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Land at Owl Lane, Chidswell
Biodiversity Enhancement and Management Plan

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Client	**Barratt Homes & David Wilson Homes Yorkshire West**
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	Name	**Position**	**Date**
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Contents

1 Introduction

1.1 BSG Ecology has been appointed by Barratt Homes & David Wilson Homes Yorkshire West to provide ecological support in relation to planning condition discharge for Land at Owl Lane, Chidswell (ref: 2019/62/92787/E), consented in 2021.

1.2 The aim of this report, the Biodiversity Enhancement and Management Plan (BEMP), is to inform the discharge of Planning Condition 34, by providing details of the creation, enhancement and management of the on-Site habitat in connection with the consented development. Condition 34 is included below.

Condition 34. Prior to the commencement of development (including ground works), a Biodiversity Enhancement and Management Plan (BEMP) shall be submitted to and agreed in writing by the Local Planning Authority. The BEMP shall ensure that no less than a 10% biodiversity net gain (i.e., 10% above the 15.84 habitat units and 4.44 hedgerow units baseline set out in the Biodiversity Net Gain Assessment (BSG Ecology, P21-098, 05/03/2021)) is achieved post-development, and shall include the following:

• Description and evaluation of features to be managed and enhanced;

• Details of the extent and location/area of proposed enhancement works on appropriate scale maps and plans;

• Details corresponding with details to be submitted pursuant to condition 26;

• Details of ecological trends and constraints on site that might influence management;

• Aims and Objectives of management;

• Appropriate management actions for achieving the Aims and Objectives;

• An annual work programme (to cover an initial five-year period capable of being rolled forward over a period of 30 years);

• Details of the management body or organisation responsible for implementation of the BEMP; and

• Details of an ongoing monitoring programme and remedial measures.

The BEMP will be reviewed and updated every five years and implemented for a minimum of 30 years. The BEMP shall include details of the legal and funding mechanisms by which the long-term implementation of the BEMP will be secured by the developer with the management body responsible for its delivery. The BEMP shall also set out (where the results from the monitoring show that the Aims and Objectives of the BEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully-functioning biodiversity objectives of the originally-approved BEMP. The development shall be implemented in accordance with the approved BEMP and all measures and features shall be retained in that manner thereafter.

Reason: To secure mitigation and compensation for the ecological effects resulting from loss of habitat and to secure a net biodiversity gain in line with policy LP30 of the Kirklees Local Plan and chapter 15 of the National Planning Policy Framework.

This pre-commencement condition is necessary to ensure that measures to ensure adequate enhancement and a biodiversity net gain (based on biodiversity metric calculations which require data relating to the site's pre-development condition) are agreed at an appropriate stage of the development process.

Off-Site Contribution

1.3 The Biodiversity Gain Assessment report (BSG Ecology, 2021) reported a change of -6.16 Habitat Units and +4.62 Hedgerow Units when comparing the existing site baseline with the post-development creation outcome. Condition 34 states that the BEMP will demonstrate 10% biodiversity net gain. However, this cannot be achieved on Site for Habitat Units. Therefore, a payment will be made to the Council to secure biodiversity net gain off-site, in accordance with the S106 agreement.

BEMP Review

1.4 This BEMP is based on the first five years of habitat creation and management activities, thereafter it is capable of being rolled forward over a 30-year period. Habitat creation and management would commence (wherever possible) at the start of construction, which is proposed to commence in September 2021. To keep the BEMP updated and relevant, an annual review will be carried out, and a summary monitoring report produced that is suitable for submission to Kirklees Council for information. This will be an opportunity to report on the status of habitats and other ecological features, informed by the ongoing monitoring events. Allied with this, the annual reviews will also enable a process of fine-tuning, allowing for the alteration or addition of new relevant management prescriptions to the work programme for subsequent years.

BEMP Structure

1.5 The BEMP is structured in a standard format and has broadly followed the approach within *A Guide to Management Planning*[1], as follows:

- Section 2 provides a general description of the Site including an overview of habitats and protected or otherwise notable species present or likely to be present within the Site;
- Section 3 details the avoidance and mitigation measures to be implemented to avoid impacts on habitats and species during Site preparation and construction;
- Section 4 describes habitats of ecological value (including those to be created), which will subsequently become Management Features;
- Sections 5 to 10 describe in detail the six Management Features, which include objectives and creation and / or management prescriptions and monitoring for each of these features;
- Section 11 defines the legal and funding mechanism for delivery of the BEMP, and provides details of annual reporting and review of the BEMP; and
- Section 12 provides an Action Plan which summarises all habitat creation and management prescriptions and indicates the timing and year in which they are to be carried out.

1.6 As is best practice, the BEMP also includes detail of construction orientated mitigation, such as use of protective fencing to avoid sensitive areas of value to wildlife and avoidance of vegetation clearance during the breeding bird season. These measures are included in Section 3 and their implementation is indicated in the Action Plan in Section 12.

CDM Regulations

1.7 When BSG Ecology designs construction work, as defined in the Construction (Design and Management) Regulations (CDM), we will comply with our statutory duties. Where our design is not construction work, as defined, we do not have any CDM duties.

1.8 BSG Ecology will not be responsible for any design undertaken by other companies whether they be a 'designer' or a contractor, except where noted in relation to sub consultants appointed by BSG Ecology who are not based in GB or Northern Ireland.

[1] Alexander, M. (2015). *A Management Planning Guide*. CMS Consortium, Talgarth, Wales

1.9 BSG Ecology will attend site to review the quality of the works and resolve any issues arising out of unforeseen circumstances but will not “control the way in which any construction work is carried out by a ‘person at work’ (CDM Regulations 25(2)). BSG Ecology will not carry out construction work.

1.10 When BSG Ecology is the contract administrator we will not have any responsibility in relation to permitting the works to start (CDM Regulation 16) or the on-going adequacy of the Construction Phase Plan or welfare provisions by the contractor.

2 Site Description

Location

2.1 The location of the Site is shown on Figure 1. The Site is centred at National Grid Reference (NGR) SE 26596 22798 and is located to the east of Owl Lane, Chidswell.

Ownership/Tenure

2.2 The landowner will be Barratt Homes & David Wilson Homes Yorkshire West.

Public Rights of Way

2.3 There are no Public Rights of Way within the Site.

Habitats

2.4 The Site comprises an arable field bordered by hedgerows to the northern, southern and western boundaries. The wider area is characterised by residential development to the northern boundary, Dewsbury Football Club to the west and arable fields to the east and south.

