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4 GREEN INFRASTRUCTURE STANDARDS

4.1 GREEN INFRASTRUCTURE & OPEN SPACE STANDARDS

Natural England Accessible Greenspace Standards (AGS)

Detailed standards for accessible green space have recently been revised by Natural England as part of the Green infrastructure Framework. These Accessible Natural Green Space Standards (ANGSt), now known as Accessible Green Space Standards (AGS) form one of the Green Infrastructure Framework Standards.

Natural England's Accessible Greenspace Standards (AGS) – size and proximity criteria - is that everyone should have access to good quality green and blue spaces close to home for health and wellbeing and contact with nature, to meet the Accessible Greenspace Standard size and proximity criteria as illustrated below in **Figure 11**, with an initial focus on access to green and blue spaces within 15 minutes' walk from home.

Following an analysis based on the latest AGS, and from reviewing the Natural England Green Infrastructure mapping, there is currently a good concentration and coverage of Accessible Greenspace typologies within and around the western and southern parts of Baldock.

The Growing Baldock Site presents an opportunity to bridge the gap of walkable AGS and address the Site and Baldock deficient greenspace criterion, including:

- **Doorstep Standard** of at least 0.5ha greenspace within 200m
- Local Standard of at least 2ha natural greenspace within 300m
- Neighbourhood Standard of at least 10ha natural greenspace within 1km
- Wider Neighbourhood Greenspace of at least 20ha natural greenspace within 2km

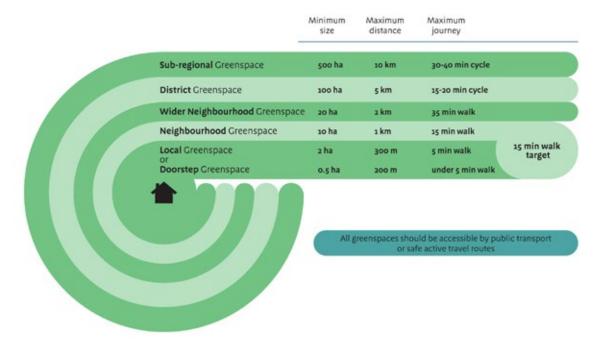
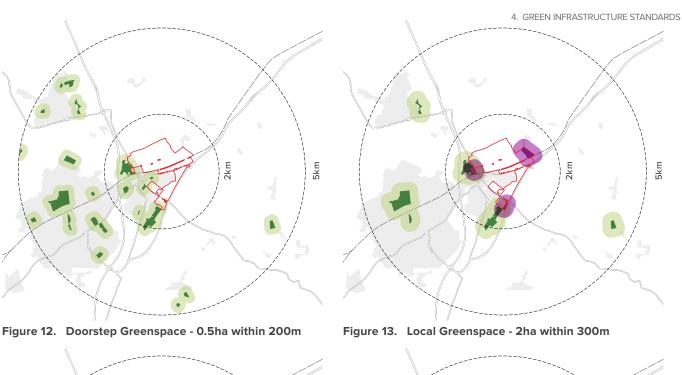


Figure 11. Natural England Accessible Greenspace Standards



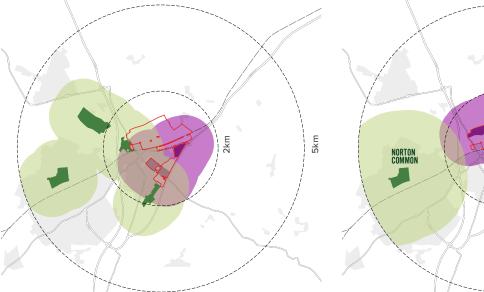


Figure 14. Neighbourhood Greenspace - 10ha within 1km

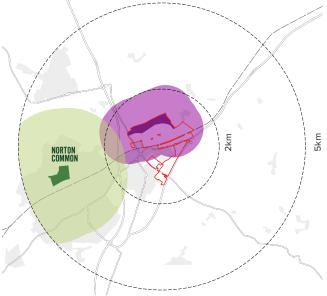


Figure 15. Wider Neighbourhood Greenspace - 20ha within 2km

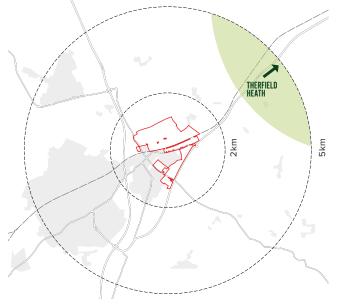


Figure 16. District Greenspace - 100ha within 5km



New Greenspace destinations within the Site as part of the Proposed Development provide the opportunity to address current Accessible Greenspace Standards (AGS) deficits including doorstep, local, neighbourhood and wider neighbourhood greenspaces within Baldock.

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4.1 GREEN INFRASTRUCTURE & OPEN SPACE STANDARDS

North Herts Council (NHC) Developer Contributions SPD

The North Herts Council (NHC) Developer Contributions (SPD) January 2023, sets out detailed guidance on the type and scale of developer contributions that will be sought to support new development, including the type and quantum of open space. Section 8.4 Open Space of the SPD highlights:

- North Herts Council Local Plan 2011-2031 Policy NE6: New and Improved Open Space states that
 planning permission will be granted for development proposals that make provision for new and/or
 improved open space
- Policy SP9 Design & Sustainability of the Local Plan requires Strategic Masterplans to create an 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
 - A high-quality integrated network to support ecological connectivity, biodiversity net gain, climate adaptation and mitigation linking into the wider Ecological Network.

To guide and set baseline requirements for open space in new development North Herts Council currently use a combination of standards set within the **Developer Contributions (SPD) January 2023** based on **Fields in Trust Standards (2024)**. The Council currently recommends an occupancy figure of 2.4 persons per household for determining the future population yield, which in turn informs the level of open space provision for new development. Based on 3,200 homes and an average occupancy of 2.4 persons per dwelling suggests an indicative development population of 7,680 people. This approach to setting out the requirements for the levels of open space provision for Growing Baldock was agreed during the preapplication process with North Herts Council (NHC) in June 2025 and is summarised in **Table 01** below.

