



SF19497 | A16 Fulney Lane North, Spalding

HABITAT MANAGEMENT AND MONITORING PLAN (HMMP)

March 2026 | For Planning
Revision C

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Quality Assurance

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Revision A	Jan 2026	Change of Landowners company name and registration from Roadside Real Estate plc to Tarncourt Development Ltd
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1.0 INTRODUCTION

- 1.1.1 Smeeden Foreman Limited has been commissioned by Tarncourt Development Ltd to produce a Biodiversity Net Gain (BNG) assessment for their site at Fulney Lane North, Spalding (central grid reference TF 26519 23774), hereafter referred to as the 'site'.
- 1.1.2 The HMMP report also provides recommendations pertaining to on-site and off-site mitigation based on habitat enhancement / creation of additional land under the client's ownership.
- 1.1.3 The on-site proposals are for the development of retail and commercial units associated with a drive thru, with associated infrastructure and landscaping. Due to significant unit losses projected by the proposed works, off-site compensation is required to address the BNG shortfall through individual trees and other neutral grassland. Details pertaining to the management and monitoring of off-site retained, enhanced and created habitat are also included within this report.
- 1.1.4 The following report is to be read in conjunction with the corresponding Biodiversity Net Gain Assessment (*SF19497_Proposed Drive Thru Spalding Biodiversity Net Gain Plan September 2024 Rev C*) produced by Smeeden Foreman.
- 1.1.5 The purpose of the current report is to specifically detail the ecological enhancement and management operations of the development. These are to be maintained for a minimum period of 30 years from the date of completion, in accordance with the Biodiversity Net Gain measures outlined within the Environment Act 2021.
- 1.1.6 Such measures to be undertaken to ensure the above is delivered successfully includes the following:
- Details of habitats to be maintained, enhanced or created;
 - A schedule of actions required to create or enhance and maintain habitats at the required quality for a period of 30 years;
 - A schedule of ecological monitoring for the 30-year period identifying when key indicators of habitat maturity should be achieved and;
 - A schedule of actions to be undertaken in case signs of failing are identified.
- 1.1.7 This report is informed by ecological information obtained for on-site and off-site areas during 2022 and 2024 respectively, as detailed within the corresponding reports:
- Preliminary Ecological Appraisal (*SF19497_Proposed drive thrus_January 2025_ REV B*);
 - Biodiversity Net Gain Assessment (*SF19497_Proposed Drive Thru Spalding Biodiversity Net Gain Plan September 2024 Rev C*), and,
 - Landscape proposals scheme (*19497_SFW_XX_XX_DR_L_1001_Po4*) produced by Smeeden Foreman.
- 1.1.8 Refer to *Appendices A (on-site)* and *B (off-site)* for landscape proposal details which illustrate the extents of retained/enhanced habitats and proposed mitigation, and habitat creation features within the new development.
- 1.1.9 It is the responsibility of the developer to ensure that the HMMP is implemented, with any required changes in management/remediation actions identified to ensure that the biodiversity net gain (BNG) targets specified within the associated BNG report are met.

The contractors and consultants which have currently been appointed are listed in Table 01.

Table 01: Contractors/consultants contact details

Works	Contractors/consultants	Contacts
DESIGN STAGE		
<i>Ecological advisor</i>	Smeeden Foreman Ltd. Somerset House, Low Moor Lane, Scotton, Knaresborough, North Yorks HG5 9JB	01423 863 369 office@smeedenforeman.co.uk
<i>Landscape design</i>	Smeeden Foreman Ltd. Somerset House, Low Moor Lane, Scotton, Knaresborough, North Yorks HG5 9JB	01423 863 369 office@smeedenforeman.co.uk
CONSTRUCTION STAGE		
<i>Principal contractors</i>	To be appointed by the developer	
<i>Ecological Clerk of Works (ECoW)</i>	To be appointed by the developer.	
<i>Arboricultural Clerk of Works</i>	To be appointed by the developer.	
<i>Tree works contractor</i>	To be appointed by the developer.	
<i>Landscape supervision</i>	To be appointed by the developer.	
<i>Landscape contractor</i>	To be appointed by the developer.	
POST-DEVELOPMENT		
<i>Arboricultural inspections/advice</i>	Smeeden Foreman Ltd. Somerset House, Low Moor Lane, Scotton, Knaresborough, North Yorks HG5 9JB	01423 863 369 office@smeedenforeman.co.uk
<i>Ecological monitoring/advice</i>		

2.0 SITE DESCRIPTION

ON-SITE

- 2.1.1 The site is located off Fulney Lane North, approximately 2km to the northeast of Spalding. The site comprises two distinct areas of modified grassland, herein referred to as Areas 1 and 2. Area 1 is located at the east of the site and comprises unmanaged modified grassland, a hardstanding access path spanning the length of the site and a rubble/spoil pile at the western boundary of Area 1, bramble scrub, two mature willow trees (*Salix sp.*) and self-set hornbeam (*Carpinus betulus*). Area 2 is located to the west of the site and is composed of a grassland verge maintained to a short sward. The site also incorporates the asphalt access road at its northern extent and the entrance to the adjacent industrial building to the south which dissects Area 1 and Area 2. The area of the site boundary measures approximately 0.73ha in total. Refer to *Figure 01* (appended).
- 2.1.2 The site is bounded by agricultural land to its eastern boundary, woodland and urban commercial structures to the north, urban industrial structures to the south and urban residential structures to the western boundary with associated infrastructure. The

dominant habitat within the wider area to the north, east and south is agricultural land within which are a network of drainage ditches. To the west is the Coronation Channel, located approximately 115m from the site at its closest point, and the town of Spalding, beyond.



Figure 01: Aerial view of site location

Table 02: On-Site Baseline Environmental Data

Feature	Detail	Potential Impacts of the Scheme
Designated Sites within 2km	Vernatts Local Nature Reserve (LNR) which is located approximately 1.3km west of the site	No adverse impact anticipated
Site of Special Scientific Interest (SSSI)	The site lies within the Impact Risk Zone (IRZ) of Surfleet Lows Site of Special Scientific Interest (SSSI), located approximately 4.9km to the north of the site.	
Local Wildlife Site (LWS)		
Local Geological Site (LGS)	Several Local Wildlife Sites (LWS) and one Lincolnshire Wildlife Trust (LWT) reserve are located within approximately 2 km of the site, supporting a range of habitats of ecological importance. These include native plantation and improved grassland at Arnold's Meadow (1.86 km south), reedbeds and rank grassland along Blue Gowt Drain (2 km northwest), and the Coronation Channel (0.36 km west). Other notable areas comprise brownfield mosaic and scrub north of Spalding Station, calcareous grassland at Pinchbeck Marsh, and riverine habitats along the River Welland. Spalding Cemetery and Vernatt's Nature Reserve	