2.5 Full habitat descriptions are contained within Biodiversity Gain Assessment report (BSG Ecology, 2021). This report supersedes the Preliminary Ecological Appraisal (PEA) report (Brooks Ecological, 2019) but this report is still relevant. Figure 1 in this BEMP is the Habitat Map extracted from the BSG Ecology Biodiversity Gain Assessment Report.

Protected Species and Otherwise Notable Species

2.6 A brief summary of relevant protected species is listed in Table 1. A more comprehensive discussion of species associated with the Site (including detail of their protection and conservation status) is provided in the Preliminary Ecological Appraisal report (Brooks Ecological, 2019).

Table 1: Protected and Otherwise Notable Species of Potential Relevance to the Site

Taxa	Status & Legal Framework	Description
Bats	The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Wildlife and Countryside Act 1981 (as amended). Several listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.	There is no potential for bat roosts within the Site but a limited number of bats may use the boundary hedgerows to forage and commute through the landscape. Measures to avoid lighting retained hedgerows during construction will be implemented.
Nesting birds	Wildlife and Countryside Act 1981 (as amended).	The Site offers limited opportunities for nesting birds other than in the boundary hedgerows. Vegetation clearance may impact on nesting birds if undertaken during the breeding bird season (March to August, inclusive).
Badger	Badger *Meles meles* and its setts receive protection	No evidence of recent or historic badger activity has been recorded on Site but suitable habitat is available. Due to the highly mobile nature of badger, a pre-commencement walkover will be

Taxa	Status & Legal Framework	Description
	under the Protection of Badgers Act 1992.	undertaken to update the status of badger within the Site.
Hedgehog	Section 41 of the NERC Act 2006.	Suitable habitat for hedgehog is present within the Site and could be impacted by the development during both construction and operation.

3 Ecological Mitigation Measures

3.1 This section summarises the ecological avoidance and mitigation measures which will be implemented to avoid harm to retained habitats and protected or otherwise notable species known or considered likely to be present within the Site.

3.2 The ecological mitigation measures set out in this section (summarised in Table 2) are informed by the ecological baseline as reported in the Biodiversity Gain Assessment report (BSG Ecology, 2021) and PEA (Brooks Ecological, 2019) and summarised in (Section 2) and legal provisions (Appendix 1).

3.3 A suitably experienced ecologist (Ecological Clerk of Works (ECoW)) will provide assistance through Toolbox Talks prior to works commencing on Site and monitoring of protective measures, where necessary, throughout the construction period.

Table 2: Ecological mitigation measures

Ecological Receptor	**Impact on Baseline Conditions**	**Specific Mitigation Proposed**	**Time Constraint**
Retain sensitive habitat / features of ecological value	Risk of damage to features of known ecological value (e.g., retained trees and hedgerows) caused by incursions by vehicles / machinery in the absence of mitigation.	Create and maintain Biodiversity Protection Zone by erection and maintenance of signed Heras fencing (or similar) to safeguard the retained hedgerow along the southern boundary during construction. Protective fencing will be placed with a minimum 2 m offset from the centre-line of the hedgerow.	Install fencing and signage prior to works commencing on site with ongoing maintenance during construction.
Badger and hedgehog	Risk of badger excavating new setts both on or immediately adjacent to Site. Risk of harm to badger and hedgehog during construction should animals become trapped in footings or other on-site hazards.	Pre-construction badger survey to be undertaken by the ECoW to update the status of badger within and adjacent to the Site. Where possible, all trenches, pits and other diggings at the Site will be closed before nightfall. Where these must be left over night, they should be covered and sealed, or an escape ramp should be provided using wood planking or suitably compacted earth. All pipework and ironworks should be sealed or covered overnight. Alternatively, such trenches pipes or other workings may be fenced off to prevent large mammals coming into contact with them.	Undertake prior to works commencing on Site. Ongoing best practice to be followed throughout construction.

Ecological Receptor	Impact on Baseline Conditions	Specific Mitigation Proposed	Time Constraint
Bats	Inappropriate lighting during construction, especially along the retained hedgerow boundaries of the Site, may detrimentally affect commuting and foraging bats.	During Site preparation and construction no lighting will be placed within 10 m of the Biodiversity Protection Zone (delineated by protective fencing). Lighting will be directional, either facing directly downwards or away from the retained hedgerow and using directional hoods where required. Care will be taken to minimise light spill onto the retained vegetation. The lighting strategy outlined above makes reference to current good practice guidance and research (BCT, 2014; and ILP, 2011).	Ongoing during site preparation and construction phases.
Nesting birds	Risk of harm to nesting birds caused by vegetation clearance taking place during the nesting bird season (March to August, inclusive).	Clearance / pruning of vegetation suitable for nesting birds (e.g., scrub, hedgerows) will take place outside of the nesting bird season to avoid impacts on nesting birds. If any suitable bird nesting habitat requires removal during the nesting season, this will be preceded by an inspection for nesting birds by the ECoW. If active nests are found to be present, clearance must stop until the young have fledged. Retained hedgerows will be protected from disturbance by protective fencing throughout construction (see 'Retain sensitive habitat features of ecological value' above).	Advanced clearance of trees, scrub and hedgerows between September to February, inclusive, is preferable.

4 Selection of Management Features

4.1 The rationale for the selection of Management Features is set out below. This is based on existing knowledge of the main nature conservation interests of the Site, and the projected vision for the long-term management of the Site. The location of the features for management or creation is shown on Figure 2. The identified Management Features are listed below, and then the justification of selection is provided in more detail in subsequent sections:

- Species-rich Semi-improved Neutral Grassland
- Hedgerows
- Trees
- Orchard
- Mixed Scrub
- Artificial Wildlife Installations

Structure for Management Feature Entries

4.2 Having identified six Management Features, and the areas in which they are located, Sections 5 to 10 of this document describe management objectives for each feature, together with a series of habitat creation, management and monitoring prescriptions that are recommended to enable the successful delivery of these objectives.

4.3 The terms used are defined as follows:

Management Objective

4.4 This is a clear, site-specific description of the desired state for each feature and how it will be attained. It includes the following:

- *Management Vision*: A description of a feature in favourable condition in the short to medium term.
- *Targets*: Targets are linked to the management vision. They provide the evidence required in order to determine whether or not favourable condition is being met, and allow progress to be monitored. Targets will be both achievable and quantifiable, with upper and lower limits set wherever possible.
- *Current Status*: This provides a summary of the current status of each feature.
- *Explanation of Targets*: This part explains why the targets have been set (if needed) and describes the work required to achieve the desired condition, taking into consideration the current status.