Refer to **Section 7.3** for the **Open Space**, **Play and Recreation Proposals**. As a reference and starting point for Growing Baldock, the open space standards generates requirements for the following levels of provision as part of the OPA:

Table 01

OPEN SPACE STANDARDS FOR NEW DEVELOPMENT			
FIELDS IN TRUST (FIT) STANDARDS (2024) NHC DEVELOPER CONTRIBUTIONS SPD (JANUARY 2023)			
Outdoor Sports Facilities (NHC SPD)			
Sports pitches (1.2ha) & other outdoor sports (0.4ha)	1.6	12.29	
Allotments (NHC SPD) Allotments, Orchards and Community Gardens	0.3	2.30	
Provision for Children & Young People (FiT) Equipped Play (0.25) & Informal Play (0.3)	0.55	4.22	
Parks & Gardens (FiT)	0.8	6.14	
Amenity Green Space (FiT)	0.6	4.61	
Natural and Semi-Natural Greenspace (FiT)	1.8	13.82	
TOTAL OPEN SPACE	5.65 ha	43.38 ha	

Based on standard occupancy ratio of 2.4 persons per dwelling to estimate the population (3200 unit scheme \times 2.4 = 7,680 population)

BMD

4.2 FORMAL OUTDOOR SPORTS REQUIREMENTS

North Herts Council (NHC) is in the process of updating its **Playing Pitch Strategy and Action Plan 2018** which sets out playing pitch needs across the district and will be used to inform new playing pitch provision.

The NHC Developer Contributions SPD notes that in the calculation of playing pitch/outdoor sports, Sport England's playing pitch calculator should also be used alongside Fields in Trust benchmark standards (1.2ha of sports pitches and 0.4ha of other outdoor sports are required per 1,000 population) to estimate demands that will be generated from the new development.

Paragraph 8.4.11 of NHC Developer Contributions (SPD) states "All schemes should have regard to these standards as a guide when proposals are developed. The standards should not be treated as a cap for open space provision" and "any discrepancies between the requirements arising from the Fields in Trust standards vs the Sport England calculator will be considered on a case-bycase basis having regard to local circumstances, provision and priorities".

The Sport England Playing Pitch Calculator (PPC) is a planning tool which can help with estimating the additional demand for playing pitches that may be generated from a new population. It can be used to provide a consistent starting point for estimating this demand which can be refined locally as appropriate. The PPC is hosted on Sport England's Active Places Power website: www.activeplacespower.com.

Pre-application consultations were held with NHC and Sports England in June 2024 to inform the Baldock Strategic Masterplan and in April 2025 regarding the OPA. In April 2025 Sports England provided (by email) a Playing Pitch Calculator (PPC) output that used the latest team data from the emerging NHC Playing Pitch Strategy for the playing pitch sports, based on an indicative development population of 7,680 people. **Table 02** below summarises the PPC results in relation to the estimated demand for new pitches (matches and training demand) and ancillary provision, used to inform the Growing Baldock OPA, refer to **Section 8.3 Sports Strategy** for more information on the proposals for outdoor sport as part of the Green Infrastructure Framework. North Herts Council view the Playing Pitch Calculator (PPC) output as a starting point to be balanced with other factors

Table 02

THE SPORTS ENGLAND PLAYING PITCH CALCULATOR (PPC) OUTPUT		
ESTIMATED DEMAND FOR NEW PITCHES (MATCHES AND TRAINING DEMAND) AND ANCILLARY PROVISION		
PITCH TYPOLOGY	NUMBER OF PITCHES	
NATURAL GRASS PITCHES	TOTAL - 12.67	
Adult Football	1.67	
Youth Football	4.96	
Mini Soccer	3.49	
Rugby Union	1.12	
Rugby League	0.17	
Cricket	1.27	
ARTIFICIAL GRASS PITCHES	TOTAL - 0.75	
Sand Based	0.22	
3G	0.53	

The Sports England estimated demand for new pitches are based on the following:

Natural grass pitches

Adult Football: $106 \times 70m$ pitch Junior Football: $97 \times 61m$ under 16/15 pitch Mini Football Pitch: $43 \times 33m$ under 8/7 pitch Senior Rugby Union: $130 \times 80m$ pitch Senior Rugby League: $122 \times 74m$ pitch Cricket - Natural turf 8-pitch square and 2 winter sports pitches: $125.6 \times 164.4m$

Artificial Grass Pitches

Sand-dressed surface - 18mm sand-dressed pitch, fenced with sports lighting: $101.4 \times 63m$ 3G surface - 60m pile length pitch, fenced with sports lighting: $106 \times 70m$







SITE GREEN INFRASTRUCTURE BASELINE

5.1 **BIODIVERSITY & ARBORICULTURE**

Chapter 11: Ecology of the Environmental Statement (ES) relates to wildlife and biodiversity for the Site and its surrounding context. The key environmental and Site ecological context is summarised below.

Biodiversity

There are no statutory designated sites of nature conservation importance located within the Site itself. The Site does not lie within the Impact Risk Zone (IRZ) for any statutory designated sites of nature conservation. The Site lies within 2km of two statutory sites of nature conservation importance:

- Weston Hills (Local Nature Reserve and Local Wildlife Site circa, 17ha) – Borders the Site at the south east boundary of BA2. Weston Hills is designated for its calcareous grassland habitat, beech and ash woodland and wildflower grassland that are managed for conservation purposes.
- Ivel Springs (Local Nature Reserve and Local Wildlife Site circa. 14.7ha) - Opposite BA1 of the Site at North Road. This site is designated for its mosaic of habitats including wildflower meadows, glades, chalk grassland, wetland and springs that are a key source for the river Ivel.

Ten non-statutory designated sites of nature conservation, six priority habitats and two notable habitats are located within 1km of the Baldock Site. The Bygrave Road Local Wildlife Site (LWS), an area of semi-improved neutral grassland, is located within the centre of the Site, contiguous with Bygrave Road.

Site's Biodiversity Context

The existing landscape features provide opportunity to create a network of habitats throughout the Site and retain existing planting. The habitat network, enhanced and managed, has the potential to positively deliver BNG.

Habitats

The majority of the Site is arable farmland of low ecological value, with a few notable landscape features limited to fragmented hedgerows, trees and woodland - associated with field boundaries and infrastructure corridors. The Site is made up of a range of habitats of varying quality and ecological value, including amenity grassland, dense scrub, hedgerows and trees, improved and semi-improved grassland and woodland (illustrated on Figure 17).