	provide woodland, neutral grassland, and pond habitats, while Vernatt's Drain supports a mix of calcareous and neutral grassland, reedbeds, and drains. These non-statutory designations highlight sites of county or regional wildlife value.	
Landscape Classification/ Typology	The site falls within the Lincolnshire (including North and Northeast Lincolnshire), as Lowland (Low-lying areas, mainly below 300 ft, including descriptive landform classes 'levels' and 'lowland vales & valleys' (see below) - associated with Mesozoic (Cretaceous, Jurassic, Triassic & Permian) or Tertiary rocks of sedimentary origin, and glacial or fluvial (marine, riverine, lacustrine, or windblown) drift) Landscape typology is classified as 'unproductive (46) The Fens'.	Likely negligible impact. The proposals site falls within an existing developed area.
Agricultural Land Status	Not applicable to urban settlement.	Not applicable.
Geology – Bedrock/ Soilscape/ Groundwater/Aquifer Designation	Rough Rock – Loamy clay with naturally high groundwater. Aquifer classification: -Unproductive. Soilscape information from MAGIC Maps (government website) for the site is classified as slowly permeable, seasonally wet acid, loamy clayey soil. Impeded drainage. Low fertility.	Likely low impact –
Hydrology and Drainage	Naturally impeded drainage with associated existing watercourse and drainage channels.	Likely low impact – providing measures are adopted to reduce the risk of surface water run-off.
Flood Risk Zones	Upon consultation with Defra's Flood Map ¹ for Planning, the site falls within Flood Risk Zone 3. The yearly likelihood of surface water flooding is Very Low 1 in 100 (1%) or greater chance of flooding each year from Rivers; or with a 1 in 200 (0.5%) or greater chance of flooding each year from the Sea	Likely negligible impact.
Land Tenure and Public Access	There is no public access to the site.	Likely negligible impact.

3.0 OFF-SITE COMPENSATION REQUIREMENT

- 3.1.1 The purchase of habitat units to enable provision of off-site compensation has been initiated by the client. Environment Bank are the chosen supplier, providing habitat offset at their King's Lynn Habitat Bank which is registered on the Biodiversity Gains

¹ <https://flood-map-for-planning.service.gov.uk/how-to-use-flood-map-for-planning-data>

Site Register ref. BGS-250924001 (<https://environment.data.gov.uk/biodiversity-net-gain/search/BGS-250924001>). This area is located within the same local habitat bank reference KL06 at King's Lynn which is in the same National Character Area of the Development. Refer to section 7.2 for further information.

4.0 LANDSCAPE AIMS AND OBJECTIVES

- 4.1.1 There are several elements to the landscape and ecological mitigation/enhancement measures included within the development, as outlined in Table 03 below and within the landscape proposals (Appendices A and B).

Table 03: Landscape and ecological mitigation elements

Element reference	On-Site Retention /Mitigation/Creation Feature
1	Retention and enhancement of 0.055ha of modified grassland
2	Proposed native scrub planting at boundary. (Acer campestre, Crataegus monogyna, Ilex aquifolium, Ligustrum vulgare, Prunus spinosa and Viburnum lantana.)
3	Proposed native shrub and ornamental grass/fern planting
4	Proposed flowering lawn mix replacing existing ruderal/ephemeral at the northeast boundary of Area 1
5	Proposed planting of introduced shrub
6	Proposed planting of individual trees
Element reference	Off-Site Habitat Creation (Environment Bank Biodiversity Units)
	Lowland Meadow
	Other neutral grassland

- 4.1.2 On-site landscape proposals will include the addition of wildflower meadow, species-rich flowering lawn, ornamental bed planting, native species tree planting, Refer to *Figure 02* (appended) for Post-development Habitat Plan.
- 4.1.3 Off-site landscape proposals will include the creation of lowland meadow, and other neutral grassland via the purchase of Biodiversity Units, supplied by the Environment Bank.
- 4.1.4 The management of these elements is intended to fulfil the following aims and objectives:
- Integrate the development with its surroundings;
 - Provide mitigation for lost habitat;
 - Provide a pleasant environment within the development;
 - Contribute to the biodiversity/ecological potential of the area, with the aim of achieving ecological gains for the site.

- 4.1.5 These aims and objectives will be achieved through the strategies and implementation of management operations as described in section 7.0 of this report.

5.0 HABITAT PROTECTION PRE AND DURING CONSTRUCTION

5.1 TREE PROTECTION

- 5.1.1 Temporary protective fencing will be installed around existing trees proposed for retention and remain in position throughout the construction period. The installation of protective fencing will ensure there is no accidental damage to the trees/shrubs or their root zones during the construction phase from machinery and will prevent the storage of construction material around the base of trees being retained.
- 5.1.2 The temporary protective fencing is to be installed to BS5837:2012: Trees in Relation to Design, Demolition and Construction and extend outside the canopy of the retained trees and remain in position until construction is complete. All-weather notices, A4 size, shall be attached to the tree protection fencing every 10m at 1.5m high with the words: 'Tree Protection Fence—strictly no accesses. All-weather notices will state the purpose of the fencing and that it should not be moved, or traversed, other than by authorised personnel throughout the construction period. Tree protection fencing will ensure that:
- Location of cabins and welfare facilities is considered in terms of potential impacts on the root protection areas of trees. The appointed arborist should be consulted if further information is needed.
 - Use of heavy plant does not cause ground compaction, and soil disturbance over RPAs is avoided by vehicles during the construction phase. Mechanical excavators should have tracks rather than wheels to help spread their load. They should be carefully marshalled when working close to tree canopies.
- 5.1.3 If site hoarding or fencing shall be installed over or within the RPA of any tree, the following restrictions shall apply:
- Ground levels shall be maintained as existing. Post holes shall not exceed 300mm x 300mm.
 - No post hole shall be excavated within 1.5m of any tree stem. Post holes shall be excavated using hand tools or by a post-hole auger attached to plant machinery sited outside the RPAs.
 - Roots in excess of 25mm shall be retained wherever possible. Roots in excess of 10mm shall be pruned with sharp secateurs. Pruning shall be minimal and only undertaken where absolutely necessary to facilitate the site hoarding or fencing. This will encourage healing and reduce the likelihood of infection. It shall be undertaken by a reputable tree surgeon working to BS5837:2012
- 5.1.4 If scaffolding is required in areas containing ground protection measures, the protective boards will need to remain in-situ and be strengthened and stabilised to bear the weight of scaffold poles. Prior to the installation of any scaffolding within 0.5m of any tree branches, the appointed arborist shall be consulted to specify any pruning works that may be required.
- 5.1.5 In order to protect tree canopies the following restrictions shall apply throughout the site:

- No machinery shall pass beneath the crowns of trees without being carefully marshalled in order to ensure that no branches are damaged.
- If materials require installation or delivery beneath tree canopies, this shall be done without the use of overhead cranes.
- If materials are to be installed or delivered close to tree canopies (but not beneath them) and a crane is required, they shall be carefully marshalled in order to ensure that branches are not accidentally damaged.

