Land West of Bloxham Road, Banbury

Ecological Appraisal

Prepared by:
The Environmental Dimension Partnership Ltd

On behalf of:
Barwood Development Securities Ltd

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Executive Summary

S1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Barwood Development Securities Ltd (hereafter referred to as 'the Applicant'), to inform the proposed development of an additional parcel of Land West of Bloxham Road, Banbury (hereafter referred to as 'the Site'). The Site is to be subject to an outline planning application for up to 65 dwellings with associated access, landscaping and open space provisions.

S2 The Site is located on the western edge of Banbury centred approximately at Ordnance Survey Grid Reference (OSGR) SP 43891 38680. The Site is circa. 3.16 hectares (ha) in size and comprises a single agriculturally improved grassland bound by hedgerows. Sections of plantation woodland, semi-improved grassland and a hardstanding track are present towards the northern portion of the Site. The baseline ecological investigations undertaken as part of the appraisal included a desk study, Extended Phase 1 Habitat survey and detailed (Phase 2) survey relating to hedgerows, bats and great crested newts.

S3 There are no statutory designated sites of international importance within 10km, nor of national importance within 2km of the Site. In regard to non-statutory designated sites, the Designated Wildlife Sites and Conservation Target Areas within the potential zone of influence are considered to be spatially separated from the Site. Given their spatial separation from the Site in addition to the size and nature of the proposed development, no significant direct or indirect impacts are predicted.

S4 The Site is dominated by a single field of cattle-grazed, improved grassland with small strips of poor semi-improved grassland to the north of the Site. The field is bound by a network of hedgerows and broadleaved treelines which are up to Local level importance. The scheme has been designed to retain and enhance the most ecologically valuable features and will incorporate additional measures to enhance the Site for biodiversity.

S5 A biodiversity impact assessment has been undertaken and this has demonstrated that the Illustrative Layout is capable of achieving a biodiversity net gain of over 10% in both habitat and hedgerow units. This is, however, based on a precautionary approach and includes a number of assumptions regarding the landscaping scheme. An update to the Department for Environment, Food and Rural Affairs (DEFRA) Biodiversity Impact Assessment may be required as part of the detailed design stage to ensure the scheme remains capable of providing net gains to biodiversity in accordance with local planning policy, the National Planning Policy Framework (NPPF) and the Environment Act 2021.

S6 A suite of protected species surveys have been undertaken in 2021 and 2022 which has identified that the Site supports low levels of bat activity by a low diversity of bat species and a single badger sett.

S7 Policy for the conservation and enhancement of the natural environment at all levels aims to minimise impacts on biodiversity and provide net gains in biodiversity NPPF (paragraph 180). Accordingly, from the outset of the design process, EDP has contributed iteratively to the design of the proposed development to minimise impacts and deliver biodiversity enhancement.

S8 As a result of this iterative design process, the locally valuable hedgerows and mature trees have primarily been retained and buffered from development. The proposed layout will also deliver significant habitat creation and enhancement through the green infrastructure network which includes new areas of Public Open Space provisions. This will include species-rich wildflower grassland, marshy grassland and sustainable urban drainage features with native species planting.

S9 Recommendations are made for the protection of habitats and species during construction, including protective fencing and sensitive clearance methods. Such mitigation measures should be detailed in an Ecological Construction Method Statement (ECMS), or equivalent document, secured via planning condition. With respect to protected species, enhancement measures include the establishment and management of new habitats and provision of new bird and bat boxes.

S10 In summary, the ecological mitigation strategy for the scheme includes: (1) avoidance measures already embedded within the proposed layout; (2) measures that should be incorporated at the construction stage; (3) those that have been designed and specified within the landscaping scheme; and (4) management measures to ensure that the measures can be realistically achieved in the long-term.

S11 On this basis, EDP considers that the scheme is capable of delivering significant long-term ecology benefits that exceed relevant planning policy requirements for the conservation of the natural environment at all levels.

Section 1
Introduction

1.1 This Ecological Appraisal (EA) has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Barwood Development Securities Ltd, to inform the proposed development of an additional parcel of Land West of Bloxham Road, Banbury (hereafter referred to as 'the Site'). This EA provides a high-level assessment of the Site with respect to identifying key ecological constraints and opportunities to inform the planning amendments to the current outline permission.

1.2 This report has been informed and prepared with reference to the following industry standard guidelines:

- British Standard Institution, (2013) Biodiversity. Code of Practice for Planning and Development. BS Standard. BS 42020:2013. British Standards Institute;
- Chartered Institute of Ecology and Environmental Management (CIEEM), (2017)., Guidelines for Preliminary Ecological Appraisal, 2nd Edition. CIEEM, Winchester[1]; and
- CIEEM, (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal version 1.2. CIEEM, Winchester[2].

1.3 EDP is an independent environmental planning consultancy with offices in Cirencester, Cheltenham and Cardiff. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

1.4 The Site is located on the western edge of Banbury centred approximately at Ordnance Survey Grid Reference (OSGR) SP 43891 38680. The Site is circa. 3.16 hectares (ha) in size and comprises a single agriculturally improved grassland field bound by hedgerows. Sections of plantation woodland, semi-improved grassland and a hardstanding track are present towards the northern portion of the Site.

1.5 Beyond the Site boundaries, farmland is located to the west and south, and recently consented residential development (Planning Ref: 14/01188/OUT) to the north and east.

[1] CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
[2] CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland*, version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

DEVELOPMENT PROPOSALS

1.6 Outline Planning Application for the development of up to 65 homes, including open space provision, parking, landscaping, drainage and associated works, with all matters reserved (appearance, landscaping, layout and scale) except for access. Access for the scheme will be provided via the existing access road to be constructed as part of the adjacent planning application to the north of the Site (planning ref: 14/01188/OUT) and the scheme will deliver appropriate mitigation for the habitat loss where required. This existing road will connect to the new access road to be created through the woodland on Site.

1.7 The Illustrative Framework Plan is provided as **Appendix EDP 8** to this report.

SCOPE OF APPRAISAL

1.8 This EA describes the current ecological interest within and around the Site, which has been identified through standard desk- and field-based investigations undertaken between 2021-2022.

1.9 This report considers the potential ecological impacts and opportunities for ecological enhancement based on the development proposals (incorporating inherent mitigation) in the context of relevant legislation and planning policy. Finally, this Appraisal identifies the necessary additional measures to avoid, mitigate or provide compensation for potential impacts, and the mechanisms for securing such measures.

1.10 The remainder of this report is structured as follows:

- **Section 2** summarises the methodology employed in determining the baseline ecological conditions within and around the Site (with further details provided within appendices and on plans where appropriate);
- **Section 3** summarises the baseline ecological conditions (with further details provided within appendices and on plans where appropriate) and identifies and evaluates any pertinent ecological features/receptors;
- **Section 4** describes the development proposals;
- **Section 5** considers the potential impacts of the proposals on pertinent ecological features in the context of legislative, planning policy and biodiversity action planning considerations. Recommendations for mitigation and enhancement measures are provided for the current and potential future planning stages; and
- **Section 6** summarises the inherent and recommend additional mitigation measures and provides the overall conclusions of the EA.

Section 2
Methodology

2.1 This section summarises the methodologies employed in determining the baseline ecological conditions within and around the Site. The appraisal has been undertaken by appropriately experienced ecologists using relevant best practice methodologies wherever possible. Full details of the techniques and process adopted are, where appropriate, provided within Appendices and on Plans to the rear of this report.

DESK STUDY

2.2 The desk study is an important element of undertaking an EA of a site proposed for development, enabling the initial collation and review of contextual information, such as designated sites, together with known records of protected and priority species and habitats[3] and augments the information captured during field surveys.

2.3 The desk study involved collating information from the following sources:

- Thames Valley Environmental Records Centre (TVERC)[4];
- Multi-Agency Geographic Information for the Countryside (MAGIC[5]); and
- Freely available aerial photography from Google Maps[6] and Ordnance Survey mapping available through Promap[7].

2.4 The desk study was undertaken during November 2022 and involved obtaining the following information:

- International statutory designations (10km radius around the Site);
- National statutory designations (2km);
- Non-statutory local sites (1km);
- Priority Habitats (250m);
- All protected/notable species records (1km); and
- Annex II bat species records (6km)[8].

[3] Priority Species and Habitats relate to those listed on Section 41 of the *Natural Environment and Rural Communities Act* (2006) considered to be of principal importance for conservation of biodiversity in England.
[4] Data provided for badger setts, bat roosts, otter holts, raptor nest sites and sensitive plant species are treated as confidential and summarised to a 1km resolution.
[5] www.magic.gov.uk
[6] https://www.google.co.uk/maps
[7] http://www.promap.co.uk
[8] Bat roost records were returned from BRERC with a resolution of 1km only.

2.5 These search areas are considered sufficient to cover the potential zones of influence[9] of the proposed development in relation to designated sites, habitats and species.

EXTENDED PHASE 1 SURVEY

2.6 An initial Site walkover survey was undertaken by EDP on 16 April 2021 and updated on 27 October 2022, with reference to the methods described in JNCC (2010)[10], in order to inform the baseline habitats and (potential) protected species information for the Site.

2.7 The survey technique adopted for the initial habitat assessment was at a level intermediate between a standard Phase 1 Habitat survey technique, based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey technique is commonly known as an Extended Phase 1 survey. This level of survey does not aim to compile a complete floral and faunal inventory for the Site.

2.8 The Extended Phase 1 survey involves identifying and mapping the principal habitat types and identifying the dominant plant species present in each principal habitat type. In addition, any actual or potential protected or priority species are identified and scoped.

2.9 During the Phase 1 survey, a Biodiversity Net Gain Condition Assessment survey was also completed utilising Defra metric 3.1 condition assessment criteria to ensure that sufficient information was collated to inform a Biodiversity Impact Assessment (BIA).

Limitations

2.10 The Extended Phase 1 surveys were conducted in April and October, which is within the optimum survey window (April to October inclusive) for habitat surveys. Therefore, the survey results are considered to be robust, with sufficient evidence of habitat composition collected to provide an assessment of ecological value appropriate to the scope of this report.