The Preliminary Ecological Appraisal (PEA) and Phase 1 habitat survey identified the following habitats and features worth retaining and a number of recommendations:

- The western edge of BA1 at North Road is within Natural England Network Enhancement Zone 2, where land connecting existing patches of primary and associated habitats which is less likely to be suitable for creation of the primary habitat. Action in this zone that improves the biodiversity value through land management changes and/or green infrastructure provision can be targeted here.
- Parts of BA2 are located within Natural England Network Enhancement Zone 1, which is land connecting existing patches of primary and associated habitats which is likely to be suitable for creation of the primary habitat. Action in this zone to expand and join up existing habitat patches and improve the connections between them.
- Walls Field and Urban Open Land are identified as Natural England Network Expansion Zones, these are areas of land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape.
- Incorporation of the triangular part of the Site, south of Royston Road, which is the spoil from the A505 bypass - this has become a good environment for reptiles, featuring semiimproved grassland;
- Safeguard, buffer and improve Ivel Springs LNR and Weston Hills LNRs connectivity within the wider GI network, buffering and protecting existing features and providing alternative green space to reduce recreational pressures on higher value habitats;
- Retention and enhancement of Bygrave Road
- Integration of bat foraging corridors along railway and east of North Road;
- Retention and enhancement of existing hedgerow boundaries (Priority Habitat, including hedgerow at Walls Field (ref:H28) identified as 'Important' under The Hedgerow Regulations 1997;
- Retention of onsite trees, small woodlands and hedgerows into the masterplan where possible; and
- Creation of a network of wildlife corridors and natural green spaces to connect areas of habitat and ecological interest.



Figure 17. Biodiversity & Arboriculture Baseline





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5.1 BIODIVERSITY & ARBORICULTURE

Species

- A number of protected and notable bird species such as corn bunting are known to be present on the Site and there is some good habitat for bats particularly towards the edges of the Site, connecting to adjacent off-site habitats;
- Protected and notable species recorded on Site include common lizard, slow worm, bats and ground nesting birds; and
- Other notable species include small blue butterfly and sandrunner shieldbug.

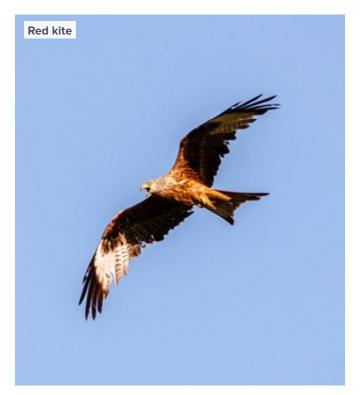
Arboriculture

The Arboricultural Impact Assessment (AIA) identifies trees and woodland on the Site and in its surrounding context. The key arboricultural context is summarised below:

- The majority of the Site is arable farmland with existing hedgerows and trees associated with field boundaries and farmsteads. There are no ancient natural woodlands, Tree Preservation Order (TPO) or veteran trees located on Site.
- The arboricultural tree survey identified multiple broad-leaved and coniferous trees on Site are category B (moderate quality) and category C (low quality). There was only one category A tree (high quality) identified (ref:T67), a Common Walnut on the north western boundary of BA2. It is recommended that category A & B trees should be retained and incorporated into the masterplan where possible.
- Identified existing native hedgerow field boundaries of moderate value (category B) should be retained and incorporated into the masterplan where possible including Site's northern boundary (ref H30 - BA1), North Road boundary (ref H35) and Clothall Road boundary (ref H4).
- Identified important linear groupings of vegetation of moderate value (category B) should be retained and incorporated into the masterplan where possible including the vegetation bordering Walls Field (G33) and the vegetation between Clothall Common and BA3 (G22 – G26).

Identified Opportunities

- Create a strategic nature recovery network that reconnects nature and provides greater permeability for species within, to and from the Site
- Reverse habitat fragmentation through creating ecological stepping stones & linear corridors to aid movement of wildlife
- Safeguard, buffer and improve LNR connectivity within the wider GI network
- Enhance and connect existing onsite fragmented habitats (hedgerow, scrub areas and grasslands) as part of an interconnected habitat mosaic within the GI network.
- Retain and enhance existing and proposed hedgerow/trees as foraging and commuter corridors for a variety of species.
- Opportunity for more biodiversity focused areas where public access is minimised to maximise biodiversity value.
- Opportunity to increase hedgerow, tree and scrub cover across the Site as part of the GI network and internally within the development areas.













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5.2 HERITAGE & ARCHAEOLOGY

Heritage

Chapter 8: Built Heritage of the **Environmental Statement (ES)** relates to cultural heritage and built heritage designations. The key built heritage context is summarised below.

There are a number of heritage designations within or in close proximity of the Site boundaries (as illustrated on **Figure 18** opposite), these include:

- Baldock Conservation Area: The Site is located circa 100m beyond the boundaries of the Conservation Area. The Site forms part of the open landscape setting with the undesignated parts of the settlement providing separation between the Site and the Conservation Area resulting in no appreciation of the landscape setting from within the designated parts of the town).
- Two Scheduled Monuments: The Site lies adjacent to Ivel Springs and the Site itself comprises the Romano-British small town and Late Iron Age Settlement off Clothall Road (referred to as Walls Field). Both of these are Scheduled Monuments, the settings of which are currently characterised by the surrounding settlement of Baldock, particularly at Clothall Road, and by their very nature, both are 'settlements' sites. These Scheduled Monuments are experienced as areas of open greenspace on the edges of Baldock, but are not visually tangible historic features (i.e. there is no visible built form or clear earthworks which give them prominence). The significance of these monuments stems principally from their archaeology.
- Individual listed buildings: Outside of the Conservation Area, there are four Grade II listed dwellings along North Road (namely, The Nook, Long Bailey, Blackhouse Farmhouse and The Compasses).
- Grade I Church of St Mary, Baldock:

 The church is situated in the centre of the Baldock Conservation Area, however the Built Heritage chapter of the ES describes it as a prominent feature in the area. The Built Heritage and Landscape and Visual chapters of the ES identified there to be visibility of the church spire from surrounding landscape to Baldock, including from the Site itself (north of Bygrave Road). The Built Heritage chapter of the ES highlights there is the potential for some improvement of views towards it and greater accessibility of these views (which are

currently from private/inaccessible agricultural

land).