5.1.6 Removal of fencing will be done after all major construction work is complete.

5.2 WATERCOURSE PROTECTION

- 5.2.1 Prior to commencement of works on site, temporary protective fencing will be installed in association with watercourses adjacent to site, at a minimum distance of 5m from the top of the bank. The installation of protective fencing would prevent access to the bankside of the watercourse, reducing the chance of any pollution/spills from vehicles/machinery, and will discourage the storage of construction material in the vicinity of the ditch.
- 5.2.2 It is also recommended that pollution prevention measures are adopted to prevent any potential pollution incidents. Best practice guidelines should be followed and examples of measures to be adopted on site should include the appropriate storage and handling of potentially hazardous materials (e.g., fuel) and the creation of a buffer zone in association with watercourses, within which hazardous materials cannot be stored and refuelling cannot take place.
- 5.2.3 The Environment Agency Pollution Prevention Guidelines (now withdrawn) remain a valid source of guidance. The Construction Industry Research and Information Association (CIRIA) guidance should also be referred to including information notes C741, C532 and SP156 in relation to best practice during construction and avoidance of pollution.

5.3 STORAGE AND USE OF HAZARDOUS MATERIALS ON SITE

- 5.3.1 Pollution during construction could result in damage to the nearby habitats. Standard pollution prevention measures from GOV.UK should be adhered to; fuel kits are to be kept on site and fuelling of all vehicles done off-site.
- 5.3.2 All hazardous materials (including cement and petrochemical, petrol and diesel products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health.
- 5.3.3 Petrol and diesel shall be stored in suitable containers as specified by current COSHH Regulations away from Root Protection Areas.
- 5.3.4 Any mixing of cement-produced and cement-based materials shall take place outside all RPAs. Cement is to be mixed on sturdy plastic sheeting e.g. 1200-gauge DPM considerable distances from trees and water run-off cannot enter RPAs.
- 5.3.5 Dust control measures will also be implemented throughout the construction phase for all relevant activities. These may include:
- Materials to be kept away from the site entrance and site boundaries;

- Materials subject to wind erosion will be dampened down / seeded to ensure satisfactory dust control and covered with tarpaulins as appropriate;
- Airborne dust will be kept to a minimum by the regular use of water spray systems and bowsers wetting down haul roads and pre-excavated areas;
- All loads entering and leaving site will be securely covered;
- Delivery of materials to site will be programmed to minimise the time stockpiles are kept on site;
- The wheels of all vehicles will be checked on leaving the site, and if necessary cleaned by jet wash within designated washing areas;
- Notices will be erected to stipulate that the above measures are adhered to.

5.4 SYMPATHETIC LIGHTING

- 5.4.1 The Preliminary Ecological Appraisal (PEA) (Smeeden Foreman, 2025) indicated that a sympathetic lighting scheme should be produced and implemented during construction works and post-development to minimise disturbance to nighttime foraging activity, and light spill onto adjacent habitats.
- 5.4.2 Any flood lighting used during construction works, if necessary, will be directed away from retained vegetation along site boundaries, where trees/scrub habitats occur. This will aim to ensure that such areas remain attractive to wildlife species, such as foraging and commuting bats, badgers etc. Refer to the relevant guidance produced by the Institute of Lighting Professionals and the Bat Conservation Trust *“Bats and Artificial Lighting at Night”* (2023) which includes the following:
- Remove or minimize artificial lighting close to vegetative commuting corridors;
 - Using warm white, narrow spectrum lights (LEDs) with little or no UV;
 - Directional lighting with near full horizontal cut off.
- 5.4.3 Post-construction, the use of artificial lighting should be limited where possible. Motion sensors on outside lighting will prevent prolonged disturbance. It is recommended that lighting be set on short-timers (ideally 1 minute) and that sensitivity is set to large moving objects only.

6.0 BASELINE INFORMATION

6.1 METHODOLOGY

- 6.1.1 The ecological interest of the site and its surroundings has been investigated by a combination of the following:
- Field survey of the site and immediate surroundings including a habitat survey, Bat Roost Suitability Assessment (BRSA), further protected species surveys to inform BNG calculations;
 - Consultation with relevant bodies to obtain existing protected species records and statutory / non-statutory designated sites information within 2km of the development site: with Greater Lincolnshire Nature Partnership (GLNP).

- Reference to corresponding ecology information compiled by Smeeden Foreman: *SF19497, Preliminary Ecological Appraisal, January 2025 Revision B*;
- The UK Biodiversity Action Plan (UKBAP);
- The Lincolnshire Biodiversity Action plan (LBAP);
- Magic map, a government website for nature conservation information; and,
- Aerial photographs.

6.2 BASELINE SITE CONDITIONS

6.2.1 Details of the habitats to be included within this HMMP are based on the following;

- On-site habitat baseline data obtained from the preliminary ecological appraisal undertaken during March 2025 by Smeeden Foreman (*SF19497, Preliminary Ecological Appraisal, January 2025 Revision B*).
- Statutory Condition Assessment Criteria obtained from the The Statutory Biodiversity Metric -Technical Annex 1: Condition Assessment Sheets and Methodology (published July 2025 (V1.0.2), Natural England)
- Details of the likelihood of Protected Species to be included within this HMMP are based on survey data obtained from the preliminary ecological appraisal undertaken during March 2024 (*SF19497, Preliminary Ecological Appraisal, January 2025 Revision B*), and subsequent water vole assessments (Smeeden Foreman, July 2025).

7.0 LANDSCAPE PROPOSALS

7.1 ON-SITE HABITAT RETENTION

For all condition assessment results for the site, refer to the SF19497 Preliminary Ecological Appraisal (Revision A, Smeeden Foreman, January 2025).

Habitat Ref. 1: Area Habitat Feature: Modified Grassland g4

- 7.1.1 Unmanaged modified grassland represents the dominant habitat on site. The sward composition was composed of a diverse range of species across at a site level but with a limited distribution across the grassland parcel, rarely achieving >6 species per m². Species composition was characteristic of an enriched grassland with limited management and an urban location but was dominated by vigorous grasses, predominantly common couch (*Elytrigia repens*) and cock's foot (*Dactylis glomerata*).
- 7.1.2 Refer to Table 04 below.

Table 04: On-Site Condition assessment criteria: Modified Grassland

Condition Sheet 5 - Grassland (Low Distinctiveness)		
Condition Assessment Criteria		Passed/Failed Criteria
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	Fail
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Fail
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Pass
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Pass
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Pass
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Pass
Number of Criteria Passed		5
Condition		Poor
Assessment Result		Condition
Passes 6 or 7 criteria including passing essential criterion A		Good (3)
Passes 4 or 5 criteria including passing essential criterion A		Moderate (2)
Passes 3 or fewer criteria; OR passes 4-6 criteria (excluding criterion A)		Poor (1)

On-Site Habitat Creation

Area Habitat Feature: Individual Tree

- 7.1.3 Proposals include the planting of 17 native trees equating 0.07ha and 13 ornamental cultivars. Given the urban environment and proposed hard landscape surrounding all of the 30 newly planted trees are anticipated to achieve 'poor' condition, due to the likelihood of their growing to full potential. Anticipated criteria to be achieved for newly planted trees are outlined within Table 05.