Habitat Creation, Restoration, Management and Monitoring Prescriptions

4.5 The following definitions of habitat creation, restoration, management and monitoring are included below to provide clarity.

- Habitat creation is the work required to create new habitat where it does not currently exist (such as creation of specie-rich semi-improved neutral grassland habitat on former species-poor semi-improved grassland).
- Habitat restoration relates to habitats retained and protected during development and subsequently restored / enhanced to higher distinctiveness / condition (such as enhancement of hedgerows from poor to moderate condition).
- Management prescriptions are recommendations put forward to help achieve the desired management vision of created and restored habitats.

- Monitoring prescriptions allow progress against the vision to be charted, and if appropriate, inform refinement to management prescriptions to bring better outcomes.

5 Feature 1: Species-Rich Semi-Improved Neutral Grassland

Management Objective

Management Vision

5.1 Throughout the Site there will be several areas of newly created species-rich semi-improved neutral grassland totalling an area of 0.43 ha. These areas will support vibrant colours of knapweed *Centaurea nigra*, selfheal *Prunella vulgaris*, ox-eye daisy *Leucanthemum vulgare,* black medick *Medicago lupulina* and other pollinator-friendly herbs that are frequently visited by bees, butterflies and hoverflies. Meanwhile, a varied structure of the grassland provides better habitat for spiders, grasshoppers and moths, amongst other invertebrates that favour established grassland in which to shelter and overwinter.

Target

Create species-rich grassland of at least moderate ecological condition and distinctiveness

5.2 The southern area of Public Open Space (POS) will comprise 0.17 ha of species-rich grassland. To meet moderate condition, the grassland must pass 3-4 of the 5 Condition Assessment Criteria set out for Grassland – Medium, High and Very High Distinctiveness in the Biodiversity Metric 3.0 Technical Supplement (Panks *et al*., 2021). These include but are not limited to:

- The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward.
- Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.
- Cover of bare ground between 1% and 5%.
- Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.
- There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of undesirable species and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.

Create species-rich grassland of at least fairly poor ecological condition

5.3 The remaining POS will be subject high foot traffic due to public access. To meet fairly poor condition, these areas of grassland must pass up to two of the five criteria outlined above.

Current Status

5.4 Species-rich semi-improved neutral grassland habitat is yet to be established.

Explanation of Targets

5.5 Species-rich grassland is the desired grassland habitat. Small-scale traditional meadow management is likely to be possible in the larger patches of grassland.

5.6 In high quality grassland well over 12 plant species may occur in a 1 m x 1 m quadrat, including grasses such as crested dog's tail, yellow oat grass and meadow fescue, and herbs such as common knapweed, ox-eye daisy and cowslip.

5.7 Injurious weeds[2] will only be tolerated in low densities so that they do not become too numerous at the expense of more desirable grassland indicator species.

Habitat Creation, Restoration, Management and Monitoring (Refer to Figure 2)

Feature 1: Create species-rich semi-improved neutral grassland	
Responsibility	Specialist Contractor (SC)
Equipment and Materials	Tractor mounted tine or disc harrow, or rake (for small areas and those on steep incline). Glyphosate herbicide (or similar). Native, flower-rich, neutral grassland seed mix (e.g., EM2 Emorsgate[3] for meadow areas in south of Site / EL1 Emorsgate[4] for all other areas of POS). Tractor mounted seed spreader and Cambridge roller. Tractor mounted chain harrow.
Methodology	Grassland will be established through the sowing of an appropriate seed mix to the specification and method described by the seed merchant. However, in summary, this is likely to involve the following: ~ Strip topsoils and apply foliar applied translocated herbicide to manufacturer's instructions to eliminate first flush of weeds prior to seeding. In red line boundary, reserve subsoils with which to establish the grassland and spread these soils in the appropriate areas toward the end of the earthworks in each particular phase. ~ The areas to be seeded will be cultivated to an approximate depth of 100 mm using a tine or disc harrow or using a rake in the smaller areas or on steep inclines. ~ Seed will be broadcast at the required rate using tractor mounted seed spreader, or by hand in the smaller areas or on steep inclines. ~ The seeded areas will be lightly rolled using a Cambridge roller (or similar) to achieve contact with the soil. ~ All operations to be undertaken when the soil is moist but not waterlogged. ~ After seeding spot-treat weeds as required using an applied translocated herbicide.
Timing	In April / May or September / October to achieve best results.
Frequency	Complete once earthworks and final ground levels have been achieved in each phase.
Manage semi-improved neutral grassland (moderate condition) in south of Site	
Responsibility	SC
Equipment	Cut and collect mower OR pedestrian mower or strimmer and rakes for removal of arisings. Tractor mounted chain harrow.
Methodology, Timing and Frequency	~ Cut and collect the grassland sward towards the end of July. A broad margin of at least 2 m wide around outer margins (i.e. boundary lines) should remain unmown. ~ One year in three cut and remove vegetation after 15th August. This is to allow later flowering species to establish. ~ A second cut may be undertaken (if required) during late April / May accompanied by the use of a chain harrow to remove any thatch. This is likely to be a management requirement in the first three years of establishment.

[2] Common ragwort *Senecio jacobaea*, Broad-leaved dock *Rumex obtusifolius*, Curled dock *Rumex crispus*, Creeping thistle *Cirsium arvense*, Spear thisle *Cirsium vulgare.*
[3] https://wildseed.co.uk/mixtures/view/3
[4] https://wildseed.co.uk/mixtures/view/56/flowering-lawn-mixture

	~ Application of inorganic fertilisers to be avoided.
Manage semi-improved neutral grassland (fairly poor condition) in POS areas	
Responsibility	SC
Equipment	Cut and collect mower.
Methodology, Timing and Frequency	~ Cut and collect the grassland sward at required intervals throughout the growing season ~ To enable low-growing herbs to flourish, allow the average sward to attain a height of 200 mm before cutting. ~ Application of inorganic fertilisers to be avoided.
Monitor grassland	
Responsibility	Site Ecologist (SE)
Methodology	~ Within the small parcels of semi-improved neutral grassland (fairly poor condition) in the POS, at ten randomly selected 1 m^2 quadrat survey points; AND, within the semi-improved neutral grassland (moderate condition) in the south of the Site, at five randomly selected 1 m^2 quadrat survey points, record: • the composition of plants using a DAFOR scale[5]; • average sward height, • % cover of bare ground, • % cover of scrub, • % cover of bracken, • evidence of physical damage to the grassland (and % cover) such as from fire damage or compaction, • the presence and % cover of any injurious weeds and invasive, non-native plant species. ~ Additionally, note the presence of any invasive, non-native plant species AND large stands of injurious weeds (up to 5 m^2), anywhere within the semi-improved neutral grassland.
Timing	Mid-June to mid-July (i.e., prior to cutting)
Frequency	Monitor every year for first three years and biennially thereafter
Resulting Action	~ Review management methods if Condition Assessment targets are not being met for the two types of semi-improved neutral grassland. ~ Consult suitably experienced specialist contractor on the eradication of invasive, non-native weeds if presence is confirmed.