Grade I Church of St Mary, Baldock in the centre of Baldock conservation area and town centre.



Walls Field (scheduled monument) - an arable field, crossed by public footpath Baldock 037 and off Clothall Road.

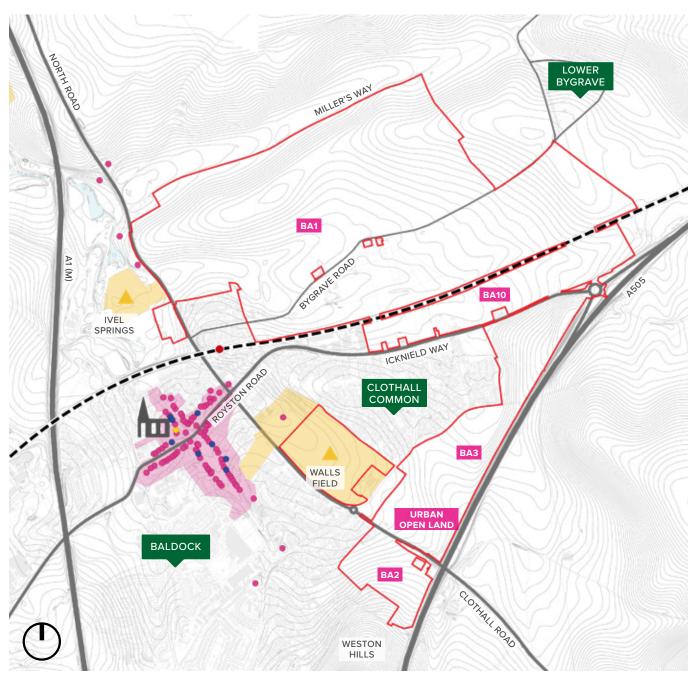
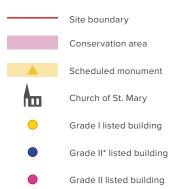


Figure 18. Heritage Baseline



There is the opportunity as part of the OPA for Baldock for the integration and interpretation of archaeology and heritage into green space. Refer to section 6.2 for further information on Green Infrastructure opportunities.



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5.2 HERITAGE & ARCHAEOLOGY

Archaeology

Chapter 9: Archaeology of the **Environmental Statement (ES)** relates to Archaeology. The section below summarises the findings (illustrated opposite on **Figure 19**), to ensure the historic landscape is fully understood and integrated into the proposals.

The Site's heritage plays an important role in defining various aspects of the Site, with several key cultural features present within the Site and in the immediate surrounding context. The cultural features provide a tangible link with the past and could contribute to the future sense of identity, character and distinctiveness of the development.

The Archaeology baseline concluded the large number of HER records present within the Site, reflect the importance of this local settlement landscape from the late Prehistoric and through the Roman and medieval periods.

Bygrave Common: The Bygrave Tithe Map of 1847, shows the vast majority of the Site is characterised by strip fields, being vestigial remains of a medieval agricultural system.

Strip-field farming, also known as an open field system, was introduced during the Medieval period as a way for villagers to share land. The field would have been owned by a land owner and the villagers would rent strips in which to grow their own crops. The 1884 OS map shows the Site occupying open, unenclosed farmland with the northern part referred to as Bygrave Common.

Current Ordnance Survey mapping has a reference to 'Bygrave Common' within the BA1 area of the Site. Historic mapping illustrates this area historically as private land, rented by the locals as narrow strips for farming. This area was not publicly accessible 'common land' in the conventional sense (https://www.gov.uk/commonland-village-greens), as the community had no right of access or to roam freely. However, there is an opportunity to reference and reinterpret Bygrave Common as part of the development, forming a new public parkland to the northern part of area BA1, opening up this location to benefit the new and existing community of Baldock and surrounding areas.

Specific archaeological/heritage features identified in **Chapter 9: Archaeology** of the ES which have the potential to inform the

development of the OPA, specifically integrated and reinterpreted within the Green Infrastructure network, include the following:

- Prehistoric routeway crosses the Site along its assumed course from the Ivel Springs through to Bird Hill.
- 2) Bronze Age barrow cemeteries clustered close to Half Way Farm, in the fields between the railway line and the Bygrave/Ashwell Road:
- 3 Historic Winterbourne Channel Winter River Route an ancient stream-bed now infilled with soil;
- Roman high status/ritual site In its vicinity have been found Neolithic chalk pits, and what is believed to be a high status zone (possibly a religious area) of Roman date;
- Scheduled Romano-British small town and Late Iron Age settlement on Walls Field;
- Scheduled settlement south of Blackhorse Farm - seen as a multi-period cropmark site of probable Iron Age, Roman and Saxon date;
- **Roman roadside settlement** the presence of Late Iron Age and Roman roadside settlement evidence along North Road.
- **8** Early medieval hamlet a 10th to 12th century AD hamlet recorded within the area of Bygrave Common, in the vicinity of a spring;
- Medieval Millers Way historic routeway;
- Medieval routeway linking Bygrave to Clothall historic routeway.
- Bronze Age barrows and Iron Age enclosures northern part of BA1
- Roman Field systems and Bronze Age barrows eastern part of BA1
- Iron Age Pit alignment and Roman settlement BA3
- Iron Age Pit alignment and Roman settlement BA2