Table 05: On-Site Condition assessment criteria: Individual trees

Condition Sheet 9 - Individual Trees			
Condition Assessment Criteria		17 Native Trees	13 Ornamental Trees
A	The tree is a native species (or at least 70% within the block are native species).	Pass	Pass
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Pass	Pass
C	The tree is mature (or more than 50% within the block are mature) ¹ .	Fail	Fail
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Fail	Fail
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Fail	Fail
F	More than 20% of the tree canopy area is overhanging vegetation beneath.	Pass	Fail
Number of Criteria Passed		3	2
Condition		Good	Poor
Assessment Result		Condition	Condition
Passes 5 or 6 criteria		Good (3)	Good (3)
Passes 3 or 4 criteria		Moderate (2)	Moderate (2)
Passes 2 or fewer criteria		Poor (1)	Poor (1)

Area Habitat Feature: Modified grassland

- 7.1.4 An area occupying 0.0013ha of modified grassland / flowering lawn is to be created. It is proposed that this created grassland habitat will attain 'moderate' condition fulfilling 4 to 5 criteria and will remain as this condition for the requisite 30-year management period. Anticipated criteria to be achieved are outlined within Table 06.

Table 06: On-Site Condition assessment criteria: Grassland (low Distinctiveness)

Modified (Flowering Lawn) grassland - Condition Sheet 5 (v.3.1)		
Condition Assessment Criteria		Passed/Failed Criteria
1	There must be 6-8 species per m ² . If a grassland has 9 or more species per m ² it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.	Pass
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Pass
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Fail
6	Cover of bracken is less than 20%.	Pass
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Pass
Number of Criteria Passed		5
Condition		Moderate
Assessment Result		Condition
Passes 6 or 7 of 7 criteria including passing essential criterion 1		Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 4 or 5 of 7 criteria including passing essential criterion 1		Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of 7 criteria but failing criterion 1		Poor (1)

Mixed scrub

- 7.1.5 Proposed native mixed scrub (0.0999ha) Common in hedgerows and scrub edges, dominated by Hawthorn often mixed with Blackthorn, and Privet is to be planted to the woodland edges to the south of the scheme, comprised of species typical to an NVC W22 community. A target habitat condition of 'Moderate' is considered attainable within the requisite 30-year management period. Anticipated criteria to be achieved for are outlined within Table 07.

Table 07: On-Site Condition assessment criteria: Mixed scrub

Condition Sheet 20 - Scrub		
Condition Assessment Criteria		Passed/Failed Criteria
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ At least 80% of Scrub is native, there are at least three native woody species ² , no single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Pass
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	Fail
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of sub-optimal condition ⁶ make up less than 5% of ground cover.	Pass
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Fail
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Pass
Number of Criteria Passed		3
Condition		Moderate
Assessment Result		Condition
Passes 5 criteria		Good (3)
Passes 3 or 4 criteria		Moderate (2)
Passes 2 or fewer criteria		Poor (1)

Area Habitat Feature: Introduced shrub/ ornamental planting and flower beds

- 7.1.6 Ornamental planting will be incorporated into the scheme (to a total area of 0.01 ha) to include aromatic wildlife friendly species such as meadow geranium *Geranium pratense*, lily turf *Liriope muscari*, snowy wood rush *Luzula nivea*, common bistort *Persicaria bistorta* in conjunction with non-native herbaceous and fern planting. Condition assessment for this habitat is not applicable, however the planting should be maintained throughout the 30-year management and monitoring period to ensure it remains free of pests and disease/ is pruned in accordance with best horticultural practice and dead plants are replaced, as outlined in the management strategy section below (refer to section 7.8).

Area Habitat Feature: Developed land; sealed surface

- 7.1.7 Residential dwellings are proposed to comprise 0.3583ha of the proposals site. Condition assessment for this habitat is not applicable.

Linear Habitat Feature: Hedgerows

- 7.1.8 Native hedgerow measuring 0.098 km of will be created within the site. Due to the location of the hedgerows and management considerations, it is unlikely that criteria A1, A2, C1 and D2 will be achieved, therefore a target condition of 'moderate' has been designated and will remain as this condition for the requisite 30-year management period. Anticipated criteria to be achieved are outlined within Table 08.

Table 08: On-Site Condition assessment criteria: Hedgerow

Condition Sheet 8 - Hedgerow			
Condition Assessment Criteria			Passed/Failed Criteria
A1. Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).	Fail
A2. Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Fail
B1. Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Pass
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness', but are not subject to the >5 m criterion (as this is the typical size of a gate).	Pass
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length; measured from outer edge of hedgerow; and is present on one side of the hedgerow (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Fail
C2. Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles <i>Urtica spp.</i> , cleavers <i>Galium aparine</i> and docks <i>Rumex spp.</i> Their presence, either singly or together, does not exceed the 20% cover threshold.	Pass
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Pass
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	Fail
Number of Criteria Passed			4
Condition			Moderate
Assessment Result			Condition
Condition categories for hedgerows without trees			
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table		Metric Score

7.2 OFF-SITE HABITAT CREATION (KING'S LYNN HABITAT BANK)

- 7.2.1 A commitment to purchase 0.46ha of Medium Distinctiveness Grassland Biodiversity Units (BU) and 0.07 Very High Distinctiveness Lowland Meadow BU from King's Lynn Habitat Bank (KL06) care of The Environment Bank to support the above development and will be expected to attain a target habitat condition within the requisite 30+-year management period. (Refer to Appendix A: Confirmed confirmation of allocation <https://environment.data.gov.uk/biodiversity-net-gain/search/BGS-250924001>.)

7.3 PROTECTED AND NOTABLE SPECIES

- 7.3.1 Existing records data and/or site survey have noted the potential for the following protected species to occur within the search area or on site. Please refer to Appendices C and D for Principle Legislation and Policies and Protected Species Legislation.

Bats- Commuting / foraging habitat

- 7.3.2 These more frequented foraging / commuting corridors including scrub lined drainage channel will be retained within the proposed scheme and can continue to offer suitability for foraging and commuting bats. Mixed scrub has been incorporated within landscape proposals to supplement these retained corridors and will provide attractive areas for invertebrates, in-turn serving as a source of food for local bat populations.