[5] D - Dominant 50-100%; A - Abundant 30-49%; F - Frequent 15-29%; O - Occasional 5-14%; R - Rare < 5%

6 Feature 2: Hedgerows

Management Objectives

Management Vision

6.1 900 m of new native species-rich hedgerows will be planted in several areas across the Site (e.g. screening to LEAP areas in the centre and along roadsides). These will create green corridors for foraging birds, bats and small mammals, and will also provide important early-season nectar and pollen for invertebrates. Additional non-native ornamental hedges will be planted around plot frontages for additional aesthetic and biodiversity interest (not subject of BEMP).

Targets

Create and maintain hedgerows of at least good condition

6.2 New hedgerows will also be required to meet good condition by meeting eight out of ten attributes as set out for Hedgerow in the Biodiversity Metric 3.0 Technical Supplement (Panks *et al*., 2021). Attributes include, but are not limited to:

- Height: >1.5 m from the base of the stem to the top of the shoots on average along the length of the hedgerow.
- Width: >1.5 m at the widest point on average along the length of the hedgerow.
- Gaps (hedge base): <0.5 m between the ground and the base of the canopy along >90% of the length of the hedgerow.
- Gap (hedge canopy continuity): <10% gaps along the total length of the hedgerow with no canopy gaps exceeding 5 m.
- Undesirable perennial vegetation: Species such as nettle *Urtica* spp, cleavers *Galium aparine* and docks *Rumex* spp. should not exceed 20% cover of undisturbed ground along the base of the hedgerow.

Current Status

6.3 The retained hedgerow along the southern boundary is considered to be in good condition at present. Management of this hedgerow is only subject of the BEMP for the sections of hedgerow within Public Open Space. The remaining hedgerows around the boundaries of the Site will be lost as a result of development.

6.4 The new hedgerows are not yet planted and will be completed by the end of the construction period.

Explanation of Targets

6.5 The value of hedgerows to a variety of wildlife will improve over time (i.e. as hedgerow matures); thus, providing a more complex environment that will benefit invertebrates, amphibians, birds and mammals. Establishment will occur most quickly when trees and shrubs are healthy and when competition from tall grasses and other competitive plants is minimal.

6.6 Non-native / undesirable plant species are often highly competitive and may slow development of native hedgerow shrubs. Monitoring the presence of these species will trigger proactive management to minimise competition with planted hedgerow shrubs. Should invasive species listed on Schedule 9 be identified, approved control measures will need to be implemented.

Habitat Creation, Restoration, Management and Monitoring (Refer to Figure 2)

Feature 2: Plant Native Hedgerows	
Responsibility	SC
Equipment	Planting plan, spade, planting stock (see below), guards and canes
Methodology	~ Mark out planting areas. Prepare ground by cultivating and adding peat-free compost, if necessary. ~ Prior to planting, dip the roots of the shrubs in a mycorrhizal root dip to aid establishment. ~ Transplants of shrubs and trees will be planted in single species groups of 3-7 in a double staggered row at 500 mm intervals (300 mm between rows). Transplants will be planted to the existing nursery root collar level. ~ Each transplant will be protected by a Tubex 600 mm high Tubex Easywrap spiral guard (or similar). The transplants and spiral guards will be supported by a single 750 mm long cane, 12 mm diameter; driven into the ground to a minimum depth of 150 mm. ~ Native hedgerow species will include a mix of blackthorn *Prunus spinosa* (30%), dogwood *Cornus sanguinea* (20%), field maple *Acer campestre* (20%), hazel *Corylus avellana* (20%), holly *Ilex aquifolium* (5%), dog rose *Rosa canina* (5%), crab apple *Malus sylvestris* (5%), guelder rose *Viburnum opulus* (5%), and honeysuckle *Lonicera periclymenum* (5%). All will be sourced from a reputable supplier of UK stock.
Timing	November to March (avoid frosty conditions)
Frequency	Throughout construction period.
Manage hedgerows	
Responsibility	SC
Equipment	Tractor mounted flail for trimming. Billhook, chainsaw, loppers, and lump hammer for laying.
Methodology	Newly planted hedgerows: ~ Allow hedgerows to mature by adopting low-intervention management ~ Only trim back hedgerows if public access becomes an issue. Retained established hedgerows (greater than 10 years old, since planting or last lay e.g., retained hedgerow along southern boundary, near orchard): ~ Lay one hedgerow section every five years, approximating to a 15-year rotation.
Timing	Late winter (preferably February), before the breeding bird season starts in March
Frequency	Five-year rotational programme of maintenance and management.
Monitor tree / shrub health and for presence of non-native / undesirable species	
Responsibility	SE
Equipment	Recording forms, GPS
Methodology	~ Conduct a walkover survey of hedgerows. ~ Record presence of damaged / diseased trees and non-native / undesirable species and plot location on GPS.

Timing	June - July
Frequency	Annually for first 3 years; biennially thereafter
Resulting action	Should any Schedule 9 plants be recorded, consult specialist for advice on the control and eradication of the species; and implement the recommended actions in liaison with SE. If health of trees or shrubs is poor, consider: ~ Removing and replacing damaged/diseased saplings as required. ~ Removing competitive grasses and weeds from within spiral guards as appropriate; or keep base weed free throughout the season by herbicide applications using an approved translocated herbicide such as glyphosate. ~ Removing tree/shrub guards and stakes when plants have become established to allow basal growth to develop.

7 Feature 3: Trees

Management Vision

7.1 A total of 161 new native trees will be planted as street trees throughout the development. These will consist of 117 small standards and 44 medium standards. These will create important stepping stones of foraging, sheltering and nesting habitat for suburban wildlife throughout the development.

7.2 Targets are not appropriate for street trees. However the following principles will be followed:

- Planted trees will be native.
- Damaged and diseased trees will be replaced.
- Consideration will be given to allowing ground flora to develop beneath tree once established.