BIODIVERSITY NET GAIN

2.11 To inform the EA and demonstrate compliance with national and local planning policies relevant to biodiversity conservation, a BIA has been completed using the Department for Environment, Food and Rural Affairs (DEFRA) Biodiversity Metric (v.3.1. – April 2022). Full details of the methodology and assumptions for the BIA are provided within **Appendix EDP 4** of this report. The calculations are provided in **Appendix EDP 5,** Habitat Baseline Condition Assessment Sheets are provided as **Appendix EDP 6** and Post-development Condition Assessment Sheets are provided as **Appendix EDP 7**.

[9] Zone of Influence - the areas and resources that may be affected by the proposed development.
[10] Joint Nature Conservation Council (2010) Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit (reprinted with minor corrections for original Nature Conservancy Council publication).

DETAILED (PHASE 2) SURVEYS

2.12 The scope of the Phase 2 surveys undertaken at the Site was defined following the initial studies described above (desk study and Extended Phase 1 Habitat survey). The surveys 'scoped in' are summarised in turn below and a brief explanation of those surveys 'scoped out' is provided thereafter.

Investigations of Bats

Bat Roosting Survey

2.13 To investigate roosting bats, a tree roost suitability assessment was undertaken following current good practice guidelines[11] during the Extended Phase 1 Habitat Survey on 16 April 2021 and updated on 27 October 2022 by a suitably experienced and licenced bat ecologist. Based upon the results of this assessment, each tree was assigned a bat roost suitability category from negligible to high suitability.

2.14 Full details of the bat roost assessment methodologies and any limitations encountered are provided in **Appendix EDP 2**.

Bat Foraging/Commuting Activity Survey

2.15 Habitats of low suitability for foraging and commuting bats have been identified on site during the initial and update Extended Phase 1 survey; including poor semi-improved grassland, broadleaved treelines and hedgerows. Seasonal transect surveys were therefore undertaken in May, July and September 2021 to assess the diversity, distribution, and abundance of the bat foraging/commuting assemblage within the Site. Supplementary automated detector surveys were also conducted in May, July and September 2021.

2.16 Full details of the bat survey methodologies and any limitations encountered are provided in **Appendix EDP 2**. The route walked for the transect survey and location of automated detectors is shown on **Plan EDP 2**.

Badger Survey

2.17 The Extended Phase 1 Habitat survey undertaken on 27 October 2022 included a search for evidence of badger (*Meles meles*), to determine the presence, and distribution of badgers and their setts across the Site. During the survey, any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified, leaf litter, fresh spoil, tracks, old bedding and guard hairs were used to determine whether they were currently in active use.

[11] Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* 3rd edition. Bat Conservation Trust, London.

Limitations

2.18 Badger surveys can be undertaken at any time of year, such that this survey was not constrained by seasonal or climatic factors. There were also no access limitations throughout the habitats across the Site.

Great Crested Newts

Habitat Suitability Index (HSI)

2.19 There are two ponds within 250m of the Site. These include P1 c. 45m north-east and a sustainable drainage system (SuDS) Pond c. 45m east of the Site. A habitat suitability index (HIS) assessment, as developed by Oldham et al. (2000)[12], was initially undertaken in April 2021 and updated on 27 October 2022 to assess the suitability of pond P1 within 250m of the Site to support great crested newt (*Triturus cristatus*). The HSI assessment follows a standardised assessment criteria using habitat features such as water quality, fish/waterfowl presence and surrounding terrestrial habitat quality to derive a suitability score, or 'index'. Water bodies with high scores are considered more likely to support great crested newts compared to those with lower scores. Full details of the HSI methodology and any limitations encountered are provided in **Appendix EDP 2**.

2.20 There are another three ponds within 500m of the Site which are located 315m north-east, 325m north-west and 340m north-east respectively. Given the nature of the Site and its separation from this pond by intervening dense residential housing, further surveys were not undertaken for this pond as it is considered highly unlikely that any populations (if present) would be impacted by the proposed development.

eDNA Survey

2.21 An eDNA survey was attempted in April 2021, however, pond P1 and adjacent water attenuation SuDS basin were both dry and therefore could not be sampled.

2.22 Full details of the great crested newt eDNA survey are provided in **Appendix EDP 3.**

Limitations

2.23 All ponds were dry and therefore the eDNA survey was not possible. It was considered unlikely that the off-Site pond within the woodland and the nearby, recently created SuDS basin would be used by great crested newts.

[12] Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt* (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155

Section 3
Ecological Baseline

3.1 This section of the EA summarises the baseline ecological conditions determined through the course of desk and field-based investigations, as described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors that lie within the Site's potential zones of influence, and which are pertinent in the context of the development of the Site. Further technical details are, where appropriate, provided within appendices and onplans to the rear of this report.

3.2 Where a particular ecological feature/receptor has been confirmed to be present, or presence is inferred based on habitat suitability, the ecological value or significance of the population or assemblage is assessed on the following geographic scale:

- International importance (ecological features that if impacted, would affect the distribution of this feature in Europe);
- National importance (ecological features that if impacted, would affect the distribution of this feature in England);
- Regional importance (ecological features that if impacted, would affect the distribution of this feature in south-east England);
- County importance (ecological features that if impacted, would affect the distribution of this feature in Oxfordshire and Cherwell District); and
- Local importance (ecological features that if impacted, would affect the distribution of this feature in Banbury and its surroundings).

3.3 Habitats assessed as being of less than 'Local' importance are identified as being of 'Site' level importance or less (negligible).

DESIGNATED SITES

Statutory Designations

3.4 Statutory designations represent the most significant ecological receptors, being of recognised importance at an international and/or national level. International designations include Special Protection Areas (SPA), potential SPA (pSPA), Special Areas of Conservation (SAC), possible SAC (pSAC), Ramsar Sites and proposed Ramsar. National designations include Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). Local Nature Reserves (LNR) are also statutory, with their level of value typically at County level or less.

3.5 No sites of international, European or national value were returned within the potential zone of influence.

Non-Statutory Designations

3.6 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although in fact these designations are typically considered to be of importance at a county level. In Cherwell District, such designations are named Designated Wildlife Sites (DWS), Conservation Target Areas (CTA), Nature Recover Networks (NRN), Oxfordshire Local Wildlife Site (OLWS) and Proposed Cherwell District Wildlife Site (PCDWS).

3.7 The Nature Recovery Network Core Zone includes statutory and non-statutory sites, reserves, priority habitats and ancient woodland. The closest Core Zone parcel lies c. 90m to the east of the Site. However, it is separated from the Site by the SuDS and POS area of the recently consented residential development (Planning Ref: 14/01188/OUT), and the A361 road.

3.8 In addition, TVERC returned two DWS located within 1km of the Site. Further details of these are provided in **Table EDP 3.1** below. The Saltway is separated from the Site by the recently consented residential development (Planning Ref: 14/01188/OUT).

Table EDP 3.1: Non-statutory Designations within the Potential Zone of Influence of the Site

Non-Statutory Designation	Distance and Direction from Site Boundary	Interest Feature(s)
Nature Recovery Networks		
Core Zone	90m, E	A narrow strip of woodland comprising several parcels along the eastern edge of the A361 which connects to and includes The Saltway to the north and Northern Valleys to the south.
Designated Wildlife Sites		
The Saltway	270m, N	An ancient road to the south of Banbury, currently used as a surfaced bridle path, bounded by hedgerows and narrow wooded strips. Historic records of white-letter hairstreaks. Part of the Core Zone NRN.
The Bretch	805m, NW	An abandoned ironstone working now used as a recreation area, with rough grassland and scrub with richer calcareous grassland remnant patches. Part of the Core Zone NRN.
Conservation Target Areas		
Northern Valleys	500m, SW and 575m, SE	The valleys of Sor Brook and North Newington Stream have areas of lowland meadow, limestone grassland and fen and swamp priority habitats. Part of the Core Zone NRN.

HABITATS

3.9 During the field survey, 0.17km of Priority Habitat native hedgerow has been identified on site. These are ecologically valuable forms due to being species-rich and associated with a bank and/or ditch which increases the number of opportunities for wildlife. Furthermore, a single Priority Habitat pond (P1), lies c. 45m north-east of the Site. This is in poor condition due to being dry, likely for some period, and heavily shaded by the adjacent woodland.

3.10 TVERC returned seven records of notable plant species within 1km, including bluebell (*Hyacinthoides non-scripta*), common rock-rose (*Helianthemum nummularium*), common valerian (*Valeriana officinalis*), and field scabious (*Knautia arvensis*). The closest record was for bluebell at c. 350m north-east of the Site, while the other three species were recorded c. 1km from Site. The Site is not considered suitable for supporting these species, and none were recorded on the Site during the Phase 1 Habitat survey.

3.11 The habitats located within the Site, as recorded during the extended Phase 1 survey, are shown on **Plan EDP 1** and described further below. Indicative photographs of the onsite habitats are provided in **Appendix EDP 1**.

Improved Grassland

3.12 Comprising a single enclosed field, the improved grassland is well-grazed and well-trodden by cattle, with a uniform short sward. Perennial ryegrass (*Lolium perenne*) is dominant, with abundant cock's-foot (*Dactylis glomerata*). White clover (*Trifolium repens*), dandelion (*Taraxacum officinale* agg.), creeping buttercup (*Ranunculus repens*) and spear thistle (*Cirsium vulgare*) are encountered occasionally with some broad-leaved dock (*Rumex obtusifolius*) and ragwort (*Jacobaea vulgaris*).

Poor Semi-improved Grassland

3.13 Located to the north of the improved grassland and bounded by the hardstanding track to its north, the poor semi-improved grassland has a tall, rank sward that hosts the same species as recorded in the improved grassland, with an increased presence of cock's-foot, broad-leaved dock and spear thistle. Overall species composition is more diverse, with dove's-foot cranesbill (*Geranium molle*), cleavers (*Galium aparine*), field speedwell (*Veronica persica*), ribwort plantain (*Plantago lanceolata*), common nettle (*Urtica dioica*), white dead-nettle (*Lamium album*) and cow parsley (*Anthriscus sylvestris*) recorded.