- 7.3.3 Artificial lighting will be required on site to light the proposed access roads; however, to minimise the impact of the proposed development upon foraging and commuting bats, it is recommended that a sensitive lighting scheme is adopted on site. The more frequented foraging / commuting routes (see 5.3.7 of the *January 2025 Revision B*) should ideally remain free from artificial lighting or measures should be adopted to minimise light spill upon these routes (e.g., low-level and / or directional lighting). Consideration should be given to the dimming of artificial lighting during the late night-time hours when vehicle movements are likely to be reduced (e.g., 10pm – 5am). Consideration should also be given to recommendations within the Institute of Lighting Professionals (ILP) and Bat Conservation Trust publication '*Bats and Artificial Lighting at Night*' (2023) which includes the following guidelines:

- Remove or minimize artificial lighting close to vegetative commuting corridors.
- Using warm white, narrow spectrum lights (LEDs) with little or no UV;
- Directional lighting with near full horizontal cut off;
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance.
- Use of bollards or low-level downward-directional luminaires should only be considered in specific circumstances due to issues such as glare, poor illumination and unacceptable light outputs.

Breeding Birds

- 7.3.4 Bird species recorded during the ecological walkover survey included woodpigeon, grey heron, long-tailed tit, herring gull and mallard. Scrub and trees offer suitable breeding habitat for some of these species and support local bird populations in general. The following mitigation measures have been incorporated within the proposals, given the presence of suitable breeding bird habitat on site:

- Retained woodland, lines of trees and boundary hedgerows will provide continued availability of habitat for local bird populations.
- The adoption of sensitive hedgerow management, avoiding cutting during the main breeding bird period (March – August, inclusive) and ideally in January of February, to allow for use of winter berries by foraging birds.

Badger, Otter and Reptiles

- 7.3.5 During construction works it is recommended that precautionary working methods are adopted, in line with those recommended for badger, otter and Reptile (refer to section 5.3.14 of the SF19497 Preliminary Ecological Appraisal January 2025).

Hedgehog

- 7.3.6 Hedgehog are known to be present within 250m of the site and suitable habitat is available for foraging and hedgehogs seeking refuge. As such, precautionary working methods are recommended to be adopted during construction works, to prevent hedgehogs from being harmed / killed during works. Such works would include the removal of any tree / shrub cuttings from site, once vegetation is cut so as to avoid the creation of brash piles; these may be attractive to hedgehogs, which could subsequently be harmed if the brash pile is burnt or removed with machinery. In addition, any trenches created on site should be covered or a means of escape shall be provided, and any open pipe work will be capped at the end of each working day.
- 7.3.7 To maintain connectivity across the site for hedgehog, it is recommended that some areas of wildflower planting and species-rich lawn remain free from artificial illumination and / or that small gaps (0.15m) are left under sections of new fencing / walls within the development, to allow passage of hedgehog.
- 7.3.8 The inclusion log piles or other refugia piles within the retained woodland would also help to mitigate for lost hedgehog habitat as a result of woodland clearance.

8.0 STRATEGY

8.1 GENERAL

- 8.1.1 The landscape proposals plan for on-site illustrate the habitats and habitat features included within the post construction phase and sets out the level of strategic spatial arrangement for the site in order to provide the green infrastructure framework (soft landscaping).
- 8.1.2 The landscape objectives include:
- Retention and appropriate management of existing line of trees and non-native hedgerow (around the boundaries);
 - Proposed modified grassland sown with a species rich, flowering lawn (WFG20) mixture (on-site);
 - Proposed native mixed scrub planting with species typical of an NVC W21/W22 shrub layer composition (on-site);
 - Proposed on-site planting of 17 native trees; and 13 Ornamental cultivars

- Proposed ornamental planting to include woody shrubs, herbaceous planting and ferns (on-site);
- Proposed mixed species native hedge planting and non-native hedgerow (on-site);
- Watercourse protection and screening (adjacent to north)

8.2 GRASSLAND –WILDFLOWER AND FLOWERING LAWN

8.2.1 General grassland ground preparation: The nutrient status of soils intended for habitat creation should be assessed before works commence. Soil samples should be analysed by an appropriate laboratory to derive key nutrient parameters (nitrogen, potassium and phosphorus), pH and texture. Prior to planting, areas are to be ploughed to turn over top layer of improved grassland, whilst also alleviating compaction and improve aeration. Methods to be conducted in accordance with BS 3882:2015 British Standard for topsoil, Annex A recommendations for stripping, handling and preparing topsoil. Ploughed clods to be chain harrowed to level off the surface, creating a smooth layer for seeding and soiled with 70 mm of nutrient poor topsoil over ground free of compaction and cultivation. Prior to seeding, weeds / unwanted plant species areas should be sprayed with an approved contact herbicide using suitably qualified operatives, or alternatively (particularly in areas designated for nature conservation such as the off-site habitat creation/ enhancement) by manual methods (e.g. strimming or the application of weed suppressing mulches (e.g. bark or biodegradable mulch matting). The timing of subsequent seeding should ensure an appropriate fallow period in accordance with the particular plant product manufacturers instructions. Soil should be raked and cross raked to form a fine tilth and seed to be sown in two directions at a density of 4 g/m² and lightly raked in.

Modified Grassland – Flowering Lawn (On-Site)

8.2.2 First year: This mix is perennial, therefore, slow to germinate and will not usually flower within the first growing season. Annual grasses will dominate in the first growing season; however, this can be controlled by repeated mowing. This should be every 7 to 10 days during the growing season. Cut to a height of 50mm every two months. All cut material to be removed to reduce nutrient build up and smothering.

For Autumn sowing: first cut to be March/April - final cut to be September/October.

For Spring sowing: first cut to be May – final cut to be September/October.

8.2.3 Subsequent years: Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Mowing should be suspended earlier in the year to allow cowslips to flower. Cuttings should be collected and removed from site.

8.2.4 General: Vegetation shall be cut in the direction away from buildings to allow any wildlife to run away without risk of getting trapped up against buildings. A strimmer or brush cutter shall be used.

8.2.5 Weeding: Selective/spot weeding can be undertaken with an appropriate and authorised herbicide / spot applicator (e.g. weed wipe) to remove aggressive/ invading weed species or by manual methods (e.g. hand pulling, strimming or mulching) as described above.

8.3 MIXED SCRUB (ON-SITE)

- 8.3.1 Trees to be notch planted into a hole with 50g of slow-release fertiliser at its base. The tree shall be planted to the nursery line and fitted with 1.2m high, biodegradable, twin walled tree shelters and fixed to stakes as outlined in the landscape proposals.
- 8.3.2 Following planting, trees shall be thoroughly watered in, to field capacity.
- 8.3.3 During the initial 12-month establishment period, planting should be checked twice a month between May and September and a total of three visits between October and April. Stock should be watered during times of drought.
- 8.3.4 Loose soil at the base of newly planted trees should be gently firmed in place. Leaning trees/ stakes should be straightened and tightened as appropriate and failed stakes are to be replaced.
- 8.3.5 Dead/ dying trees or those failing to thrive are to be replaced with equivalent plants as specified in the landscape proposals.
- 8.3.6 Once established, dense scrub to be selectively thinned to encourage regeneration of seedlings and young shrubs. This should be done on a rotational basis to maintain habitat.
- 8.3.7 Bramble is beneficial for nesting and feeding birds and insects but should be managed to ensure it does not comprise more than 5% of the habitat area.

