (shared surface including walking and cycle)
- Pedestrian trail
- Potential cycle / pedestrian link
- National Cycle Network (NCN) 12
- Primary gateways
- Potential wayfinding markers
- Active travel priority junctions/ speed management measures
- Vehicular entrance to school
- Pedestrian / cycle entrance to school

NOTES:

Please note that the North arrow orientation is based on the OS map true North orientation. For additional information, please refer to survey drawings.

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2. Always work to noted dimensions.
3. All dimensions are in metres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read in conjunction with all relevant specification clauses and other consultants' information.
7. Order of construction and setting out to be agreed on site.

N

0 100 200 M

Drawing title	MOVEMENT FRAMEWORK PLAN		
Project no.	1001	Scale	1:5000 @ A3
Project title	Site LG1	Date	03/05/2024
Client	LGCHF	Revision	

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MOVEMENT FRAMEWORK PLAN: WALKING ROUTES

- Site boundary
- Green open space
- Developable land parcels
- Walking route
- Potential walking route
- Pedestrian gateway with potential for wayfinding markers

NOTES:

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7. Order of construction and setting out to be agreed on site.

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Drawing title	MOVEMENT FRAMEWORK PLAN: WALKING ROUTES		
Project no.	1001	Scale	1:5000 @ A3
Project title	Site LG1	Date	03/05/2024
Client	LGCHF	Revision	

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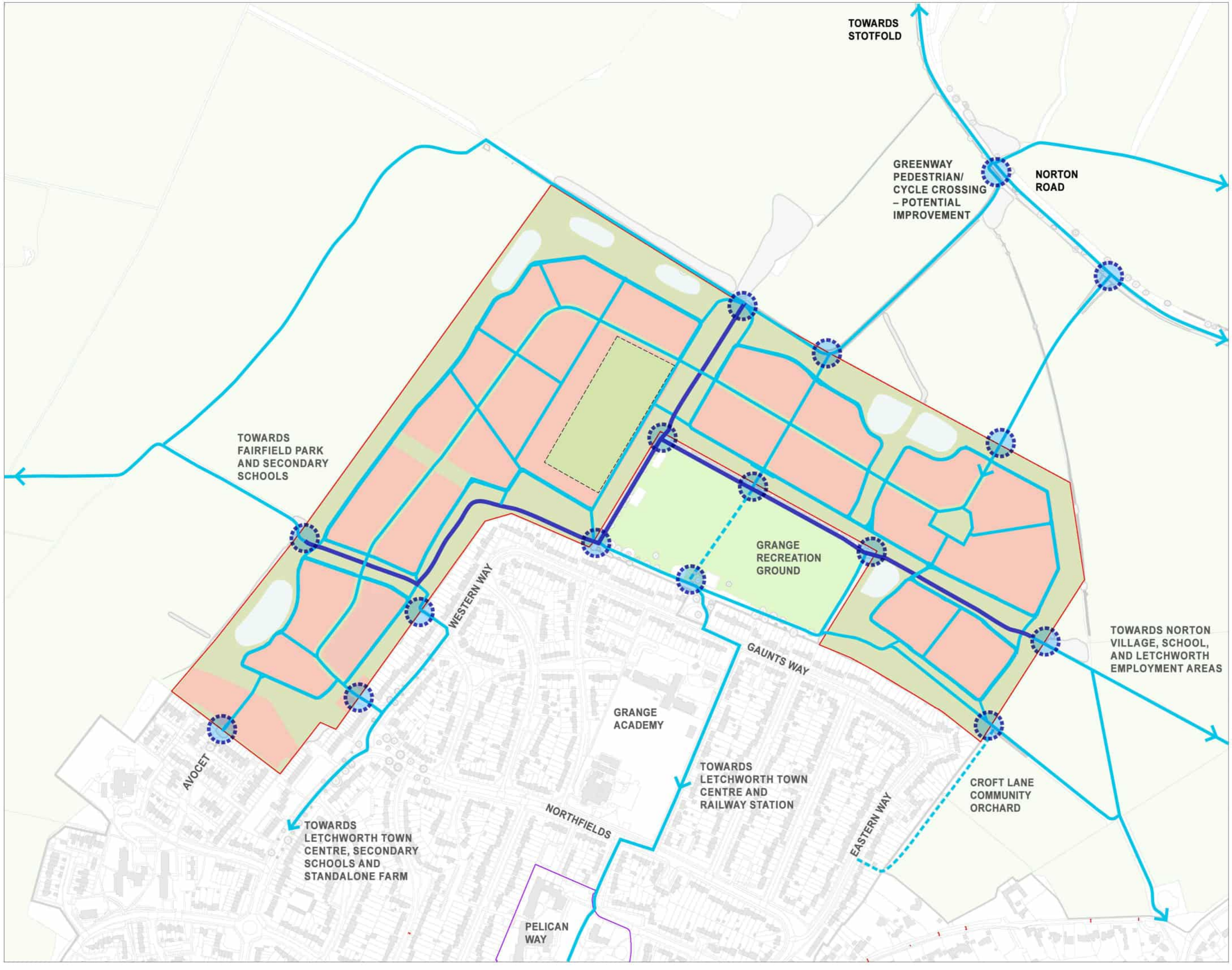