Hedgerow and Treelines

3.14 Hedgerow1 (H1 and H2) bound the western field boundary, while a double-line of species-rich broad-leaved trees (H3) delineates the southern field boundaries. The hedgerows are described below:

- H1 is generally tall and unmanaged with trees and a dry, very shallow ditch to its west. On average, there are seven woody species per 30m. Hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) occur most frequently with some, ash (*Fraxinus excelsior*), oak (*Quercus* sp.), rose (*Rosa* sp.), field maple (*Acer campestre*), hazel (*Corylus avellana*), cherry (*Prunus avium*) and elm (*Ulmus* sp.). Common nettle,

common ivy (*Hedera helix*) and bramble (*Rubus fruticosus*) dominate the understorey. The hedgerow qualifies under ecological reasons for protection under the *Hedgerow Regulations* (1997);

- H2 is an intact, species-rich hedgerow which lies behind a fence with a dry, shallow ditch to its east. On average, there are six woody species per 30m, including: hawthorn, blackthorn, ash, rose, field maple, hazel, and elm. Nettle, common ivy and bramble dominate the understorey; and

- H3 comprises a double line of trees, with a 1.5m wide dry ditch to its north. There is a fence line to its north and south. These include cherry, ash elm, hawthorn, silver birch (*Betula pendula*), field maple, sweet chestnut (*Castanea sativa*), oak and spindle (*Euonymus europaeus*). The understorey primarily comprises grasses (with some forbes) as recorded in the improved and poor semi-improved grasslands, with some bramble.

Hardstanding

3.15 A hardstanding single-lane track runs along the northern portion of the Site between the poor semi-improved grassland and the offsite woodland. The track is generally in fair condition.

Plantation Woodland

3.16 A section of young broad-leaved plantation woodland is located on the northern portion of the Site. The off-site components of this woodland contains a network of dry ditches which lead to a dry pond to the north-east of the Site. Woody species include sweet chestnut, oak, field maple, ash, cherry, whitebeam (*Sorbus aria*), rose, spindle, hawthorn and fir (*Abies* sp.). Fir trees make up less than 10% of the species composition. The understorey is sparse, with some small stands of bramble, common nettle and wood millet (*Milium effusum*).

Off-site Habitats

3.17 To the west and south of the Site lie pasture grassland. To the east lies a SuDS basin surrounded with meadow grassland and amenity grassland.

SPECIES

3.18 The likelihood of presence, or confirmed presence, of protected/and or notable wildlife species within the Site is summarised below with reference to desk study records, habitat suitability and detailed surveys where relevant. Further details are made available within appendices and plans where referenced.

Birds

3.19 TVERC returned 147 notable bird records, pertaining to 38 species. This includes seven Schedule 1 species (namely: barn owl (*Tyto alba*), fieldfare (*Turdus pilaris*), hobby (*Falco subbuteo*), kingfisher (*Alcedo atthis*), peregrine (*Falco peregrinus*), red kite (*Milvus milvus*) and redwing (*Turdus iliacus*)) and 16 priority species.

3.20 The hedgerow and mature treeline around the perimeter of the Site, and small plantation woodland to the north, offer suitable habitat to support common nesting birds. Given the nature of the habitats present, it is considered likely that the assemblage of breeding birds using the Site is of Site-level importance.

Bats

3.21 TVERC returned six records of roosting bats relating to three locations with the closest record located 2.3km to the south-east. The remaining records pertain to roosts which lie c. 4km to the north-east and north-west. All roost records were not identified to genus level.

3.22 In addition, TVERC returned 55 records of foraging and commuting bats – the majority of which were not identified to species or genus level and relate to foraging and commuting bats, with 14 recorded as Myotid bats (*Myotis spp.*), one common pipistrelle (*Pipistrellus pipistrellus*) and one brown long-eared bat (*Plecotus auritus*). Of note, two records of barbastelle (*Barbastella barbastellus*) were recorded flying 1.2km to the north-west of the Site in 2019.

3.23 The plantation woodland to the north of the Site is not considered to offer suitable roost opportunities for bats due to the young age and general good condition of the trees, though bat roosting features will have been incorporated into the new dwellings associated with the development to the north. The woodland, treelines and hedgerows are also considered to offer some suitability for foraging and commuting.

Bat Roosting Survey

3.24 None of the trees within the Site were identified as being potentially suitable to support roosting bats given their immaturity and good condition.

Bat Foraging/ Commuting Activity Survey

3.25 Detailed results of the bat activity transects and automated detector surveys are provided in **Appendix EDP 2** and illustrated on **Plan EDP 2**.

3.26 Overall, low levels of foraging/commuting bat activity were recorded across the Site during the transect surveys. Furthermore, only a limited number of species were recorded including common pipistrelle, soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*) and Myotid bats. Activity peaked in May and decreased on each subsequent survey, with activity concentrated on the hedgerow and tree lines along the western and southern site boundaries as shown on **Plan EDP 2**.

3.27 A total of six bat species were confirmed to be present foraging and/or commuting within the Site during the automated detector surveys with serotine (*Eptesicus serotinus*) and

long-eared bat (*Plecotus spp.*) also recorded on Site. In direct contrast to the transect surveys activity was generally low in May but significantly increased in September.

Evaluation

3.28 The bat assemblage recorded within the Site is considered relatively typical for an urban edge site in the south of England. The vast majority of foraging and commuting activity was attributed to common and widespread generalist species, namely common and soprano pipistrelle. A small number of uncommon species including serotine and *Myotid* bats were also recorded, albeit in relatively low numbers and considered only to use the Site for infrequent, low-level foraging/commuting. The hedgerows around the boundaries of the Site are considered, in the context of the other habitats present, to provide foraging and commuting corridors for bats in the local area.

3.29 Based on the findings summarised above, the bat foraging/commuting assemblage within the Site is considered to be of Local-level importance.

Badger

3.30 [redacted]

3.31 [redacted]

3.32 [redacted]

Great Crested Newt

3.33 Fourteen records of great crested newt and two records of smooth newt (*Lissotriton vulgaris*) were returned by TVERC. The closest of which are located c. 400m to the north of the Site. However, these records are separated from the Site by construction works. The other records pertain to ponds 500-700m to the south-east and are separated from the Site by the A361.

3.34 There is a ditch network along the eastern, western and southern perimeters of the Site. One pond (P1) lies in the northern peninsular of the plantation woodland located to the north of the Site boundary, with a ditch running east-west that feeds into the pond. In addition, there is a flood attenuation basin to the east, and a mitigation pond to the north. However, the mitigation pond is separated from the Site by construction works (270m to the north of the Site). All ponds and ditches were dry at the time of the surveys.

3.35 The Site itself supports intensively grazed improved grassland which provides sub-optimal terrestrial habitat for great crested newts due to its limited protection from predators and

foraging opportunities. The boundary hedgerows, treelines and poor semi-improved grassland could provide some, limited opportunities for great crested newts.

3.36 Given the primarily sub-optimal condition of the Site and closest waterbodies, it is considered highly unlikely that great crested newts would be present on Site however they cannot be ruled out with certainty.

Reptile

3.37 A single record for common lizard (*Zootoca vivipara*) was returned by TVERC from 2013, located c.375m to the north. In addition, EDP recorded a grass snake (*Natrix helvetica*) c. 300m to the north in 2014, as part of the neighbouring application.

3.38 The rough grassland areas along the track and field margins are considered suitable for common reptiles, although somewhat ecologically isolated. The improved grassland field is cattle-grazed and well-trodden, making it unlikely to be utilised by reptiles. If present, any population is unlikely to be significant beyond a local context, and therefore is considered to be of site level ecological importance.

Dormouse

3.39 No records for dormouse (*Muscardinus avellanarius*) were returned by TVERC. The Site supports native hedgerows and treelines which could provide opportunities for dormice. The adjacent plantation woodland is sub-optimal for dormice given the immaturity of the trees and sparse understory layer. Optimal woodland habitats are present in the wider landscape, however, these are poorly connected to the Site. Given the limited distribution of suitable habitats within the Site and the poor connectivity of the Site to optimal woodland habitat, dormice are considered absent from the Site and are not considered further in this report.

Otter and Water Vole

3.40 TVERC did not return any records for otter or water vole.

3.41 The on-site ditches are of limited value for these species due being typically dry and poorly connected to other suitable waterbodies/watercourses in the local surroundings. As such, both otter and water vole are considered to be absent from the Site and are not considered further in this report.

Other Notable Species

3.42 Four records of hedgehog (*Erinaceus europaeus*) were returned by TVERC, of which the closest record lies c.630m to the north-east. There was a single record of polecat (*Mustela putorius*) from 2015, recorded c. 850m to the south of the Site. The Site is considered to offer limited suitable habitat for these species.

Section 4
Details of Proposed Development

4.1 EDP has provided input throughout the iterative design process, so the proposed layout already reflects some important measures suggested by EDP, to avoid, mitigate or compensate for ecological impacts as well as other measures designed to provide long-term ecological enhancements. A vision for the POS and natural areas is presented within the Illustrative Layout enclosed as **Appendix EDP 8**. The key inherent measures included within the strategy's design to provide long term benefits to biodiversity are as follows:

- Retention, buffering and enhancement of the majority of boundary features, including the locally valuable woodland, hedgerows and treelines; and

- Provision, an attractive, multi-functional green space with areas designed to maximise biodiversity, whilst providing recreational opportunities to enhance on-Site and local biodiversity.

4.2 Further measures designed to ensure that the proposals enhance the natural environment to “identify and pursue opportunities for securing measurable net gains for biodiversity” in accordance with paragraph 179 of the NPPF, are discussed further in **Section 5** of this Appraisal.

Section 5
Predicted Impacts and Mitigation

5.1 This section of the EA considers the likely impacts of the development proposals on the existing ecological resource as illustrated in **Appendix EDP 8**. Where impacts cannot be avoided by inherent mitigation alone, additional mitigation or enhancement measures are recommended, which, if implemented, would ensure the proposed development is undertaken in accordance with legislative and planning policy requirements.