8.4 NEW TREE PLANTING (ON-SITE)

- 8.4.1 New tree planting within the site will include native and non-native tree species considered to be of value to wildlife (i.e. – high yields of pollen, fruits and/or berries).
- 8.4.2 Trees will be planted bare root or container grown dependant on their planting period.
- 8.4.3 Trees may be pruned to remove material encroaching over footpaths / roads and to encourage vegetative renewal. General pruning should be undertaken to preserve the natural form of trees and their propensity to bear flowers, fruits or exhibit winter stem colour.
- 8.4.4 Any pruning required will follow current best horticultural practice. Sympathetic management of existing and newly planted trees and shrubs should be undertaken to avoid disturbance to breeding birds.
- 8.4.5 Once established (five-ten years) management should be followed with trees allowed to grow to their natural size and form to provide a closed canopy of mature trees.

8.5 HEDGEROWS (ON-SITE)

- 8.5.1 Bare rooted whips to be planted during the dormant period (November – March) in ground that has been appropriately dug over and cleared of weeds and existing vegetation. Individuals should be spaced approximately 20 – 30 cm apart. Young plants should be protected by spiral / rabbit guards. If using container grown whips, planting can be conducted at any time of the year and accompanied by watering during dry weather.
- 8.5.2 First year: Remove weeds from the base of the trees/ shrubs. Assess the need to replace dead, or dying plants and. Or fill gaps with replacement species, as specified within the landscape proposals. Hard prune the young trees/ shrubs in the spring to approximately 45- 60 cm above the ground to promote healthy, vigorous growth.

- 8.5.3 Subsequent years: tree guards to be removed after a couple of years or as soon as the hedge has established. Formative pruning may be required to encourage a dense, bushy habit and for plants to reach their ultimate height. For managed, ornamental hedgerows, cut all sides and tops of hedgerows to specified height and ensure hedge is clear of roads and pathways. Species, rich, native hedgerows planted for wildlife should be allowed to flower and fruit; once established, light trimming into an A shape will prevent overgrowth and encourage leafy growth around the base. Trimming of sections should be conducted on a rotational basis to ensure habitat is maintained.
- 8.5.4 Avoid cutting hedgerows during the breeding bird season (March – August). Under the Wildlife and Countryside Act 1981 it is an offence to damage or destroy the nest of any wild bird while it is in use or being built.

8.6 ORNAMENTAL PLANTING (ON-SITE)

- 8.6.1 Ornamental planting comprises both woody shrubs, herbaceous species and ferns.
- 8.6.2 First year: Planting to be conducted during autumn in appropriately prepared beds, clear of weeds and existing vegetation. Plants to be watered during the spring and summer months to aid establishment. Assess the need to replace dead/ dying plants during the following autumn, in accordance with species outlined in the landscape proposals.
- 8.6.3 Subsequent years: Formation pruning will be required to shrubs to maintain shape and vigour. Herbaceous species and sub-shrubs (e.g. lavender) will have spent stems cleared away in autumn and dead material removed annually. Male ferns will require constant damp conditions to thrive and should be checked annually to ensure conditions remain optimum.
- 8.6.4 Control of weeds can be through hand removal of annual weeds where the root can be removed and through the application of a translocated contact herbicide to perennial and deep-rooted weeds to be applied not less than twice a year as necessary.

8.7 WATERCOURSE (ON-SITE)

- 8.7.1 Watercourse adjacent to site to be protected during construction and screened post-development.
- 8.7.2 Relevant permits for watercourse works should be sought in advance (e.g. ordinary watercourse consent/ flood risk activity permits) from the relevant authorised body (e.g. Internal drainage board or local authority).
- 8.7.3 Management and monitoring recommendations will depend on operations outlined within a detailed construction method statement, provided by a suitably qualified water environmental consultant/ engineer (to be confirmed following appointment).

9.0 LONG TERM MONITORING

- 9.1.1 *habitat creation and enhancement works in accordance with the Habitat Management and Monitoring Plan will be completed no later than 12 months after the completion of development work.*
- 9.1.2 An annual site walkover by a suitably qualified ecologist will be undertaken for the first two years following completion of the development and in years 5, 10, 15, 20 and 30 thereafter to monitor the site to assess the establishment/management of proposed

habitats and suggest remediation works or alterations to the programme where required to take into consideration unforeseen changes as the habitats develop.

- 9.1.3 The visit will make note of any ecological trends and constraints, grass, flowering lawn, over-shading new trees and make note of any additional management recommendations needed to be carried out.
- 9.1.4 This inspection will also allow for recommendations of alternative management methods if the aims and objectives of the management plan are not being met.
- 9.1.5 The results of the inspection will form the basis of a long-term progress report which will be submitted to the local planning authority following each inspection to measure the success of the scheme and delivery of habitat objectives.
- 9.1.6 The monitoring reports as referenced below shall contain as a minimum:
- A summary of management actions taken over the previous monitoring period and their timing;
 - A summary of problems encountered in meeting management objectives and any mediation actions taken or planned to address problems;
 - A current UK habitat condition assessment for each post-development habitat accompanied by the following supporting evidence:
 - I. species composition and % cover quadrat data for grassland habitats following sampling methods of the National Vegetation
- 9.1.7 Classification or similar (NVC; Rodwell 1992*);
- II. species composition of hedgerow and woodland habitat; and
 - III. representative photographs of each habitat parcel.
- 9.1.8 This HMMP will be subject to review every 5-10 years and updated by a suitably qualified ecologist, informed by monitoring survey results and habitat appraisals to date to provide an assessment of successful implementation including the establishment/management of proposed habitats. Where relevant, remediation works or alterations to the BEMP will take into consideration unforeseen changes as the habitats develop and revisions made where required to ensure effective management.
- 9.1.9 Refer to Tables for targeted habitat condition assessments and timescales for development, and Tables 09-12 for recommended timings on when management works should be undertaken for the requisite 30-year period. The Contractor shall notify the Contract Supervisor before his intention to carry out any of the management operations in order that the work can be checked and approved if necessary.