MOVEMENT FRAMEWORK PLAN: CYCLING ROUTES

- Site boundary
- Green open space
- Developable land parcels
- Primary active travel route (3m dedicated cycle path)
- Secondary active travel route (shared between pedestrians and cyclists)
- Potential secondary active travel route
- Cycle gateways with potential for wayfinding markers

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LANDUSE FRAMEWORK PLAN

- Site boundary
- Public parks and gardens (3.269Ha)
- Amenity green space (3.131Ha)
- Natural and semi natural (8.373Ha)
- Allotments (0.656Ha)
- Equipped play areas (LEAPs) (0.54Ha)
- Mixed use: Neighbourhood facilities (0.09Ha)
- Residential (23.511Ha)
- 'Reserve' 2FE primary school site (need and timeline for delivery to be confirmed by HCC)
- Childcare facility
- Car free zone for school along the enhanced Greenway linear park
- Potential new north-south link through the Grange Rec to be confirmed by NHC
- New south-facing public square along Rec's northern boundary
- Opportunity for a cafe spilling out over new public square aligned with the new N-S link through Rec
- Mobility hub adjacent to the school
- Neighbourhood centre/ Community hub
- 50-60 unit senior living scheme

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DEVELOPMENT AREA FRAMEWORK PLAN

- Site boundary
- Net developable area (excludes structural green space, primary roadway and school site)
- Structural green space
- 'Reserve' 2FE primary school site

APPROX. 16HA NET GREENSPACE AREA

2.14HA NET SCHOOL AREA

APPROX. 24HA NET DEVELOPABLE AREA

NORTON ROAD

GRANGE RECREATION GROUND

WESTERN WAY

GAUNTS WAY

GRANGE ACADEMY

AVOCET

NORTHFIELDS

EASTERN WAY

CROFT LANE COMMUNITY ORCHARD

PELICAN WAY

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URBAN DESIGN FRAMEWORK PLAN

- Site boundary
- Existing trees, hedges and vegetation
- Attenuation basin
- Green open space
- Development blocks
- 'Reserve' 2FE primary school site
- Primary access
- Primary frontage
- Landmark buildings
- Marker buildings
- Key groupings
- Primary views
- Secondary views
- Opportunities to frame views from the development using landscape
- Primary public open space
- Secondary public open space
- Focal point
- Activity hotspots / pop-up event space
- Primary gateway

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DENSITY AND BUILDING HEIGHTS FRAMEWORK PLAN

- Site boundary
- Density zone 1 (approx. 30 dph)
- Density zone 2 (approx. 45 dph)
- Density zone 3 (approx. 70 dph)
- 'Reserve' school site
- 4 - 5 storeys
- 3 storeys
- 2 - 2.5 storeys (remaining massing)

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CHARACTER AREA FRAMEWORK PLAN

Site boundary

Character areas

- Area 1: Grange Rec/ Central Park
- Area 2: Grange Meadows
- Area 3: The Avenue
- Area 4: Countryside Periphery
- Area 5: Parkway Approach

NORTON ROAD

GRANGE RECREATION GROUND

WESTERN WAY

GAUNTS WAY

GRANGE ACADEMY

AVOCET CL

NORTHFIELDS

ORCHARD

PELICAN WAY

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