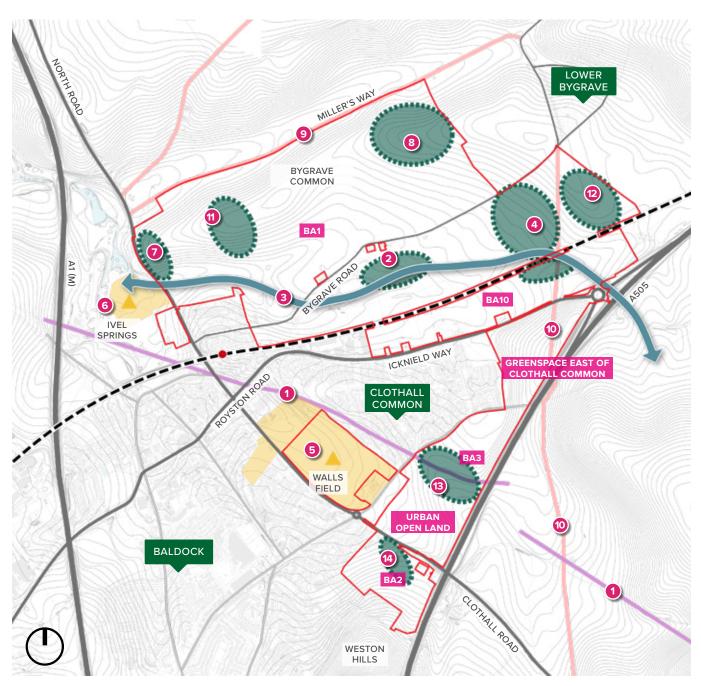
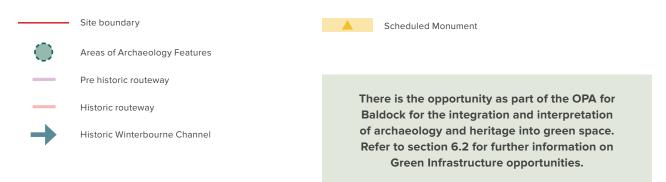


Figure 19. Archaeology Baseline





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5.3 LANDSCAPE CHARACTER

The Landscape and Visual Impact Assessment (LVIA, produced to form **Chapter 7: Landscape & Visual of** the **Environmental Statement**) assesses the baseline landscape character. The section below summarises the findings of landscape character (illustrated opposite on **Figure 20**).

At a district level¹ the majority of the Site lies within LCA 224: North Baldock Chalk Uplands which is described as "rolling chalk landform, eroded by a complex network of shallow dry valleys. Small rounded chalk knolls common. Large scale arable fields often with remnant field boundaries, mainly well trimmed hawthorn hedges. The core has a pattern of regular rectilinear fields often with curving boundaries. Boundaries often based on older more organic pattern of lanes and primary boundaries".

The key characteristics and distinctive features of this character area, relevant to the Site, are summarised as follows:

- Rolling chalk landform;
- Small rounded chalk knolls;
- Large rectilinear fields in arable;
- Nucleated settlements;
- A1(M), A505, railway;
- Abuts suburban edge of Baldock;
- Pylons crossing the western edge; and
- Ivel valley.

The following principles for **North Baldock Chalk Uplands** (for landscape strategy and guidelines for managing change), which are seen to have the potential to facilitate the OPA, specifically with relation to the Green Infrastructure network, include the following:

Landscape Management Guidelines:

- Sensitive design and creation of new woodland and tree planting hedgerows and woodland are limited within North Baldock Chalk Uplands. The introduction of extensive planting or large numbers of new hedgerows would be uncharacteristic
- Promote the creation of habitat buffer zones

 between areas of arable farmland and areas
 of semi-natural habitat, including the creation
 of links between habitat areas
- **Promote hedgerow restoration** to create visual links between existing woodland areas
- Promote the diversity of hedgerow species and planting of standard hedgerow trees
- Maintain and extend the rights of way network

Built Development Guidelines:

- Maintain the open character of North Baldock Chalk Uplands
- Retain the rural character of the area ensuring any new development is appropriately sited and of a scale, form and style appropriate to the character area
- Planting mitigation should be appropriate to local character and not necessarily fully enclose development
- Ensure that new development does not necessitate the removal of existing woodland blocks or hedgerow
- Protect and preserve the pattern of narrow open lanes



Existing hedgerow field boundary along the northern edge of BA1, along Millers Way a historic routeway and bridleway - Bygrave 001.



The ridgeline within BA1 of the Site provides elevated views back towards Baldock from bridleway Bygrave 002.

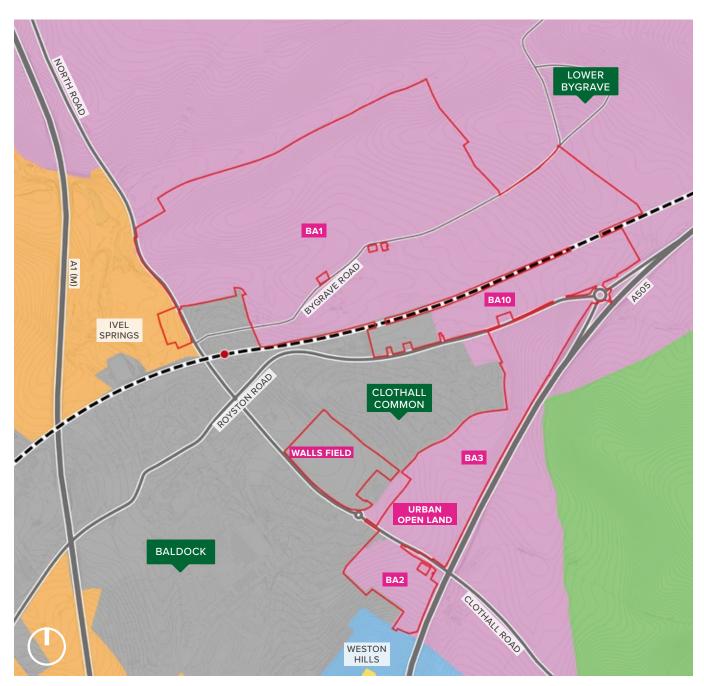


Figure 20. Landscape Character Baseline

Site boundary

The North Hertfordshire and Stevenage Landscape Character Assessment 2011



There is the opportunity as part of the OPA for Baldock for the integration and interpretation of landscape character into green space. Refer to section 6.2 for further information on Green Infrastructure opportunities.



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5.4 VISUAL CONTEXT

The LVIA identifies visual receptors that currently share intervisibility with the Site and are of the greatest visual sensitivity to the type of development proposed

The following summarises the key visual context reported in the LVIA.

Baldock is a compact and historic market town, set within the rolling chalk landscape of north Hertfordshire. Visually, the settlement of Baldock lies in a 'bowl', with relatively distant views across the town from elevated positions on the surrounding chalk ridgelines and scarp slopes

The Site is visible from limited locations including the northern, outer residential edge of Baldock, from parts of Lower Bygrave to the north east and from residential areas bordering the Site. More extensive views of the Site and beyond to St Mary's Church are possible from the Public Right of Way network.