5.2 In accordance with the *Natural Environment and Rural Communities* (NERC) *Act* 2006, within England, Local Planning Authorities (LPAs) have a statutory duty to have regard to effects upon biodiversity when exercising their functions; this includes consideration of effects upon ecological features such as designations and Priority Habitats/Priority Species when determining planning applications. In accordance with planning policy at all levels, LPAs must also consider whether or not 'significant harm' to biodiversity may occur due to effects upon such ecological features. This, and the statutory protection afforded to certain designations and species, is explored in further detail below.

POLICY CONTEXT

5.3 There are several mechanisms through which habitats receive protection with the statutory and non-statutory designated site frameworks. For instance, certain habitats are identified in policies within the NPPF. Furthermore, the NPPF states:

"*180. when determining planning applications, local planning authorities should apply the following principles:*

a) If significant harm to biodiversity resulting from a development cannot be avoided (through locating on alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

…

c) development proposals 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 reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains in biodiversity or enhance public access to nature where this is appropriate."

5.4 In addition, the *Environment Act* 2021, subject to the two-year adoption period, includes additional policy for protecting and improving the natural environment. This includes a requirement for new developments to deliver 10% biodiversity gain, as evaluated using a BIA calculator.

5.5 At a local level, the Cherwell Local Plan 2011 - 2031 (adopted July 2015) affords policy protection to biodiversity via Policy EN10: Protection and Enhancement of Biodiversity and the Natural Environment. This states that the council will support proposals which provide a net gain in biodiversity by:

"*…protecting, managing, enhancing and extending existing resources, and by creating new resources*". Furthermore, "*development proposals will be expected to incorporate features to encourage biodiversity and retain and where possible enhance existing features of nature conservation value within the site*."

5.6 Policy ESD11: Conservation Target Areas requires development within or adjacent to a Conservation Target Area to undertake a biodiversity survey and a report to identify constraints and opportunities for biodiversity enhancement.

DESIGNATED SITES

5.7 As outlined in **Section 3**, there are no statutory designations that would be directly or indirectly impacted by the proposed development.

5.8 A number of DWS are present within the local surroundings. Owing to the degree of spatial separation from these designated sites, and the lack of any direct habitat linkage/pathway, it is considered that the proposed scheme would have no significant direct impacts upon the special interest features. Indirect impacts from recreational pressure will be minimised through the provision of on-site POS within the Site.

5.9 A CTA is used to identify where the greatest gains can be made from habitat enhancement, restoration and creation, as these areas offer the best opportunities for establishing large habitat areas and/or networks of wildlife habitats. As the Site does not fall within or adjacent to the CTA, the proposed development will not have a detrimental effect on the purpose of the designation, and as such, it will not be considered further.

HABITATS

5.10 With reference to the habitats present, the hedgerow network, broadleaved plantation woodland and off-site pond is considered to be of Local level value, with the other habitats considered to be of Site level value or lower. Hedgerows also have the status of a Priority Habitat.

5.11 None of the habitats within the Site are particularly notable such that it might preclude development, and their degraded state leaves scope for enhancement opportunities. The scheme has been designed to primarily retain and enhance these boundary habitats with supplementary planting in gaps and the implementation of an appropriate management regime. Furthermore, to ensure there is no net loss of woodland on Site, a new parcel of broadleaved plantation woodland is to be created around the pump station to the south of the Site. Native species will be used and the woodland will be appropriately managed in the long-term.

5.12 To avoid damage/disturbance of retained features during construction, it is recommended that Ecological Protection Zones (EPZ) with an appropriate buffer should be established during the construction phase. These EPZ are to be achieved through coordination with tree protection measures required as good arboricultural practice, including temporary protective fencing and signage as illustrated on the Tree Protection Plan in the Arboricultural Impact Assessment (report ref: edp7153_r006) to be submitted as part of the planning application.

5.13 As a result of an iterative design process, the proposals will provide significant green-infrastructure within the scheme. The Illustrative Layout in **Appendix EDP 8** provides details of areas of new habitats of ecological value within the PS), including the following:

- Native tree planting within the POS and along new roads;
- Amenity and species-rich wildflower meadow grassland within the POS;
- Provision of native semi-natural woodland within the POS;
- Provision of native hedgerow planting along the eastern and western Site boundaries to improve connectivity around the Site;
- Provision of ornamental hedgerow planting within the development footprint; and
- A drainage network which will include areas of marshy grassland.

BIODIVERSITY IMPACT ASSESSMENT

5.14 The scheme within the Illustrative Layout is capable of achieving a biodiversity net gain of over 10% in both habitat and hedgerow units. This is, however, based on a precautionary approach which includes number of assumptions outlined in **Appendix EDP 5**, given the absence of more detailed habitat and landscaping plans at this stage in the project. This may be subject to variation at the detailed design stage, as such, an update DEFRA BIA calculator should be undertaken at the detailed design stage to ensure the scheme remains capable of delivering biodiversity net gain.

5.15 It should be noted that the retained and proposed habitats and their target conditions will require some level of management and monitoring to ensure that the habitats achieve the desired outcomes in the long-term. It is considered that the proposed habitats are realistically achievable on Site. A Landscape and Ecological Management Plan (LEMP) should be produced to detail how these habitats will be created and subsequently maintained at their target habitat type and condition, and this can be secured by a suitably worded planning condition. Periodic monitoring will be necessary to determine whether habitats are achieving their target condition and will be able to highlight where further management and maintenance activities may be required to address any failures in habitat establishment.

PROTECTED AND/OR PRIORITY SPECIES

5.16 Certain species receive legal protection in the United Kingdom and are commonly known as 'protected species'. In reality, the level of protection for different species varies considerably, from protection solely against 'killing and injury' to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species groups are provided below.

5.17 In addition to protected species, there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status as Priority Species or other status. Details of any actual or potential notable species within the Site are identified below.

5.18 Baseline investigations have identified protected species implications for the Site relating to breeding birds, foraging/commuting bats, badgers, great crested newts and reptiles which are discussed in turn below.

Breeding Birds

5.19 All wild birds, their nests and eggs are protected under Section 1 of the *Wildlife and Countryside Act* 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take, damage or destroy the egg of any wild bird; and/or
- To have in one's possession or control any wild bird (dead or alive) or egg or any part of a wild bird or egg.

5.20 Where possible, above-ground vegetation clearance that includes removal or pruning of any potential bird nesting habitat, such as woodland and scrub, will be undertaken outside of the bird nesting season (i.e. works should be undertaken during September to February inclusive).

5.21 Should this constraint prove not to be practical in terms of the proposed construction timetable, any habitats suitable for breeding birds to be affected by clearance works within the breeding season (March to August inclusive) must first be checked for active nests by a suitably experienced ecologist. If an active bird's nest is discovered, then works within a minimum of 5m of the nest must cease until it has been confirmed by a suitably experienced ecologist that the nest is no longer active. The exact dimensions of the buffer zone will be determined by the ecologist and depend on the level of disturbance, the bird species present and the life stage of the young.

5.22 It is recommended that artificial nest boxes should be erected on new trees and incorporated into new buildings within the Site. The location and type of boxes should be designed with reference to Cherwell District Council's (CDCs) Biodiversity in the Built

Environment guidance[13]. Full details of their location, management and maintenance should be included in the PHabitat Mitigation and Management Plan (HMMP) for the development which can be secured via condition.

Bats

5.23 All species of British bat are listed as EPS on Schedule 2 of the *Conservation Regulations* (Appendix IV(a) to the *Habitats Directive*), thereby receiving protection under the *Conservation of Habitats and Species Regulations* 2017 (as amended), which is the highest level of protection afforded to species in the UK. This legislation makes it an offence to:

- Deliberately capture, injure or kill a wild animal of an EPS;
- Deliberately disturb wild animals of an EPS wherever they are occurring, in particular any disturbance that is likely to impair their ability to survive, to breed or reproduce, or in the case of hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;
- Damage or destroy a breeding site or resting place of a wild animal of an EPS; and/or
- To have in one's possession or control, any live or dead species of an EPS.

5.24 Furthermore, four of these species (lesser horseshoe, greater horseshoe, barbastelle and Bechstein's bat) are also listed on Appendix II of the Habitats Directive.

5.25 Additional protection for bats is also afforded under the *Wildlife and Countryside Act* 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place that is used for shelter or protection, or to obstruct access to this structure or place.

Roosting Bats

5.26 It is recommended that prior to vegetation clearance and/or pruning works, those trees, in addition to all other semi-mature/mature trees, to be impacted, will be subject to an update ground-level inspection by a suitably qualified ecologist to determine their current potential to support roosting bats. Trees with low bat roost suitability will be felled under supervision from an appropriately experienced bat ecologist. Where trees are identified as having moderate or greater potential, then such trees will be subject to a further detailed aerial inspection whereby all suitable roosting features will be checked at height for the presence of bats. Aerial surveys will be undertaken by a suitably qualified and licenced bat licensed ecologist, or an arboricultural contractor with a bat survey licence or with experience of working with bats and under the supervision of a bat survey licence holder.

5.27 If any bats are discovered during the inspection, owing to the strict legal protection afforded to bats and their roosts, works are likely to require a European Protected Species Mitigation Licence (EPSML) from Natural England before works can continue.

[13] Cherwell District council., (2019)., *Biodiversity in the Built Environment Good Practice Guide 1: Preservation of existing nesting sites and provision of artificial nesting sites*. Cherwell District Council, Bodicote, Banbury, Oxfordshire.

5.28 If no evidence of roosting bats is uncovered during the inspection, works may proceed without an EPSML Licence from Natural England. However, regarding those trees identified as having potential to support roosting bats, a 'soft felling' technique' involving the sectional dismantling of the tree will be adopted, as follows:

- Tree felling will avoid cutting through any cracks, cavities, limb/knot holes or any other potential roosting features – i.e. by cutting above and below the feature when removing sections with suitable features;

- Any sections to be cut supporting suitable roosting features are to be suitably harnessed and supported before cutting using industry-standard rigging equipment, and gently lowered to the ground once cut, to avoid violent shaking of potential roosting features; and

- Any cut sections with potential roosting features are to be retained on site for a minimum of 48 hours, with potential entrances not blocked i.e. facing away from ground, before they are removed or chipped.