Habitat Creation, Restoration, Management and Monitoring (Refer to Figure 2)

Feature 3: Plant native trees	
Responsibility	SC
Equipment	Planting plan, spade, guards, stakes, planting stock (a mix of native trees will be planted including but not limited to English oak *Quercus rubur*, rowan *Sorbus aucuparia*, whitebeam *Sorbus aria* and silver birch *Betula pendula*.
Methodology	~ Mark out planting areas and ensure no weeds are present. ~Dip roots into mycorrhizal root dip prior to planting. ~ Dig appropriately sized tree planting pits so that they are at least 300 mm wider and 75 mm deeper than the tree root system when fully spread. Removed soils will be kept and mixed with peat-free compost for backfill. ~ Standards will be staked with two stakes and each stake shall be whole sections of softwood timber of 75 mm top diameter, peeled and pressure treated in accordance with BS 4072. A 100mm x 30mm section cross spar shall be fixed to the posts with galvanised nails. One tree tie shall be a rubber strap overlapped and fixed to the timber cross spar by galvanised clout nails. A rubber collar shall ensure that tree and stake do not touch in any place.
Timing	November to March (avoid frosty conditions)
Frequency	Throughout construction period.
Monitor tree / shrub health and for presence of non-native / undesirable species	
Responsibility	SE
Equipment	Recording forms, GPS
Methodology	~ Conduct a walkover survey of tree planting areas. ~ Record presence of damaged / diseased trees and non-native / undesirable species and plot location on GPS.
Timing	June - July
Frequency	Annually for first 3 years; biennially thereafter
Resulting action	If health of newly planted trees or shrubs is poor, consider: ~ Removing and replacing damaged/diseased saplings as required.

	~ Removing competitive grasses and weeds from within spiral guards as appropriate; or keep base weed free throughout the season by herbicide applications using an approved translocated herbicide such as glyphosate. ~ Removing tree/shrub guards and stakes when plants have become established to allow basal growth to develop. Once newly planted trees have established, give consideration to allowing below-canopy flora to establish by refraining from mowing. The SE will identify suitable areas.

8 Feature 4: Orchard

Management Objectives

Management Vision

8.1 A new traditional orchard will be created in the south of the Site. The orchard will combine species-rich grassland with flowering and fruiting trees which will provide important foraging resources for invertebrates, birds, hedgehog and small mammals.

Targets

Create an orchard of at least moderate condition

8.2 The orchard must pass 4-5 out of 8 Condition Assessment Criteria in the Biodiversity Metric 3.0 Technical Supplement (Panks et al., 2021) for Orchard. These include:

- Presence of ancient and / or veteran trees.
- Less than 5% of fruit trees are smothered by scrub. Small patches of dense scrub and/or scattered scrub growing between trees can be beneficial to biodiversity, however these should occupy less than 10% of ground cover.
- There is evidence of formative and/or restorative pruning to maintain longevity of trees.
- Presence of standing and/or fallen dead wood: all mature trees have standing or fallen branches, stems and stumps greater than 10 cm associated with them.
- At least 95% of the trees are free from damage caused by humans or animals e.g. browsing, bark stripping or rubbing on non-adjusted ties.
- Sward height is varied (between 5 cm and 30 cm) and small patches of bare ground are present creating structural diversity. Up to 10% cover of patches of tall herb vegetation may be present.
- Species richness of the grassland is equivalent to a medium, high or very high distinctiveness grassland.
- There is an absence of invasive non-native species and undesirable species make up less than 10% of ground cover.

Current status

8.3 The orchard has not yet been created and will be completed by the end of the construction period.

Explanation of Targets

8.4 The value of orchards to a variety of wildlife will improve over time; thus providing a more complex environment that will benefit invertebrates, birds and mammals. Establishment will occur most quickly when fruit trees are healthy and when the grassland is managed appropriately. The urge to 'tidy-up' beneath fruit trees should be resisted, since fallen leaves and dead wood provide an important microhabitat for a diverse flora (including fungi) and fauna.

8.5 Non-native / undesirable plant species are often highly competitive and may slow development of planted fruit trees. Monitoring the presence of these species will trigger proactive management to minimise competition with trees. Should invasive species listed on Schedule 9 be identified, approved control measures will need to be implemented.

Habitat Creation, Restoration, Management and Monitoring (Refer to Figure 2)

Feature 4: Create orchard	
Responsibility	SC

Equipment	Grassland element: Tractor mounted tine or disc harrow. Glyphosate herbicide (or similar). Native, flower-rich, neutral grassland seed mix (e.g., EM2 Emorsgate[6]). Tractor mounted seed spreader and Cambridge roller. Tractor mounted chain harrow. Orchard tree planting: Planting plan, spade, guards, stakes, planting stock (a mix of maiden bareroot fruit trees will be planted including but not limited to varieties of apple *Malus* sp., pear *Pyrus* sp., plum *Prunus* sp., cherry *Prunus* sp. and hazel).
Methodology	Grassland element: ~ Grassland will be established through the sowing of an appropriate seed mix to the specification and method described by the seed merchant. However, in summary, this is likely to involve the following: ~ Strip topsoils and apply foliar applied translocated herbicide to manufacturer's instructions to eliminate first flush of weeds prior to seeding. In red line boundary, reserve subsoils with which to establish the grassland and spread these soils in the appropriate areas toward the end of the earthworks. ~ The areas to be seeded will be cultivated to an approximate depth of 100 mm using a tine or disc harrow or using a rake in the smaller areas or on steep inclines. ~ Seed will be broadcast at the required rate using tractor mounted seed spreader. ~ The seeded areas will be lightly rolled using a Cambridge roller (or similar) to achieve contact with the soil. ~ All operations to be undertaken when the soil is moist but not waterlogged. ~ After seeding spot-treat weeds as required using an applied translocated herbicide. Orchard tree planting element: ~ Mark out planting areas (5 m equal spacings between trees and rows) and ensure no weeds are present. ~ Dip roots into mycorrhizal root dip prior to planting. ~ Dig appropriately sized tree planting pits so that they are at least 300 mm wider and 75 mm deeper than the tree root system when fully spread. Removed soils will be kept and mixed with peat-free compost for backfill. ~ Once planted, a generous layer of mulch will be added in a 1 m diameter circle around each tree at a depth of 80 100 mm. The mulch should not touch the bark of the tree. ~ Trees will be staked with two stakes and each stake shall be whole sections of softwood timber of 75 mm top diameter, peeled and pressure treated in accordance with BS 4072. A 100mm x 30mm section cross spar shall be fixed to the posts with galvanised nails. One tree tie shall be a rubber strap overlapped and fixed to the timber cross spar by galvanised clout nails. A rubber collar shall ensure that tree and stake do not touch in any place.