Table 09: Habitat Target Condition Assessments and Timescales

BNG Metric Ref.	Current Habitat Type	Proposed Habitat Type	Area Length (ha)/ km Tree number	Condition achieved	Base Units	BNG Units delivered	Years to target condition	Management and enhancement approach	Date proposed habitat condition achieved	Trigger for action when proposed habitat condition is not achieved	Remedial Action
REF	On site habitat to be retained										
7	Modified grassland	Modified grassland	0.5178 ha	Maintained in 'moderate' condition	1.04	0.19	10	Subject to regular cutting regime as currently managed. Limited scope for improvement.	2035	Throughout the monitoring periods (Years 2, 5, 10, 15, 20+) if decline in condition has been observed on any of those occasions.	Inspection to remove litter and encroaching scrub if present. Monitor for damaged areas and presence of undesirable/invasive species.
	On site habitat to be created										
	N/A	Urban Tree	17 No. native trees. Poor condition.	Given urban environment and other factors not expected to reach 'Moderate condition'	0.00	0.21	27	Healthy form through formative pruning and growth to natural form and size	27 years from commencement	Monitoring Years 2, 5 and 10+ if damage/ disease/ failure to thrive/ decline in condition observed on any of those occasions.	Selective thinning operations to be undertaken to provide space for trees to reach full size whilst retaining a varied age structure. By a qualified arborist
	N/A	Urban Tree	14 No. ornamental trees. poor condition.	Target of poor condition due to location of planting.	0.00	0.15	27	Healthy form through formative pruning and growth to natural form and size	10 years from commencement	Monitoring Years 2, 5, 10, 15 and 20+ if damage/ disease or failure to thrive / decline in condition observed on any of those occasions.	Selective thinning operations to be undertaken to provide space for trees to reach full size whilst retaining a varied age structure. By a qualified arborist
	Modified grassland	Modified grassland - species rich flowering lawn (WFG20)	0.0013 ha	Anticipated to reach 'moderate condition' with correct management	0.00	0.0	4	Habitat managed in accordance with recommendation: With a sympathetic mowing regime for wildflower	4 years from commencement	Monitoring Years 1, 2 and 5+ if grassland has failed to establish/ weedy species proliferate/ target species count falls below 6-8 species	Inspection to remove litter and encroaching scrub if present. Monitor for damaged areas and presence of undesirable/invasive species.

Table 09: Habitat Target Condition Assessments and Timescales

BNG Metric Ref.	Current Habitat Type	Proposed Habitat Type	Area Length (ha)/ km Tree number	Condition achieved	Base Units	BNG Units delivered	Years to target condition	Management and enhancement approach	Date proposed habitat condition achieved	Trigger for action when proposed habitat condition is not achieved	Remedial Action
								grassland, can reach moderate condition if sward height is varied and physical damage is less than 5%.		per metre ² (as per criteria A on condition sheet 5) on any of those occasions.	
	N/A	Mixed scrub	0.0052 ha	N/A	0.00	0.01	1	Habitat managed in accordance with recommendations with the HMMP report recommendations	1 year from commencement	Throughout the monitoring periods (Years 1,2,5,10,15,20 - 30) if damage/ disease/ failure to thrive/ decline in condition observed on any of those occasions.	Identify and remove dead/ dying trees and replace with equivalent species. Check tree guards are in place. Water during periods of drought. Inspection to remove weeds/ undesirable or invasive species. Monitor for damage and scrub encroachment. Remove litter.
	Hedgerow	Native hedgerow	0.098 km	Anticipated to not attain more than 'Poor' condition due to management and urban surroundings.	0.00	0.22	1		1 year from commencement	Monitoring years 1 and 2+ if damage/ disease/ failure to thrive observed on any of those occasions.	Identify and remove dead/ dying trees and replace with equivalent species. Check tree guards are in place. Water during periods of drought. Inspection to remove weeds/ undesirable or invasive species. Monitor for damage and scrub encroachment. Remove litter.

Table 09: Habitat Target Condition Assessments and Timescales

BNG Metric Ref.	Current Habitat Type	Proposed Habitat Type	Area Length (ha)/ km Tree number	Condition achieved	Base Units	BNG Units delivered	Years to target condition	Management and enhancement approach	Date proposed habitat condition achieved	Trigger for action when proposed habitat condition is not achieved	Remedial Action
	Off Site habitat to be created										
	N/A	Lowland Meadow	0.15 ha	Anticipated to attain 'Moderate' condition with appropriate management.	0.07	0.07	5	Habitat managed in accordance with recommendations with the HMMP report recommendations	5 years from commencement	Monitoring years 1, 2 and 5+ if damage/ disease/ failure to thrive or less than 3 habitat condition criteria attained (sheet 20) observed on any of those occasions.	Managed to maximise wildlife value. Initial works limited to those required
	N/A	Other Neutral Grassland	3.22 ha	Anticipated to attain 'Good' condition with appropriate management.	0.00	7.03	30+	Habitat managed in accordance with recommendations with the HMMP report recommendations	30+ years from commencement	Throughout the monitoring period (Years 1,2,5,10,15,20, 30+) if damage/ disease/ failure to thrive observed on any of those occasions or if condition criteria indicators (sheet 24) for 'Good' condition appear unattainable.	

Table 10: Initial habitat enhancement measures – years 1-3

	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
New tree planting								Hand weeding. Check for dead plants and adjust tree ties/stakes as required				
Flowering lawn/wildflower grassland (Year 1)				Cut to 50mm to suppress pernicious weeds. Hand weeding. Cuttings to be removed from site.		Cut to 50mm to suppress pernicious weeds. Hand weeding. Cuttings to be removed from site.		Cut to 50mm to suppress pernicious weeds. Hand weeding. Cuttings to be removed from site.		Cut to 50mm to suppress pernicious weeds. Hand weeding. Cuttings to be removed from site.		
Flowering lawn/wildflower grassland (Years 2-3)				Early season cut to suppress pernicious weeds. Hand weeding. Cuttings to be removed from site.					End of season cut following seed set to 150mm. Hand weeding. Cuttings to be removed from site.			
Watering				As required.								
Litter	Annual checks for the removal of any flytipped waste.			Removal of litter during general maintenance visits.								

Table 11: Long term habitat enhancement measures – years 4-5

	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
New tree planting	Formative pruning only if required.			Fertiliser application.				Check for dead plants and adjust tree ties / stakes as required.			Replacement planting as required.	
Flowering lawn/wildflower grassland (year 4-5)				Early season cut to suppress pernicious weeds. Cuttings to be removed from site.					End of season cut following seed set to 150mm. Cuttings to be removed from site.			
Watering				As required.								
Litter	Annual checks for the removal of any fly tipped waste.			Removal of litter during general maintenance visits.								

Table 12: Management operations – post year 5 for the required 30-year period

	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Woodland 30+ year
New tree planting	Thinning of large-scale forest trees if required. Tree management works if required.								Adjust tree ties /stakes as required.		Thinning of large-scale forest trees if required. Tree management works if required.		Shift from establishment objectives to longer term strategies for maintaining ecosystem structure, biodiversity and resilience. Selective thinning of poor quality or overcrowded trees to encourage age and structural diversity; Keeping glades and rides open to facilitate light penetration and ground flora integrity and vigour; Identify future veteran trees within the maturing woodland and give them space and protection to fully develop; retention of fallen and standing deadwood to support invertebrate, fungi and micro-organism diversity ongoing monitoring and mitigation of pests and diseases, invasive species and evidence of detrimental mammal browsing.
Flowering lawn / wildflower grassland				Early season cut following seed set to 150mm. Cuttings to be removed from site.					End of season cut following seed set to 150mm. Cuttings to be removed from site.				
Watering				As required.									
Litter	Annual checks for the removal of any fly tipped waste.			Removal of litter during general maintenance visits.									