5.29 To enhance roosting opportunities on the Site for the local bat assemblage, it is recommended that durable bat boxes are installed upon suitable, semi-mature trees retained along the peripheries of the Site where practical. The specification and location of proposed bat roosting features should be designed with reference to CDCs Biodiversity in the Built Environment guidance. Full details of their location, management and maintenance should be included in the Habitat Mitigation and Management Plan (HMMP) which can be secured via condition.

Foraging/Commuting Bats

5.30 The manual transect and automated detector surveys recorded a bat population of low species diversity that is of Local-level ecological importance. The surveys found there were low levels of activity within the Site with the majority of activity being associated with the boundary woodland, hedgerows and treelines.

5.31 Inherent mitigation includes the retention entirety of the boundary hedgerows and treelines. The proposals will result in minor loss of woodland, however, the scheme will compensate for this loss with the creation of 0.069ha of native broadleaved woodland.

5.32 The development footprint will also result in the loss of grassland habitat. Only limited foraging activity was observed over these features during the transect surveys, likely due to these habitats being species-poor and therefore supporting limited invertebrate prey; as such, the habitats are not considered to provide an important foraging resource. The scheme will compensate for these losses by providing wildflower grassland within the POS which will provide more valuable foraging opportunities for bats post-development.

5.33 Therefore, the habitats losses are not considered likely to significantly impact the local bat populations.

Lighting

5.34 To maintain the functionality of the retained hedgerows along the Site boundaries, which will be used by foraging/commuting bats and birds, a sensitive lighting strategy is to be adopted both throughout the construction phase of the development and within the development layout at the detailed design stage. The principles of this strategy are set out below:

- The use of artificial lighting is to be limited to the essential minimum throughout the Site, and any lighting to be used should avoid upward pointing lights, with the spread of light being kept near to or below the horizontal;
- During construction, any illuminated site compounds will be sited away from all retained features of ecological interest described in this document, namely the retained hedgerows, treelines and woodland;
- Where required, the times that lights are on should be controlled to avoid lights illuminated between, and including, dusk and dawn hours to allow some dark periods for bats and other wildlife; and
- Lighting with a low UV component should be used to reduce invertebrate attraction, and directional lighting/shielding of lights with accessories such as hoods, covers, louvers and shields to be used throughout to avoid excessive light spill.

5.35 A suitable lighting design for the final development layout could be secured by condition attached to a planning consent.

Badger

5.36 Badgers and their setts are afforded protection under the Protection of Badgers Act, 1992, which protects badgers from deliberate harm and injury. The protection afforded to badgers is primarily due to animal welfare issues and not due to concerns over their unfavourable nature conservation status. Restrictions under this act, which apply to any development, prevent:

- killing, injuring, possession or cruel treatment to badgers;
- interference to a sett through damage or destruction;
- obstruction or access to any entrance of a sett; or
- disturbance to a badger whilst it is occupying a sett.

5.37 Under current proposals, the scheme will not directly impact the sett, and a 30m buffer zone will be provided which will be subject to light landscaping and tree planting. The loss of grassland for the development will be compensated for with wildflower grassland and fruit tree planting within the open space which will provide high-quality foraging opportunities post-development. A green corridor will also be provided within the scheme, maintaining connectivity to the sett and wider landscape.

5.38 An update site walkover will be required to check for active setts within the development footprint prior to work commencing. Should any active setts be identified within the impact footprint, suitable mitigation measures should be employed, which may include a Natural England development license.

Amphibians and Reptiles

5.39 All species of common reptile, including common lizard, slow-worm (*Anguis fragilis*), grass snake and adder (*Vipera berus*) receive at least limited protection from harm under the Wildlife and Countryside Act, 1981 (as amended) and it is an offence to cause the intentional killing and injuring of these species. In addition, common reptile species are listed as Priority Species.

5.40 Regarding amphibians, great crested newts are a protected species. Great crested newts are listed on Appendix II of the *Bern Convention* and on Annexes II and IV of the EU *Natural Habitats Directive*. In England and Wales, the great crested newt is protected under Schedule 2 of the *Conservation of Habitats and Species Regulations* 2019 and under Schedule 5 of the *Wildlife and Countryside Act* 1981 (as amended).

5.41 It is an offence to:

- Intentionally or deliberately capture, kill, or injure great crested newt;
- Intentionally or recklessly damage, destroy, and disturb great crested newt in a place used for shelter or protection, or obstruct access to such areas;
- Damage or destroy a great crested newt's breeding site or resting place;
- Possess a great crested newt, or any part of it, unless acquired lawfully; and
- Sell, barter, exchange, transport, or offer for sale great crested newt or parts of them.

5.42 This legislation covers all newt life stages, such that eggs, tadpoles and adult newts are all equally protected. Great crested newts are also a Priority Species under the UK Biodiversity Action Plan and has been adopted as a Species of Principal Importance in England under Section 41 of the NERC Act 2006.

5.43 A precautionary approach should be undertaken for vegetation clearance during the active season (mid-March to mid-October, where temperatures are above 10^{o}C) under the supervision of a suitably experienced ecologist and should be undertaken directionally, so that any active amphibians or reptiles can disperse towards retained vegetation. Vegetation will be cut in two phases, with the first phase of clearance reducing the height down to a minimum of 175mm, and thereafter to sward heights not exceeding 50mm.

5.44 Any potential refugia/hibernacula (e.g. piles of wood/vegetation) will be carefully dismantled/removed using hand tools, hand-held machinery or untracked, light machinery to facilitate efficient supervision.

5.45 Where below-ground vegetation clearance is required, including the removal of roots and/or stumps of trees/shrubs, or of buried rubble and spoil, where there is a risk of encountering

hibernating species, works shall be restricted to the active season mid-March to mid-October inclusive (when temperatures are above 10°C).

5.46 It is considered highly unlikely that great crested newts would be present on site. However, should great crested newts be found on site, works will stop and an appropriate licence sought.

Hedgehog

5.47 Hedgehogs are listed on schedule 6 of the *Wildlife and Countryside Act* (1981), which makes it illegal to kill or capture wild hedgehogs. They are also listed under the *Wild Mammals Protection Act* (1996), which prohibits cruel treatment of hedgehogs. Under the NERC Act, hedgehogs are also listed as a species of 'principal importance'.

5.48 Hedgehog are considered likely to be present in the local landscape, especially within the woodland and hedgerows. Those methods of clearance outlined for reptiles and amphibians will provide protection against accidental harm during site clearance works.

5.49 To enhance the Site for this species, log/brash piles and compost heaps will be installed within the woodland and other areas of open space to provide additional opportunities for foraging and refuge. These will provide further enhancement of the habitat for common reptile species, amphibians, mammals and other wildlife potentially present within the wider landscape.

5.50 Post development, it is proposed that hedgehog highways will be created within the development to allow movement between gardens and access the wider landscape. These can be created by providing a small hole at the bottom of fences, which is approximately 130mm in dimeter.

Section 6
Summary and Conclusions

6.1 This section of the EA summarises the ecology strategy for the proposed development, in terms of inherent and recommended additional mitigation measures, and then provides the overall conclusions of the Appraisal.

SUMMARY OF ECOLOGY STRATEGY

Inherent Mitigation Embedded in the Planning Layout

6.2 The following mitigation is embedded within the proposals:

- The retention and enhancement of 0.36km of boundary hedgerows and treeline; and
- Provision of a multi-functional green space with areas designed to maximise biodiversity, whilst providing recreational opportunities.

Construction Measures

6.3 It is proposed that the following measures are adhered to during construction:

- Briefing of site personnel (toolbox talk) and supervision of certain construction/enabling works by a suitably experienced ecologist;
- Protection of retained habitats within EPZs where construction personnel, vehicles, equipment and materials are excluded;
- Pre-commencement update walkover survey for badger setts;
- Sensitive timing and methods of vegetation clearance with regards to nesting birds, reptiles, amphibians and hedgehog, where suitable habitat losses occur;
- Good practice construction measures to ensure hedgehogs or badgers cannot become trapped in excavations (e.g. through covering up at night or inserting an 'escape ramp').
- Any artificial lighting used is to be kept to a minimum with the provision of dark periods; and
- Any artificial lighting used is to be directional through the use of hoods to prevent light spill.

6.4 It is recommended that these measures are detailed within an Ecology Construction Management Strategy (ECMS) and LEMP secured by a suitably worded pre-commencement condition attached to planning consent.

Detailed Design Measures

6.5 The following measures are proposed to be incorporated into the Detailed Landscape Design, which will enhance the Site for biodiversity:

- Creation of wildflower grassland within the green infrastructure and POS network;
- Enhancement and strengthening of the existing hedgerows through gap and tree planting of native species including blackthorn;
- Provision of durable bird and bat boxes, and inbuilt bat roosting features on new residential dwellings/garages or mature retained trees within the Site;
- Provision of native woodland planting around the pump station;
- Sensitive lighting scheme to minimise disturbance to bats, birds and other wildlife; and
- Creation of SuDS features with native species planting and permanently wet areas to enhance aquatic diversity.

Overall Conclusions

6.6 Desk and field-based baseline investigations have demonstrated that the designated sites, habitats and species present within and adjacent to the Site do not pose an 'in principle' constraint to the proposed development. There are no statutory or non-statutory nature conservation sites within the Site, and it is considered those within the local area will not be materially affected by the proposals.

6.7 Several habitats and protected species have, however, been identified within the Site that require due consideration, and mitigation should be embedded into any future applications. These include the hedgerows and scattered trees, in addition to breeding birds, foraging and commuting bats, badger, great crested newt and reptiles.

6.8 National and local policy for the conservation and enhancement of the natural environment expects developments to minimise impacts on and provide net gains for biodiversity (NPPF paragraph 180). A proportional and appropriate response for the avoidance, mitigation and compensation of any predicted impacts and ecological effects is considered within this report and summarised above. These measures include: (1) those already embedded within the design; (2) measures that should be incorporated at the construction stage; (3) those that should be designed and specified within the detailed landscaping scheme; and (4) management measures to ensure that the design vision is achieved in the long term.

6.9 The habitats and protected and priority species interest within the Site do not pose a notable constraint to development, and the scope of the proposed mitigation measures are sufficient to mitigate for the biodiversity impacts resulting from the development. The illustrative scheme is capable of achieving a biodiversity net gain in habitat and hedgerow units. An update BIA should be undertaken at the detailed design stage to ensure the scheme remains capable of delivering biodiversity net gain in accordance with the NPPF, local planning policies and the *Environment Act* 2021.