[6] https://wildseed.co.uk/mixtures/view/3

Timing	Grassland element: April / May or September / October to achieve best results. Tree planting: November to March (avoid frosty conditions).
Frequency	During the appropriate phase of construction.
Manage orchard	
Responsibility	SC
Equipment	Grassland element: Cut and collect mower OR Pedestrian mower or strimmer and rakes for removal of arising. Tractor mounted chain harrow (or similar). Fruit Trees: Mulch, pruning equipment.
Methodology, Timing and Frequency	Grassland: ~ Cut and collect the grassland sward towards the end of July. A margin of at least 1 m wide around outer margins (i.e. boundary lines) should remain unmown. ~ One year in three cut and remove vegetation after 15th August. This is to allow later flowering species to establish. ~ A second cut may be undertaken (if required) during late April / May accompanied by the use of a chain harrow to remove any thatch. This is likely to be a management requirement in the first three years of establishment. ~ Application of inorganic fertilisers to be avoided. ~ Retain a 1-2 m buffer strip of unmanaged grassland around the perimeter of the orchard. Fruit Trees: ~ Regular mulching and watering in the first year. ~ Formative pruning from the first year onwards. Pip fruits (apples and pears) will require winter pruning, and stone fruits (plums and cherries) will require summer pruning.
Monitor tree / shrub health and for presence of non-native / undesirable species	
Responsibility	SE
Equipment	Recording forms, GPS
Methodology	~ Conduct a walkover survey of the orchard. ~ Within the grassland, at four randomly selected 1 m^2 quadrat survey points, record: • the composition of plants using a DAFOR scale[7]; • average sward height, • % cover of bare ground, • % cover of scrub, • % cover of bracken, • evidence of physical damage to the grassland (and % cover) such as from fire damage or compaction,

[7] D - Dominant 50-100%; A - Abundant 30-49%; F - Frequent 15-29%; O - Occasional 5-14%; R - Rare < 5%

	• the presence and % cover of any injurious weeds and invasive, non-native plant species. ~ Additionally, note the presence of any invasive, non-native plant species AND large stands of injurious weeds (up to 5 m^2), anywhere within the semi-improved neutral grassland. ~ Record presence of damaged / diseased fruit trees. ~ Record percentage of deadwood (both aerial and ground).
Timing	Mid-June to mid-July (prior to grassland being cut)
Frequency	Annually for first 3 years; biennially thereafter
Resulting action	Review management methods if Condition Assessment targets are not being met for the grassland. Should any Schedule 9 plants be recorded, consult specialist for advice on the control and eradication of the species; and implement the recommended actions in liaison with SE. If health of newly planted trees is poor, consider: ~ Removing and replacing damaged/diseased saplings as required. ~ Removing competitive grasses and weeds from within guards as appropriate; or keep base weed free throughout the season by herbicide applications using an approved translocated herbicide such as glyphosate. ~ Removing stakes when plants have become established to allow basal growth to develop. Retain aerial and ground deadwood in-situ where H&S allows. If unfeasible, move deadwood to safe locations along the boundary of the Site.

9 Feature 5: Mixed Scrub

Management Objective

Management Vision

9.1 Mixed scrub will be planted along the entrance to the development and in the southern POS. These areas will comprise a mosaic of tussocky grassland and scrub that provides important structural habitat for a range of flora and fauna, including birds, amphibians and invertebrates. The scrub will provide places of refuge for animals, with small clearings present, to maximise basking opportunities, especially beneficial for invertebrates. Overall, this matrix of habitats provides good foraging opportunities such as berries for birds and hedgehog, and herbs offering pollen and nectar for invertebrates.

Targets

To create areas of mixed scrub of at least moderate condition

9.2 Moderate condition can be achieved by meeting 3-4 out of 5 Condition Assessment Criteria in the Defra Biodiversity Metric 3.0 Technical Supplement (Panks et al., 2021) for Mixed Scrub. A primary target will be to maintain scrub cover of at least 60%, with at least three native woody species with no one species comprising more than 75% of the overall cover. There should be a good age range of plants (seedlings, saplings, young shrubs and mature shrubs), with many clearings within the scrub.

Current Status

9.3 New mixed scrub habitat is yet to be established within the Site.

Explanation of Targets

9.4 The objective for this feature is to establish, maintain and enhance the condition of the mixed scrub and associated grassland clearings. Over time, in the absence of management, scrub will become extensive, forming a dense thicket that is of similar age and possibly uniform species composition. This will be of limited ecological value compared to what could potentially be achieved. To maintain a mosaic of this habitat in which scrub will be the most abundant, but not dominant feature, management (e.g., cutting) will be required to inhibit scrub establishment and maintain a variety of age ranges and create new clearings.

9.5 The scrub will be created by firstly sowing a tussocky grassland seed mix prior to scrub planting – this will provide a platform for glade creation.

9.6 Injurious weeds will only be tolerated in low densities so that they do not become too numerous at the expense of more desirable grassland species.

Habitat Creation, Restoration, Management and Monitoring (refer to Figure 2)

Feature 5: Create mixed scrub habitat	
Responsibility	SC
Equipment and Materials	Tussocky grassland: ~ Tractor mounted tine harrow, seed spreader and Cambridge roller ~ Shade tolerant, native wildflower-rich seed mix (e.g., Emorsgate Tussock Mixture (EM10). Scrub: ~ Planting plan, spades, planting stock (see below), guards and canes.

Methodology	Tussocky grassland: ~ Prepare a seedbed by scarifiying using a tine harrow. ~ Seed will be oversown at the required rate using tractor mounted seed spreader (or by hand in small areas). ~ The seeded areas will be lightly rolled using a Cambridge roller (or similar) to achieve contact with the soil. ~ All operations to be undertaken when the soil is moist but not waterlogged. Scrub: ~ Referring to the planting plan, mark out planting areas. ~ Dip the roots of transplants into a mycorrhizal root dip. ~ Transplants to be individually planted at approximately 1.5 m centres, with planting compost added if appropriate. Transplants will be planted to the existing nursery root collar level. ~ Each transplant will be protected by a Tubex 600 mm high Tubex Easywrap spiral guard (or similar). The transplants and spiral guards will be supported by a single 750 mm long cane, 12 mm diameter; driven into the ground to a minimum depth of 150 mm. ~ Native shrub species including crab apple, field maple, hazel, holly, and blackthorn, will be used and sourced from a reputable UK based supplier.
Timing	Tussocky grassland – April / May or September / October to achieve best results. Scrub - November to March (avoid frosty conditions)
Frequency	Complete tussocky grassland during first available season and scrub planting once earthworks and final ground levels have been achieved for the relevant phase.
Manage mixed scrub	
Responsibility	SC, SE
Equipment and Materials	Chainsaws, strimmers, brushcutters.
Methodology	~ SE to mark areas of scrub to be coppiced or removed on a three-year rotation. These will be 3-6 m in diameter. ~ Contractor to undertake coppicing and removal of scrub patches. ~ Removed material will be used to create habitat piles.
Timing	Late winter, ideally February.
Frequency	~ Manage biennially or as informed by monitoring
Monitor mixed scrub	
Responsibility	SE
Methodology	~ Plan a walked transect route that covers all accessible areas of mixed scrub habitat (including clearings, once created). ~ At five evenly spaced survey points (mark these with GPS), within a 2.5 m radius, estimate: • the composition of woody plants using a DAFOR scale; • age range of woody plants (i.e., sapling, young, semi-mature, mature) • the presence and % cover of any injurious weeds and invasive, non-native plant species.