Existing, large, pale buildings along Royston Road (at Ashville Trading Estate) – along with the Letchworth retail and business park – serve as detracting features in views from the surrounding countryside, when looking back towards Baldock. Electricity pylon towers dominate the skyline in views from the north and west. Linear transport routes, including the Cambridge railway line and Baldock A505 bypass, sever views – with their alignments partly picked out by flanking existing vegetation, along with associated infrastructure (bridges over the A505, the Weston Hills tunnel and signage at the Royston Road junction).



Views of St Mary's Church spire in Baldock are strongest from the elevated locations on the Site's ridgeline to the north **(Key vantage point A)**. The church spire 'rises' into the horizon on approach from the north as footpath users descend towards Bygrave Road.

Visual Considerations:

- Avoid development on the northern exposed ridge (BA1), and minimise adverse impacts on longer distance views, where the landscape is rural, elevated, remote and is visually sensitive.
- Retain and frame views of St Mary's Church spire from key locations within the Site, including bridleway Bygrave 001, on the ridgeline, land east of Clothall Common and from the area of Urban Open Land.
- Retain the Informal recreation land east of Clothall Common, which provides elevated long distance views east to Wallington scarp slopes.
- Retain an open landscape transition from Walls Field to the Urban Open Land and beyond to the rural landscape.
- Visually sensitive edges transition to the surrounding rural landscape and Green Belt – with strong views of surrounding rural context.
- Incorporate landscape buffering along Site's boundary with A505 and railway line, to minimise impacts of these visual detractors.
- Use of woodland/hedgerow planting to mitigate views and assimilate the development.



Views of St Mary's Church spire from the Urban Open Land to the south east of Baldock **(Key vantage point F)**.

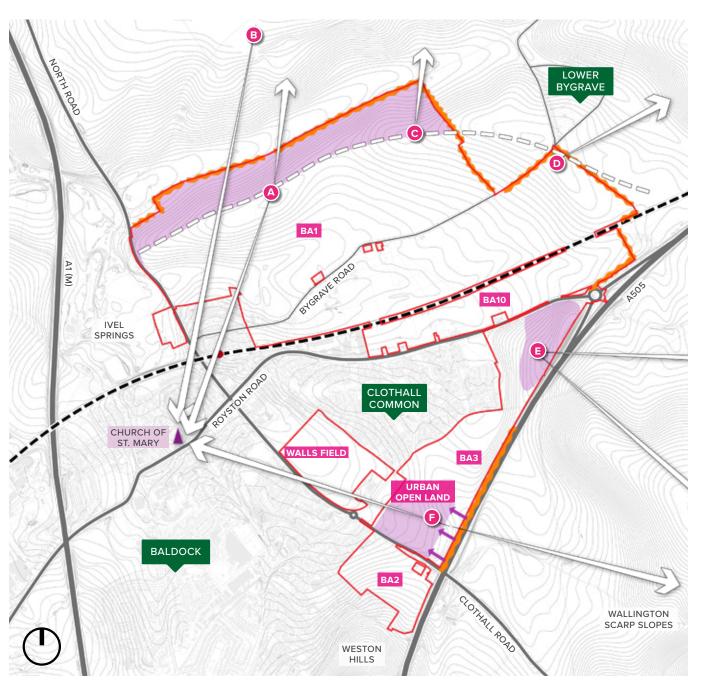


Figure 21. Visual Context Baseline





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5.5 HYDROLOGY & TOPOGRAPHY

Hydrology, Drainage & Flood Risk

The Flood Risk Assessment and Drainage Strategy within the Environmental Statement (ES) technical appendices relates to Hydrology, Flood Risk and Drainage. The following summarises the baseline context and key findings reported in **Chapter 10 Hydrology and Flooding** of the **ES.**

The Site and immediate context are drained by a limited network of local streams and ditches. The only watercourses are beyond the Site, including Cat Ditch to the east and Ivel Springs and ponds to the west. Cat Ditch is a perennial chalk stream but has had no flow for at least three years due to over abstraction (at Slip End and Cat Ditch).

The Site is located entirely within Flood Zone 1 and is therefore suitable for development. There are no surface water sewers on the Site. The Site is identified at very low risk of flooding from groundwater or artificial sources.

The majority of the Site is at also at very low risk of surface water flooding, with the exception of two areas on the southern part of the Site and an area adjacent to North Road and Bygrave Road in the northern part of the Site. The risk of flooding and master planning implications for these areas are shown in **Figure 22** opposite and summarised in the following points:

- to the south of railway line the area to the south of Merchants Walk is most susceptible to flooding in the lowest area in this part of the Site. Contouring could be adjusted in this area to contain flooding and integrate it into a future SuDS feature to provide attenuation volume, water treatment and amenity space
- 2 East of Clothall Road an area of less significant flooding would not prohibit development but would be better suited to integration into a landscaped area, which would also improve the drainage of Walls Field Scheduled Monument to the west
- 3 Land between the railway line and Bygrave Road some shallow and low probability flooding anticipated in this area, potentially caused by an existing field boundary and elevated levels restricting flows
- Land to the north of Bygrave Road area of flooding identified north of Bygrave Road caused by raised bund to Laymoor Farm, which then overtops the bund and combines with an overland flow path to create an area of flooding at the lowest point east of North Road. This area is best integrated into a new open SuDS feature(s)

Topography

A desk study of the onsite Topography has been undertaken by BMD, to inform Baldock OPA for the Site.

- The Site and the immediate surrounding landscape is characterised by the rolling chalk landscape of North Hertfordshire.
- The northern part of the Site is large scale, open, rolling chalk landform featuring rounded ridges and valleys running in an east-west direction (circa +60 to +75m AOD).
- Between Bygrave Road/Ashwell Road and Royston Road, the landform becomes flat and even (at circa +60m AOD), rising only gently eastwards.
- The localised elevated landform south of Royston Road and east of Clothall Common (at circa +85m AOD) was artificially created after the construction of the A505 Baldock bypass.