Appendix EDP 1
Illustrative Site Photographs

Image EDP A1.1: Improved grassland.

Image EDP A1.2: Poor semi-improved grassland.

Image EDP A1.3: Hedgerow H1

Image EDP A1.4: Hedgerow H2

Image EDP A1.5: Hardstanding single carriageway track

Image EDP A1.6: Hedgerow H3

Image EDP A1.7: Eastern ditch with scattered scrub, (with offsite SuDS and amenity grassland in background)

Image EDP A1.8: Broad-leaved plantation woodland

Image EDP A1.9: Dry off-site pond within broad-leaved plantation woodland

Image EDP A1.10: Dry off-site SuDS basin

Appendix EDP 2
Bat Survey Results

METHODS

Tree Assessment for Roosting Bats

A2.1 To determine the potential impacts of the proposed development upon bats potentially roosting within trees within/immediately adjacent to the Site, each tree was subject to a ground level visual assessment for the presence of potential to support roosting bats, with reference to current best practice guidelines[14] on 27 October 2022.

A2.2 The survey was undertaken during the Extended Phase 1 Survey by a suitably qualified and experienced bat ecologist. Each tree was assessed as thoroughly as possible from ground level, using a high-powered torch and binoculars, with all elevations covered where accessibility allowed.

A2.3 Suitable features for roosting bats sought for during the assessment included:

- Loss/peeling/fissured bark;
- Natural holes e.g. rot holes, and holes from fallen limbs;
- Woodpecker holes;
- Cracks/splits or hollow tree trunk/limbs; and
- Thick stemmed ivy.

A2.4 Bats were sought for *in situ*, in addition to evidence of their usage in the form of characteristic signs. Signs of roosting bats include:

- Bats roosting *in-situ* (live, dead or parts of);
- Bat droppings or urine stains within or beneath a feature/access point;
- Feeding remains (e.g. insect wings and beetle wing cases);
- Oily marks (staining) around an access point/feature;
- Audible squeaking from the roost; and
- Large/regularly used roosts or sites may produce a distinctive odour.

[14] Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* 3rd edition. Bat Conservation Trust, London.

A2.5 Based upon the results of the visual assessment and features/evidence identified, as above, the descriptions provided in **Table EDP 2.1** were used to assign a category to each tree during the assessment.

Table EDP A2.1: Bat Roost Suitability Categories for Trees

Bat Roost Suitability	Description
Confirmed Roost	Evidence of bats found. An EPS licence is required for works to tree to be completed lawfully.
High	Tree supports one or more features that are obviously suitable for use by larger numbers of bats on a more regular basis, and potentially for longer periods of time.
Moderate	Tree supports one or more features that could be used by bats but are unlikely to support a roost type of high conservation status.
Low	A tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features seen but with very limited roosting potential.
Negligible	No features likely to support roosting bats.

Limitations

A2.6 Visual assessments for roosting bats within buildings and trees can be undertaken at any time of year. However, bats are mobile animals and will move between a series of different roost sites, frequently establishing and occupying new roost sites, depending on seasonal requirements and resources available locally. This survey, therefore, only provides a snapshot of the conditions present at the Site at the time of survey.

A2.7 Tree surveys are ideally undertaken during the winter months when visibility into the crown of the tree is improved due to the absence of leaves. However, given the young age of the trees and canopy visibility it is considered that the assessment is robust.

Manual Transect Surveys

A2.8 The manual transect surveys were undertaken to identify areas of bat foraging activity and commuting routes used by bats. The date, timing, and weather conditions of each transect survey is given in **Table EDP A2.2**.

Table EDP A2.2: Date, Timing and Weather Conditions of Manual Transect Surveys

Survey Date	Survey Time	Sunrise/ Sunset Time	Weather Conditions			
			Temp (OC)	Cloud (%)	Rain	Wind (Beaufort Scale)
27.05.21	21:08-23:08	21:08	13-15	20-40	0	1
14.07.21	21:20 – 23:20	21:20	16-18	10	0	1

Survey Date	Survey Time	Sunrise/ Sunset Time	Weather Conditions			
			Temp (OC)	Cloud (%)	Rain	Wind (Beaufort Scale)
07.09.21	19:40-21:45	19:40	22-23	30-40	0	0-1

A2.9 The transect surveys were completed by a pair of experienced bat surveyors across a single transect route designed to cover all potential foraging or commuting habitats on the Site, as shown in **Plan EDP 4**. The transect was walked at a slow and steady pace and the routes were alternated in direction each month between clockwise and anti-clockwise.

A2.10 Activity surveys were conducted using an Elekon Batlogger M, with observations of the time, location, and activity of all bats seen or heard recorded. Bats were identified on the basis of their characteristic echolocation calls, which were recorded where appropriate and analysed using computer sonogram analysis (BatExplorer) to confirm species identification. Species of Myotid bat (*Myotis* spp.), long-eared bat (*Plecotus* spp.) and in some cases *Nyctalus* spp. are difficult to tell apart solely from their echolocation calls and were therefore grouped as such.

Limitations

A2.11 The manual transect surveys were undertaken in good weather conditions, with no significant constraints.

Automated Bat Detector Surveys

A2.12 To supplement the bat transect survey data, activity was also sampled using static detectors which automatically trigger and record echolocation calls. Two automated bat detectors (hereby named 'Anabat') were deployed at two locations in May, July and September 2021 for five consecutive nights during each month in strategic locations across the Site to sample bat foraging and commuting activity. These locations are illustrated within **Plan EDP 2**.

A2.13 Anabat Express Bat Detectors were fixed in secure locations, with an external microphone attached approximately 1.5-2.0m above ground, and directed away from the tree, approximately 45° to the hedgerow, to maximise detection sensitivity. **Table EDP A2.3** gives the sampling dates, the temperature range and microphone details for the static detectors deployed during the sampling periods.

A2.14 The echolocation calls recorded by the static detectors were filtered for noise files (i.e. sound files created when noise triggers the detector to record) and then specifically for each of the UK's bat species using Analook software filter function. All files passing the various filters were checked manually using sonogram analysis (AnalookW) in accordance with published parameters[15] to confirm the identification of each call.

[15] Russ (2021). *Bat Calls of Britain and Europe: A Guide to Species Identification*. Pelagic Publishing, Exeter.

Table EDP A2.3: Static Detector Sampling Dates and Microphone Details

Sampling Period	Location Reference	Temperature Range (OC)	Microphone	
			Height (m)	Direction
27.05.2021 – 01.06.2021	North-west	22.5-9.0	2.5	NE
	South-east		1.5	NW
14.07.2021 – 19.07.2021	North-west	No data	2	SE
	South-east		2	NW
07.09.2021 – 13.09.2021	North-west	24.0-9.0	2	E
	South-east		2	NW

Limitations

A2.15 Both static detectors failed in July. However, given the relatively low levels of activity across all of the other survey periods including the July manual transect survey, and the limited impacts to the green corridors, it is not considered to be a significant impact.

A2.16 The identification of calls and species using Analook software is dependent upon the quality of the recording made which can be influenced by the following factors, which may limit levels of activity and species recorded:

- Weather conditions - rainfall and wind;
- Distance of bat from the bat detector;
- Presence of obstructions through which the noise must pass i.e. trees; and
- Proximity of other noise sources such as roads.

RESULTS

Tree Assessment for Roosting Bats

A2.17 None of the trees within the Site were identified as being potentially suitable to support roosting bats given their immaturity and good condition.

Manual Transect Survey Results

A2.18 Overall, the Site had a limited species composition (common pipistrelle, soprano pipistrelle noctule and *Myotis* spp.), with over 82.7% of all activity by common pipistrelle bats. The next most abundant was *Myotis* spp. at 14.3%, with the majority of records pertaining to May. A summary is shown in **Table EDP A2.4** and **Plan EDP 2**.

A2.19 Overall activity peaked in May and decreased on each subsequent survey, with activity concentrated on the hedgerow and tree lines along the western and southern site boundaries as shown.

Table EDP A2.4: Summary of Bat Passes during Transect Surveys 2021

Species	Month			Grand Total	Species Proportion (%)
	May	July	September		
Common pipistrelle	37	30	14	81	82.7
Myotis spp.	13	–	1	14	14.3
Noctule	–	–	2	2	2.0
Soprano pipistrelle	–	–	1	1	1.0
Grand Total	**50**	**30**	**18**	**98**	**100.0**

Automated Detector Survey Results

A2.20 Activity was generally low in May but significantly increased in September. Species composition was broadly similar to that recorded on the transect survey, though with serotine and *Plecotus* sp. also recorded on site. A summary of results is provided in **Table EDP A2.5**.

A2.21 In each month, overall activity was consistently higher in the north-western corner of the Site. Species composition fluctuates between the static detector locations, although common pipistrelle is consistently the most recorded species. In the north-west, *Myotis* spp. are the next most commonly recorded, whereas they are less abundant along the southern field boundary. This likely relates to foraging along the adjacent woodland edge in addition to along the western hedgerows. It is considered possible that bats are using the wider hedgerow network connecting from The Saltway through Crouch Farm and onwards to the woodland parcels along the east of Bloxham Road to the wider area.

Table EDP A2.5: Static Bat Detector Summary Results - 2021

Location	Species	Month			Grand Total	Species Proportion (%)
		May	July	Sept		
North-west	Common pipistrelle	368	No data	2,682	3,050	85.2
	Myotis spp.	122		281	403	11.3
	Soprano pipistrelle	6		63	69	1.9
	Noctule	18		20	38	1.1
	Serotine	7		3	10	0.3
	Plecotus sp.	4		4	8	0.2
	Total	**525**	**–**	**3,053**	**3,578**	**100.0**
South-east	Common pipistrelle	160	No data	722	882	66.6
	Soprano pipistrelle	38		114	152	11.5
	Plecotus sp.	93		48	141	10.6
	Noctule	2		85	87	6.6
	Myotis spp.	8		32	40	3.0

Location	Species	Month			Grand Total	Species Proportion (%)
		May	July	Sept		
	Serotine	7		15	22	1.7
	Total	**308**	**–**	**1,016**	**1,324**	**100.0**
Grand Toal		**833**	–	**4,069**	**4,902**	

Appendix EDP 3
Great Crested Newt Surveys

A3.1 No waterbodies are present within the Site, but one pond and one recently created sustainable drainage system (SuDS) basin lies within 250m of the Site. Another pond is also located within 500m of the Site. Given the nature of the Site and its separation from this pond by intervening dense residential housing, further surveys were not undertaken for this pond as it is considered highly unlikely that any populations (if present) would be impacted by the proposed development.