FIGURES

Figure 01: Site Location Plan (included within main body of report)

Figure 02: UKHabs Post-Development Habitat Creation/ Retention Plan (On-site)

APPENDICES

Appendix A Landscape Proposals (SF3310 LL01 produced by Smeeden Foreman)

Appendix B: Principle Legislation and Policies

Appendix C: Protected Species Legislation



APPENDIX B: PRINCIPLE LEGISLATION AND POLICIES

Principle Legislation

Wildlife and Countryside Act 1981 (as amended)

This is the primary legislation for nature conservation in England and Wales. It confers varying degrees of protection on selected species according to their conservation status, ranging from making it an offence to take a species from the wild for profit, to full protection of a species and its habitat. The Act also gives guidance and instruction on statutory sites, such as sites of Special Scientific Interest (SSSI). License exempting specific works can be granted by Natural England. Such licenses are only granted once a full assessment has been made and an appropriate, sustainable mitigation package devised.

Protection of Badgers Act 1992

Allied to the Wildlife and Countryside Act, 1981 are subsidiary Acts such as the Protection of Badgers Act, 1992 which consolidated and added to previous legislation. According to the PBA it is an offence to wilfully kill, injure or maim a badger. Badger setts are also protected from interference unless such activities are licensed through Natural England. Any mitigation packages devised for badgers found on development sites must be agreed by Natural England and all mitigation activities must be fully licensed.

Countryside and Rights of Way Act 2000

As well as providing measures to improve countryside access for walkers, ramblers and horse riders, this Act also strengthens the protection of species and designated sites made in the Wildlife and Countryside Act 1981. This Act also gives the importance of biodiversity conservation statutory basis requiring government departments to have regard for biodiversity in carrying out their functions, and to take positive steps to further the conservation of listed species and habitats.

Natural Environment and Rural Communities Act (NERC), 2006 – Biodiversity Duty

NERC received royal assent in March 2006. Section 40 of the Act replaces and extends a duty, from Section 74 of the Countryside and Rights Of Way Act 2000, on Ministers and Government which already requires them to have regard to the purpose of conserving biodiversity. Section 40(1) states that, "*Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.*"

EC Habitats Directive (92/43/EEC)

This Directive aims to give Europe-wide protection to certain rare and threatened habitats on land and at sea. It builds on legislation already established under the Birds Directive of 1979 and aims to establish a series of protected sites known as Natura 2000 series. These sites are intended to protect the unique and special wildlife of Europe and to preserve it for future generations. In Britain these Natura 2000 sites include those areas designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The Habitats Directive is implemented in the UK through the Conservation of Habitats and Species Regulations 2017.

EC Birds Directive (79/409/EEC)

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievements are at the discretion of each Member State (in the UK delivery is via several different statutes). The Directive applies to the UK and to its overseas territory of Gibraltar.

The main provisions of the Directive include:

The maintenance of the favourable conservation status of all wild bird species across their distributional range with the encouragement of various activities to that end;

The identification and classification of Special Protection Areas (SPAs) for the rare and vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance;

The establishment of a general scheme of protection for all wild birds; Restrictions on the sale and keeping of wild birds.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

For species-specific legislation, please refer to *Appendix D* for further information.

Policy

National Planning Policy Framework (2018)

The National Planning Policy Framework replaces Planning Policy Statement 9 (PPS 9) Biodiversity and Geological Conservation but the accompanying guidance document (ODPM 06/2005: Biodiversity and Geological Conservation-Statutory Obligations and their impact within the Planning System) has not been withdrawn.

The NPPF sets out the Government's policies on the protection of biodiversity and sites of geological interest through the planning system. It required local planning authorities, when taking decisions, to ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species and to biodiversity and sites of recognised geological interest within the wider environment. It states:

'Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing values landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- 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.

‘When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity 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 there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists; and,
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.”

Biodiversity Action Plan (BAP)

In 1993, the UK government consulted over three hundred organisations throughout the UK and held a two day seminar to debate the key issues raised at the Convention of Biological Diversity. The product of this was the launch of Biodiversity: the UK Action Plan in 1994 which outlined the UK Biodiversity Action Plan for dealing with biodiversity conservation in response to the Rio Convention.

The UK Biodiversity Steering Group was created in 1994 and published Biodiversity: the UK Steering Group Report – meeting the Rio challenge. This established the framework and criteria for identifying species and habitat types of conservation concern.

From this list, action plans for 391 species and 45 broad habitat types were produced. As well as having national priorities and targets, action was also taken at a local level. The Steering Group drew up a set of guidelines that were discussed with the Local Authority Association and the Local Government Board.

Today there are 162 Local Biodiversity Action Plans in the UK. A review of the UK BAP was undertaken between 2003 and 2006.

APPENDIX C: PROTECTED SPECIES LEGISLATION

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately disturb a bat;
- deliberately kill, injure or capture a bat;
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to:

- intentionally kill, injure or take a bat ;
- damage, destroy or obstruct a bat roost *;
- disturb a bat at a roost *;
- possess or control a bat or any part thereof;
- sell, offer for sale, possess or transport for sale any bat or part thereof;
- set traps for catching, killing or injuring bats;
- possess articles for the purposes of committing offences against bats;

[*= intentional and reckless offences covered].

Legal protection under the Habitats Directive applies to the animals and their breeding sites and resting places. This means that bat roosts are fully protected, whether they are in use at the time or not. Where roosts or resting/breeding sites are identified, any works which may contravene the protection afforded to them require derogation from the provisions of the legislation in the form of a licence from Natural England..

Breeding birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built or,
- take or destroy an egg of any wild bird.

This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependent young is provided for birds included on Schedule 1.

Badger

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under the Act it is illegal to:

- Wilfully kill, injure or take a badger or attempt to do so;
- Cruelly ill-treat a badger; and,
- Interfere with a sett by doing any of the following:
 - (i) damaging a badger sett or any part of it;
 - (ii) destroying a badger sett;
 - (iii) obstructing access to a badger sett;
 - (iv) causing a dog to enter a sett; and,
 - (v) disturbing a badger while it is occupying a sett.

Reptiles

The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill any of our native snakes and lizards. The sand lizard and smooth snake receive additional protection; for these species, it is unlawful to capture or possess them, or to damage/obstruct access to places they use for shelter or protection, or to disturb them whilst in such a place.

Otter

Otter are afforded full legal protection under both UK and European legislation. The Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately capture, injure or kill an otter;
- deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young; or,
- damage or destroy an otter holt.

The otter is also protected under Section 9(4)(b) of the Wildlife and Countryside Act 1981

- intentionally or recklessly disturb any otter whilst it is occupying a holt; or,
- intentionally or recklessly obstruct access to a holt.

Water Vole

Water voles are given full legal protection under Section 9(4) of Schedule 5 of the Wildlife & Countryside Act 1981 (as amended in 2008). This makes it a legal offence to intentionally kill, injure or take, sell, damage or destroy or obstruct access to any structure or place used by water voles for shelter or protection, or to disturb water voles while they are using such a place.