	~ Additionally, note the presence of any invasive, non-native plant species AND large stands of injurious weeds (up to 5 m^2), anywhere within the mixed scrub. ~ Note any failing shrubs ~ Through cross-reference to recent aerial photography, map the proportion of scrub: grassland.
Timing	June to July
Frequency	Annually for first 3 years; biennially thereafter
Resulting Action	Review Management Prescriptions if moderate condition is not being met. Replace failed shrubs as appropriate. Consult suitably experienced contractor on the eradication of invasive, non-native weeds if presence is confirmed.

10 Feature 6 – Provision of Artificial Wildlife Installations

Management Objective

Management Vision

10.1 The Site will support nesting birds and roosting bats in appropriately placed artificial bird nest and bat roost boxes on new buildings to compensate for losses of established semi-natural vegetation. In addition, access for hedgehog will be retained by creating suitably sized openings in new garden fences to aid movement throughout the Site, linking semi-natural habitats for hedgehog foraging and shelter.

Targets

10.2 Ensure that all access points are unobstructed and features are structurally sound.

Current Status

10.3 The retained hedgerows provide suitable bird nesting habitat and are suitable for foraging and commuting bats. Additional roost and nest boxes will be installed prior to completion of construction.

10.4 Currently, there's no obstructions to hedgehog movement throughout the Site. New fences between properties will incorporate gaps for hedgehog.

10.5 Habitat piles created from scrub and hedgerow management works will be placed in discrete areas along the Site boundary to create suitable shelters for hedgehog.

Habitat Creation, Restoration, Management and Monitoring (Refer to Figure 2)

Feature 6: Provision of artificial wildlife installations	
Responsibility	Barratts & David Wilson Homes (B&DWH) and SE
Equipment and Materials	Artificial roosting/nesting features Fence panels. Circular or reciprocating saw.
Methodology	Nest / roost boxes: ~ Ten integral bat boxes (e.g., supplied by Bird Brick Houses) will be incorporated into buildings at a minimum height of 3 to 4 m above ground, with east, south or west facing aspects, looking onto semi-natural vegetation (i.e., hedgerow) and with clear flight paths. ~ Lighting levels in the area surrounding the features on trees and any connecting habitat corridors will be minimised, where possible. ~ Ten integral bird boxes (e.g., supplied by Bird Brick Houses) will be incorporated into buildings 4 m from the ground at a minimum height of 3 to 4 m above ground, with east or north facing aspects, looking onto semi-natural vegetation (i.e., hedgerow). Hedgehog-friendly fence panels ~ 130 x 130 mm holes will be cut out of the base of new fence panels at intervals throughout the Site. These will be placed such that hedgehog cannot become trapped in residential plots.
Timing	No restrictions
Frequency	One-off activity
Monitor artificial wildlife installations	
Responsibility	SE

Equipment and materials	Map of roosting/nesting feature locations and hedgehog-friendly fence panels, recording form, ladder.
Methodology	~ For installations attached to private properties, contact the owner first to seek permission to monitor the installation. ~ Check that access points are unobstructed. ~ Check for evidence of use. Bat boxes should be inspected by a licenced bat ecologist. ~ Check for signs of damage or other interference.
Timing	Nest / roost boxes - between March and September Hedgehog-friendly fence panels - anytime
Frequency	Years 1 and 2 post-construction
Resulting Action	Replace or reposition boxes if condition is not satisfactory. Unobstruct fence panels if blocked.

11 Delivery of the BEMP

Reporting and Meetings

11.1 There are requirements for monitoring by the Site Ecologist (SE) for specific features since it is only by regular monitoring that management can be appropriately reviewed and suggestions for improvements made as required. To provide documentary evidence of this monitoring and responsive management, periodical reporting will be appropriate, a copy of which will be circulated to the LPA to inform LPA site meetings.

11.2 For reasons of efficiency, it is recommended that this reporting is combined into a single annual report. The contents of this report will vary from year-to-year, depending upon the monitoring programme and management regime for the Management Features.

11.3 Site meetings with the LPA (most notably with the SE) may need to be convened; these will take place annually until such time that the LPA is satisfied that the frequency of meetings can be reduced, due to ongoing satisfaction with the ecological management being implemented. The annual site-based review meeting with the LPA will be held towards the end of the calendar year, at which time the progress made can be reviewed and future actions / amendments agreed and committed to writing to pave the way for the following year's management activities.

Funding and Legal Delivery Mechanism for Management

11.4 Habitat creation, enhancement and management in the BEMP is secured through a Section 106 Agreement.

11.5 Where possible to do so, habitat creation and management works identified in the BEMP will start at commencement of development. This will allow habitats the opportunity to establish early in the life of the development and therefore contribute to the biodiversity interest of the Site and its wider setting.

11.6 During the 30-year period covered by the BEMP, B&DWH and subsequently, the Land Management Company will be responsible for implementing the prescriptions stated in the plan.