METHODOLOGYBITAT SUITABILITY INDEX

A3.2 Pond P1 was assessed for its suitability to support great crested newt using the standard HSI assessment, as developed by Oldham et al. (2000). The survey was undertaken in April 2021 and updated 27 October 2022. The HSI assessment follows a standardised assessment criteria using habitat components such as water quality, fish/waterfowl presence and surrounding terrestrial habitat quality to derive a suitability score, or 'index'. Waterbodies with high scores are considered more likely to support great crested newts compared to those with lower scores. HSI scores and the inferred suitability of the pond assessed to support great crested newt are described within **Table EDP A3.1**.

Table EDP A3.1: Habitat Suitability Index Scores and Inferred Pond Suitability

Habitat Suitability Index Score	Pond Suitability to Support Great Crested Newts
<0.5	Poor suitability
0.5 – 0.59	Below average suitability
0.6 – 0.69	Average suitability
0.7 – 0.79	Good suitability
> 0.8	Excellent suitability

eDNA

A3.3 An eDNA survey was attempted in April 2021, however, the pond and SuDS basin were dry and therefore could not be sampled.

RESULTS

A3.4 The pond (P1) is a small sized pond located within an area of broadleaved plantation woodland which casts a heavy shade over the pond and has been dry during each site visit. In addition, the nearby SuDS has been recently constructed and has also been dry during each site visit.

Table EDP A3.2: Habitat Suitability Assessment for Pond P1.

Suitability Indices	**Criteria**	**Pond P1**	**SUDS**
SI1	Geographic Location	1	1
SI2	Pond Area Pond	0.05	1
SI3	Permanence	0.1	0.1
SI4	Water Quality	0.33	0.33
SI5	Shade	0.2	1
SI6	Waterfowl	1	1
SI7	Fish	1	1
SI8	Pond Count	0.65	0.65
SI9	Terrestrial Habitat	0.33	0.01
SI10	Macrophytes	0.3	0.3
HSI Score = (SI1*SI2*SI3*SI4*SI5*SI6*SI7*SI8*SI9*SI10)1/10		0.34	0.38
Pond Suitability*		**Poor**	**Poor**
* (<0.5 = poor; 0.5-0.59 = below average; 0.6-0.69 = average; 0.7-0.79 = good; >0.8 = excellent)			

Appendix EDP 4
Biodiversity Impact Assessment

A4.1 The Biodiversity Impact Assessment (BIA) of the proposed residential development at the Site was undertaken in December 2022 using the DEFRA Biodiversity Metric 3.1 (version date: 28 April 2022), by an ecologist with experience of using such calculators, in accordance with the Biodiversity Metric 3.1 best practice guidance[16].

A4.2 The BIA has been produced to objectively assess the net effects of the proposals on biodiversity in line with local and national planning policy.

A4.3 The assessment is based on the existing habitat information derived from the extended Phase 1 Habitat survey undertaken by EDP in October 2022 as illustrated on the Pre-development Habitat Plan (**Plan EDP 3**) and proposed habitats as shown on the Post-development Habitat Plan (**Plan EDP 4**). Geographic Information System (GIS) software has been used to accurately calculate areas of habitat to be retained, enhanced and created. The Biodiversity Metric 3.1 condition assessment calculator reference sheets[17] have been used to inform the conditions used for existing habitats alongside professional judgement.

A4.4 The condition assessment of the habitats on the Site was undertaken in October 2022 in accordance with the methodology and condition assessment criteria set out by DEFRA. This Site visit was undertaken within the optimal season for surveys requiring botanical species identification; as such species identification was sufficient to adequately assess the condition of the habitats present. A range of assumptions have been made regarding the value and condition of the proposed habitats.

A4.5 As with all BIA calculations, they do not account for protected species mitigation and enhancement measures, such as the provision of bird/bat roost features or amphibian/reptile refugia.

A4.6 Note that the calculations deal with linear features (hedgerows) and other habitats separately, resulting in two separate scores. Any additional information required (for example the full set of calculations, condition criteria and GIS files) are available upon request. It should be noted that this is the preliminary round of calculations for the proposals, intended to demonstrate potential achievable scores for the Site, and inform future landscape design evolution.

BASELINE CONDITION

A4.7 The baseline conditions for existing and proposed habitats are summarised below.

[16] Stephen Panks, Nick White, Amanda Newsome, Mungo Nash, Jack Potter, Matt Heydon, Edward Mayhew, Maria Alvarez, Trudy Russell, Clare Chason, Finn Goddard, Sarah J. Scott, Max Heaver, Sarah H. Scott, Jo Treweek, Bill Butcher and Dave Stone, 2022. *Biodiversity p 3.1: Auditing and accounting for biodiversity – User Guide*. Natural England.
[17] http://publications.naturalengland.org.uk/publication/6049804846366720

Existing Habitats

A4.8 The Site currently comprises the following habitats:

- Broadleaved plantation woodland lies along the access road and has been entered as 'other woodland; broadleaved' in poor condition owing to the young, uniform structure with no recognisable floral community;
- Improved grassland has been entered as 'modified grassland' in poor condition due to the heavily grazed and improved nature of the field;
- Poor semi-improved grassland has been entered as 'other neutral grassland' in moderate condition owing to the varied structure with low levels of bramble and bracken;
- Hedgerows have been assessed individually and have been entered as:
    - 'Native species rich hedgerow with trees – associated with bank or ditch' in moderate condition;
    - 'Native species rich hedgerow – associated with bank or ditch' in moderate condition; and
    - 'Line of Trees (Ecologically Valuable) – with bank or ditch' in moderate condition.
- Hardstanding has been entered as 'developed land; sealed surface' in '*n/a*' condition.

A4.9 Based on this assessment, the Site measures c. 3.14 hectares (ha) and its current biodiversity value is 6.38 for the baseline habitat (area) units and 4.01 for the baseline hedgerow (linear) units.

Proposed Site Habitats

A4.10 The proposed development is for a residential space with a housing density of 34dph with associated landscaping and SuDS.

A4.11 The created and enhanced habitats will comprise the following:

- A ratio of 70% hardstanding (including buildings and footpaths), 25% gardens and 5% amenity road verges has been assumed for the development footprint:
    - New buildings, and associated hardstanding, including footpaths, have been input as 'developed land; sealed surface' in 'n/a' condition;
    - Gardens associated with the new residential buildings have been input as vegetated garden in 'n/a' condition; and
    - Amenity road verges have been input as 'modified grassland' in 'poor' condition.

- A ratio of 50:50 ratio amenity and wildflower grassland has been assumed for the public open space:
    - The wildflower grassland component has been input as 'other neutral grassland' in 'moderate' condition. It is assumed that the grassland will lie adjacent to the existing hedgerows (which will be retained), be subject to an appropriate management regime to maintain structural and botanical diversity, and will provide enhancement to existing hedgerows; and
    - The amenity grassland component has been input as 'modified grassland' in 'poor' condition. It has been assumed that a native wildflower seed mix tolerant to trampling will be used, but it's quality will be reduced close to footpaths due to its amenity use and high levels of disturbance.
- Rough wildflower grassland will be created around the SuDS. This has been input as 'modified grassland' in 'moderate' condition as it has been assumed these areas will be managed for wildlife.
- The urban trees along highways and POS will comprise of small native trees in 'poor' condition;
- Native broadleaved plantation woodland is proposed to the south of the Site to screen the water pumping station. It is assumed that this will reach 'moderate' condition with the implementation of an appropriate management regime and planting of a variety of native tree species from at least two age groups;
- Existing hedgerows will be enhanced to 'good' condition through the implementation of an appropriate management scheme, planting in gaps and provision of an adjacent wildflower grassland margin;
- It is proposed that c. 0.25km of new ornamental hedgerow planting will be created within the development footprint including within road verges. These are automatically assumed to be in 'poor' condition;
- Native, species-poor hedgerow are to be created along the eastern Site boundary and a small section of the western boundary to improve connectivity around the Site. It has been assumed that these will reach 'moderate' condition with appropriate planting and long-term management including limited pesticide usage and pruning
- Thirty-two small native trees are proposed within the public open space. It has been assumed these will reach 'moderate' condition with appropriate planting and long-term management including limited pesticide usage and pruning;
- The cluster of three native trees by the SuDS will be medium sized and of 'moderate' condition; and
- The trees within the badger buffer zone will be small fruit trees of 'moderate' condition.

RESULTS SUMMARY

A4.12 The full BIA calculations pertaining to habitat units and hedgerow (linear) units based on the Illustrative Site Plan are provided in **Appendix EDP 8** and these calculations are summarised in **Table EDP A4.1**.

A4.13 The calculations confirm that, based on the illustrative proposals and the above assumptions, the development is capable of achieving a net gain in habitat units of 10.19% and a net gain of 48.19% in hedgerow units.

A4.14 The Metric includes an assessment of whether certain trading rules have been met by the proposed scheme. Trading rules applied by the Metric require that any loss of habitat is replaced on a 'like for like' or 'like for better' distinctiveness basis, to prevent 'trading down', whereby more ecologically valuable habitats are lost and replaced with larger areas of lower value habitats. Under the above assessment, the Trading Rules for the Metric have been satisfied.

Table EDP A4.1: Biodiversity Impact Assessment Summary.