- Closer to the settlement edge of Baldock the landform becomes flatter, particularly land south of Clothall Common, Walls Field and the Urban Open Land around Clothall Road.
- The northern part of the Site is defined by a ridgeline of natural chalk running east-west, dropping in the west towards lvel valley/River lvel.
- Future development proposals for the Site will need to respond to localised variations in topography, in particular the ridgeline in the northern part of the Site.

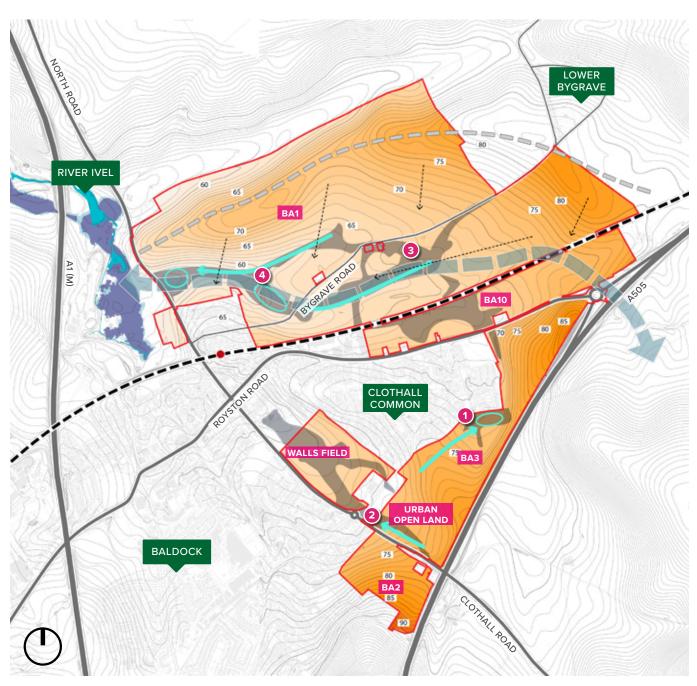


Figure 22. Hydrology & Typography Baseline





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5.6 GEOLOGY & SOILS

The Site and the immediate study area are located within National Character Area (NCA) 87, East Anglian Chalk, where the underlying and solid geology is dominated by Upper Cretaceous Chalk, a narrow continuation of the chalk ridge that runs south-west to north-east across southern England, continuing in the Chilterns and along the eastern edge of the Wash.

The chalk bedrock has given the NCA its nutrient-poor and shallow soils. The North Hertfordshire and Stevenage Landscape Character Assessment, describes the geology and soil of the North Baldock Chalk Uplands, which the Site and immediate study area are located within, as chalk overlain by free draining calcareous to neutral loamy brown soils. There are thin drift deposits of Boulder Clay and glacial gravel on the upper slopes.

Overlying soils are predominantly freely draining lime-rich soils, supporting a landcover of arable with grassland at higher altitudes (http://www.landis.org.uk/soilscapes). Also present are small areas of shallow lime-rich soils over chalk, supporting a similar landcover.

5.7 AIR & NOISE

The following summarises the baseline context and key findings reported in **Chapter 5 Noise and Vibration** and **Chapter 6 Air Quality** of the **ES.**

<u>Air</u>

Existing air quality conditions were considered through analysis of DEFRA mapping of pollutant concentrations in the UK and local monitoring and modelling studies. This identified two Air Quality Management Areas in North Hertfordshire, both of which are at too great a distance (c.8.5KM) from the Site to be affected by development of the Site.

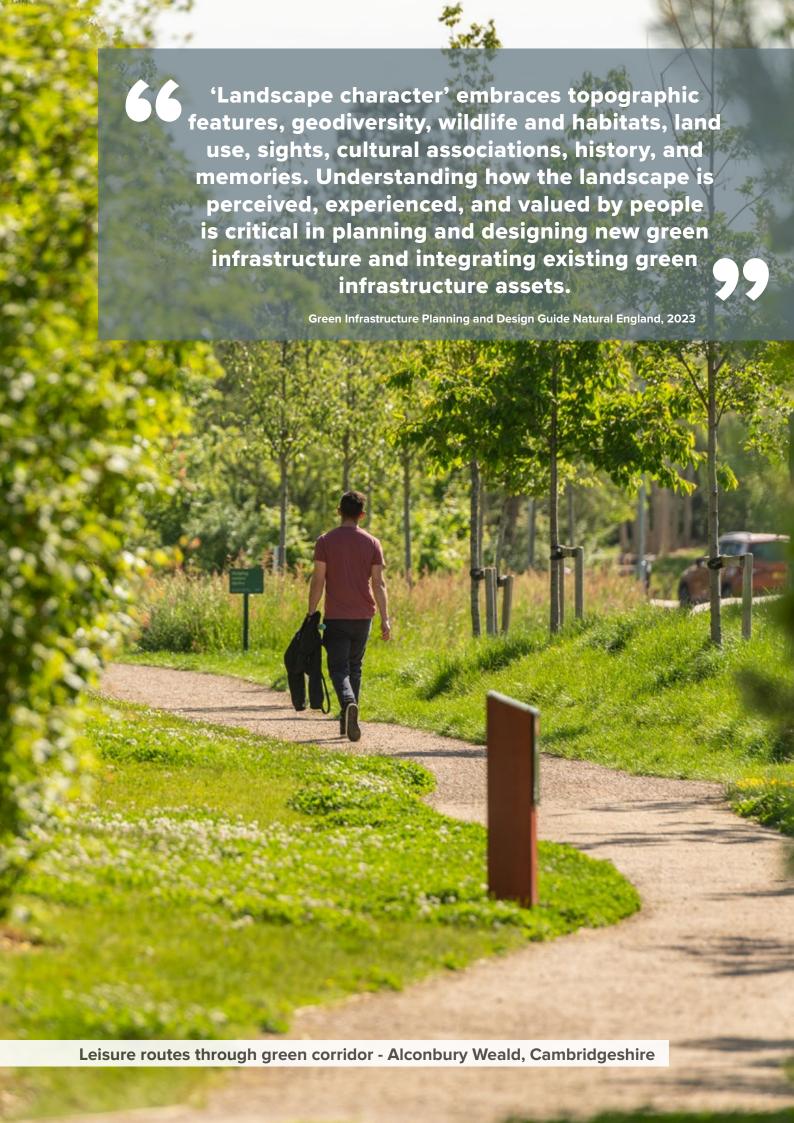
Local monitoring confirms that average measured concentrations of NO2 and PM10 and PM2.5 in the vicinity of the Site were all well below the limit value/objectives. It is anticipated that these levels will reduce over time, due to the progressive introduction of improved vehicle technologies and increasingly stringent limits on emissions. Consequently, the air quality conditions indicate that the Site is suitable for sensitive land users and there are no obvious constraints to the Application Site.