12 Action Plan

Management Prescription	Responsibility	Timing	During Construction			Activities in Each Year (first five years)				
			2021	2022	2023	2024	2025	2026	2027	2028
Ecological Mitigation Measures – Pre-Commencement and During Construction										
Install protective fence along retained hedgerow on southern boundary	B&DWH	Prior to construction	✓							
Monitoring of fences and retained habitats by ECoW	ECoW	Throughout construction	✓	✓	✓					
Pre-construction survey for badger	ECoW	Prior to construction	✓							
Adopt measures to avoid harm to mammals during construction	B&DWH	Throughout construction	✓	✓	✓					
Adopt measures to avoid harm to nesting birds during construction	B&DWH	Throughout construction (preferable to avoid impacts to hedgerows and trees between March and August)	✓	✓	✓					
Implementation of lighting strategy	B&DWH	Throughout construction	✓	✓	✓					
Feature 1: Species-Rich Semi-Improved Neutral Grassland										
Create species-rich semi-improved neutral grassland	Specialist Contractor (SC)	April / May or September / October		✓	✓					
Manage semi-improved neutral grassland (moderate condition)	SC	End July (1 in 3 years: late-August). Spring cut & chain harrow during late April / May if required.			✓	✓	✓	✓	✓	✓
Manage semi-improved neutral grassland(fairly poor condition) in POS areas	SC	During growing season			✓	✓	✓	✓	✓	✓
Monitor grassland	Site Ecologist (SE)	Mid-June to mid-July				✓	✓	✓		✓
Feature 2: Hedgerows										
Plant Native Hedgerows	SC	November to March		✓	✓					
Manage hedgerows	SC	Late winter, preferably February				✓				
Monitor tree / shrub health and for presence of non-native / undesirable species	SE	June - July			✓	✓	✓	✓		✓
Feature 3: Trees										
Plant native trees	SC	November to March		✓	✓					

Management Prescription	Responsibility	Timing	During Construction			Activities in Each Year (first five years)				
			2021	2022	2023	2024	2025	2026	2027	2028
Monitor tree / shrub health and for presence of non-native / undesirable species	SE	June - July			✓	✓	✓	✓		✓
Feature 4: Orchard (see Feature 1 for grassland element)										
Create orchard	SC	Grassland element: April / May or September / October Tree planting: November to March		✓	✓					
Manage orchard	SC	Grassland cutting: End July (1 in 3 years: late-August). Formative pruning : Pip fruits in winter; stone fruits in summer			✓	✓	✓	✓	✓	✓
Monitor orchard	SE	June - July			✓	✓	✓	✓		✓
Feature 5: Mixed Scrub										
Create tussocky grassland	SC	April / May or September / October		✓	✓					
Create Mixed Scrub	SC	November to March		✓	✓					
Manage mixed scrub	SC SE	Late winter, preferably February				As required				
Monitor mixed scrub	SE	June - July			✓	✓	✓	✓		✓
Feature 6: Provision of Artificial Wildlife Installations										
Install bird nest boxes and bat roost boxes	B&DWH (SE)	No timing restrictions		✓	✓					
Install hedgehog-friendly fences	B&DWH (SE)	No timing restrictions		✓	✓					
Monitor installations	B&DWH / SE	March to September (nest / roost boxes)				✓	✓			
Reporting										
Reporting	SE	Annual				✓	✓	✓	✓	✓

13 References

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Figures

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JOB REF: P21-098

PROJECT TITLE

OWL LANE, CHIDSWELL, DEWSBURY

DRAWING TITLE

Figure 1: Baseline Habitats Site Map

DATE: 18/08/2021	CHECKED: JF	SCALE: 1:1,600
DRAWN: LA	APPROVED: JF	VERSION: 1.1

Legend

- Red line boundary
- Native hedge (Moderate condition)
- Native hedge with trees (Good condition)

Arable land (condition n/a)

- A J1.1 - Cultivated/disturbed land - arable

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JOB REF: P21-098

PROJECT TITLE

OWL LANE, CHIDSWELL, DEWSBURY

DRAWING TITLE

Figure 2: Ecology Features to be Created and Managed

DATE: 17/09/2021	CHECKED: JF	SCALE: 1:1,600
DRAWN: LA	APPROVED: JF	VERSION: 1.2

Legend

- Red line boundary
- Scattered tree (moderate condition)
- Native species rich hedge (Good condition)
- Retained native hedge with trees (Good condition)
- Mixed scrub (Moderate condition)
- Urban orchard (Moderate condition)
- Other neutral grassland (Fairly poor condition)
- Other neutral grassland (Moderate condition)

Bird and bat boxes. Install ten bat boxes and ten bird nest boxes into new buildings fronting habitat corridors in south and east of Site

Hedgehog-friendly fences. Holes will be cut out of the base of new fence panels at intervals throughout the Site. These will be placed such that hedgehog cannot become trapped in residential plots

Appendix 1: Summaries of Relevant Policy, Legislation and Other Instruments

This section briefly summarises the legislation, policy and related issues that are relevant to the main text of the report. The following text does not constitute legal or planning advice.

Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act require the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England as required by the Act. In accordance with the Act the Secretary of State keeps this list under review and will publish a revised list if necessary, in consultation with Natural England.

The S41 list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions, including development control and planning. This is commonly referred to as the 'Biodiversity Duty.'

Guidance for public authorities on implementing the Biodiversity Duty[8] has been published by Defra. One of the key messages in this document is that 'conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them.' In England the administration of the planning system and licensing schemes are highlighted as having a 'profound influence on biodiversity conservation.' Local authorities are required to take measures to "promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species. The guidance states that 'the duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making.'

In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for rarer species and habitats in the UK. The UK Post-2010 Biodiversity Framework[9], which covers the period from 2011 to 2020, now succeeds the UK BAP. The UK priority list contained 1150 species and 65 habitats requiring special protection and has been used as a reference to draw up the lists of species and habitats of principal importance in England.

In England, there are 56 habitats of principal importance and 943 species of principal importance on the S41 list. These are all the habitats and species found in England that were identified as requiring action in the UK BAP and which continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

Birds

All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

Badger

Badger setts have not been recorded within the Site, although badger may be present within the local area. Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or

[8] Defra, 2007. *Guidance for Public Authorities on Implementing The Biodiversity Duty*. (http://www.defra.gov.uk/publications/files/pb12585-pa-guid-english-070516.pdf)

[9] JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. *UK Post-2010 Biodiversity Framework*. July 2012. (http://jncc.defra.gov.uk/page-6189)

destroying a sett or obstructing access to it. A badger sett is defined in the legislation as “a structure or place, which displays signs indicating current use by a badger”.

Wild mammals in general

The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts, making it an offence for any person to intentionally cause suffering to any wild mammal. In the context of development sites, for example, this may apply to rabbits in their burrows.

Invasive non-native species

No non-native invasive species have been recorded on the Site. Such species should not be introduced to Site over the duration of the project (e.g., via cross contamination from heavy plant or inappropriate sourcing of plants and seed for the landscaping). It is an offence to plant or otherwise cause to grow in the wild invasive non-native plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This effectively means that it is an offence to cause the spread of such plants as a result of development operations.