Noise

The main existing constraint on the development with respect to noise sensitive uses is noise from road traffic. The principal roads affecting the Site are the A1(M) which runs around 300m to the west and the A505 which is adjacent to the south-east of the Site. The railway line running though the Site also imposes a noise constraint.

Considerations for the OPA & Green Infrastructure network:

- Potential impact of rail/road noise on residential areas is factor in distribution of land uses and green space/landscape buffers;
- Acoustic design process required to consider site layout, landscaping, building orientation, façade design and location of external amenity areas.





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5.8 GREEN INFRASTRUCTURE CONNECTIVITY

BMD undertook a GI connectivity review of the Site and the PRoW network in the surrounding area, which included a desktop review of the strategic PRoW network (based on the Definitive Map for Hertfordshire). The assessment also involved a field survey, walking the routes and recording the following:

- Evidence of user groups/capacity for different user groups
- Condition/quality of the route
- Issues affecting functionality/connectivity of these routes

As the North Hertfordshire's Green Infrastructure Strategy highlights, there is a strategic GI aspiration to create the **'Baldock Greenway'** that provides a multi-user route around and through the settlement of Baldock, which would connect to and support the Etonbury Green Wheel and Letchworth Greenway.

Public access of the Site is currently restricted to the existing Public Right of Way (PRoW) network and includes:

BA1 North of Baldock — Public bridleway
Bygrave 001, along the Site's northern boundary,
is a historic route referred to as 'Millers Way'.
Public bridleway Bygrave 002 runs north to
south, from Bygrave Road at Laymore Farm,
extending north to restricted byway Bygrave 014
beyond the Site. Both bridleways form part of
the North Baldock Circular. There is also public
footpath Bygrave 015 on the eastern extent of
BA1, which runs north to south from Ashwell
Road, across farmland and over the railway line
to Royston Road

BA3 Land south of Clothall Common – Public bridleway Clothall 003 runs from Royston Road, south through the Site towards the A505, where it forks with one part continuing over the A505 and the other staying within the Site and becoming bridleway Clothall 027, heading west towards Clothall Common.

Urban Open Land and Walls Field – The Urban Open Land features public footpath Clothall 001. Walls Field features public footpath Baldock 037 which forms part of the Baldock South Circular. Public footpath Baldock 036 runs along the north eastern boundary of Walls Field at the interface with Clothall Common settlement edge.

Beyond the Site and surrounding Baldock, there is a wider recreational PRoW network used by the community for leisure. Baldock benefits from a number of circular strategic recreational paths around the town, however, the quality of access, restrictions to certain user groups and legibility of (and to) these routes from the town (and gaps within the routes themselves) could be enhanced as part of off-site interventions.

These existing strategic recreational routes are described in detail in **Section 3.2** and illustrated on **Figure 6** and the adjacent **Figure 23**.

- Baldock North Circular: Baldock to Ashwell

 a 12.2 miles circular walk which starts in the town and extends through the BA1 Site to Ashwell
- Baldock South Circular: Baldock to Wallington – a 8.2 circular walk from Baldock to Wallington across the elevated Wallington scarp slopes.
- The Kingfisher Way a 20 mile walk from Baldock to Stotfold, following the course of the River Ivel
- Icknield Way National Trail The Icknield
 Way Trail, long distance footpath, borders the
 Site's southern-most boundary (BA2), running
 in an east to west direction, passing through
 Baldock and providing onward connection
 to Letchworth Garden City in the west and
 joining with the Hertfordshire Way in the east.
- National Cycle Route (NCR) National Cycle Route 12 (NCR 12) runs through the western part of Baldock, passing between Letchworth Garden City and Baldock, along the A1(M) road corridor.
- Letchworth Greenway a 13.6 mile circular route around the Garden City suitable for the enjoyment of walkers, runners and cyclists. The Greenway passes through the western and south western edges of Baldock, at its closest points crossing Norton Road to the west of Ivel Springs and along Weston Road, passing Knights Templar Sports Centre.

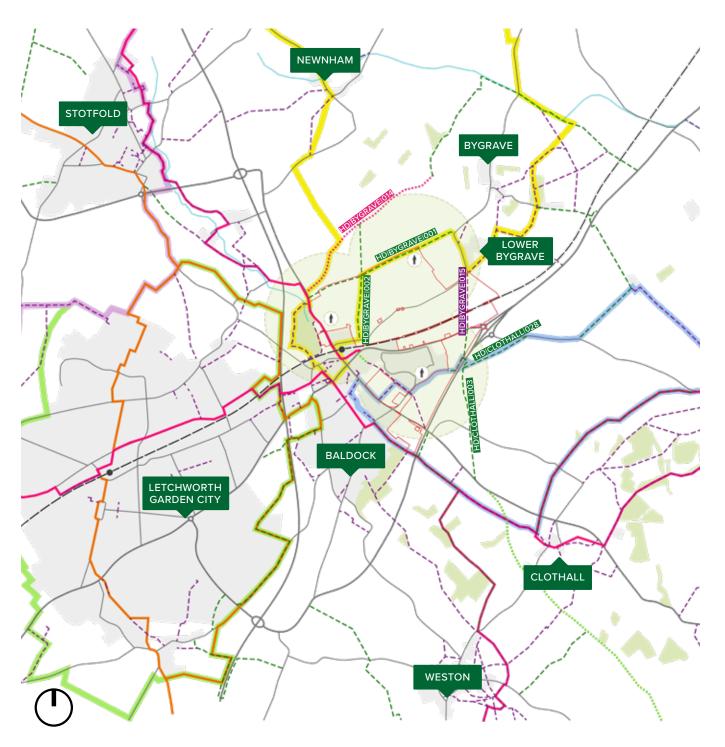


Figure 23. Green Infrastructure Connectivity