Biodiversity Value	Habitat (Area) Units	Hedgerow (Linear) Units
Existing Site	6.38	4.01
Post-development	7.03	5.95
Net Balance (units)	0.65	1.93
Net Balance (%)	10.19	48.19

Appendix EDP 5
Biodiversity Assessment Calculations

Return to results menu

Headline Results

On-site baseline	*Habitat units*	6.38
	Hedgerow units	4.01
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	7.03
	Hedgerow units	5.95
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	10.19%
	Hedgerow units	48.19%
	River units	0.00%
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.65
	Hedgerow units	1.93
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	10.19%
	Hedgerow units	48.19%
	River units	0.00%
Trading rules Satisfied?		**Yes ✓**

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A-2 Site Habitat Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Post development/ post intervention habitats											
Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty multipliers	Habitat units delivered	Comments	
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition/years	Final difficulty of creation		Assessor comments	Reviewer comments
Grassland	Other neutral grassland	0.0974	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	0.65	rough grassland around SUDS	
Grassland	Modified grassland	0.2122	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.41	Road verges around the development footprint.	
Urban	Developed land; sealed surface	1.25	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00	Core residential footprint (includes houses, paths and roads). A ratio of 70% hardstanding, 25% gardens and 5% road verges has been assumed for the development footprint.	
Urban	Sustainable urban drainage feature	0.1449	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Medium	0.35	SUDs basin	
Urban	Vegetated garden	0.44	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.85	Residential gardens (front and rear). A ratio of 70% hardstanding, 25% gardens and 5% road verges has been assumed for the development footprint.	
Grassland	Modified grassland	0.33435	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.65	Public Green Space. A ratio of 50% amenity lawn and 50% wildflower grassland has been assumed.	
Grassland	Other neutral grassland	0.33435	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	2.24	Public Green Space. A ratio of 50% amenity lawn and 50% wildflower grassland has been assumed.	
Urban	Urban Tree	0.2035	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	10	Low	0.57	Poor condition small trees in development footprint	
Urban	Urban Tree	0.1425	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	27	Low	0.44	Mixture of small and mediun trees in the public open space.	
Woodland and forest	Other woodland; broadleaved	0.0696	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	15	Low	0.33	Semi-natural broadleaved woodland in the public open space.	
Grassland	Modified grassland	0.08	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.15	Road verges within the development footprint. A ratio of 70% hardstanding, 25% gardens and 5% road verges has been assumed for the development footprint.	
Urban	Urban Tree	0.13	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	27	Low	0.40	32 small trees to be scattered within the public open space.	
Urban	Developed land; sealed surface	0.15	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00	Roads and footpaths around the residential footprint.	
	Total habitat area	3.59							7.03		
	Site Area (Excluding area of Urban trees and Green walls)	3.11									

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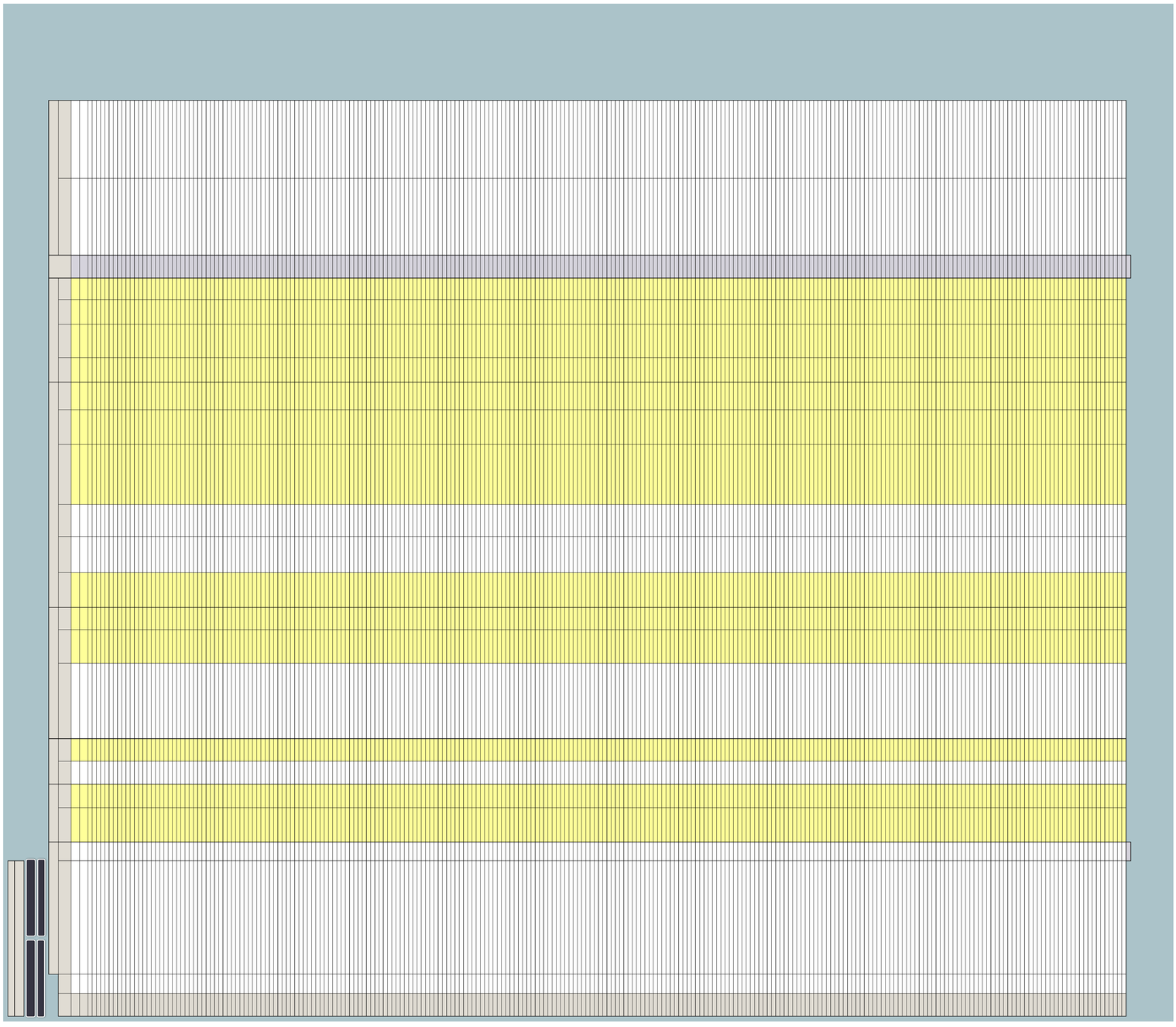
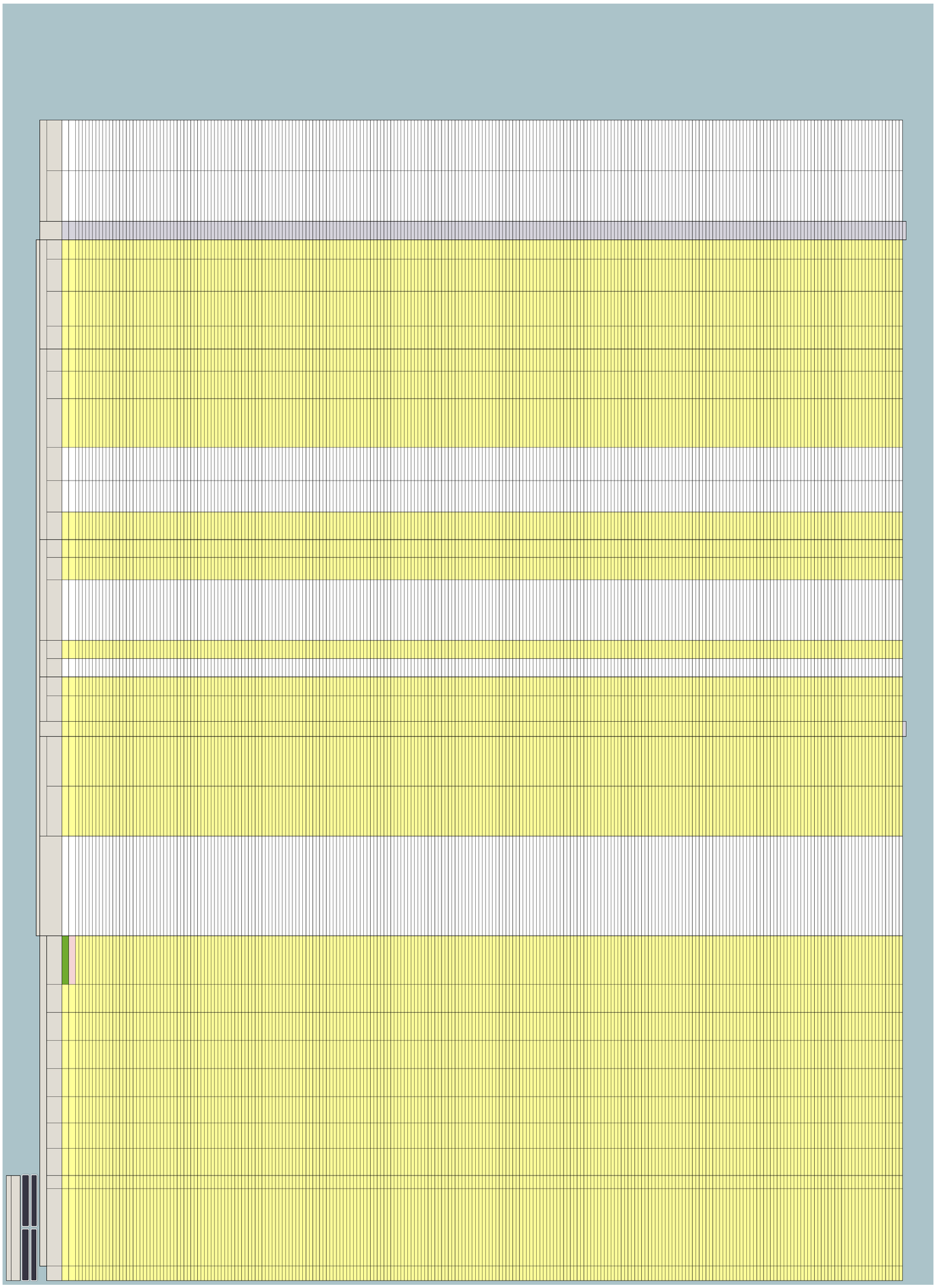




Appendix EDP 6
Habitat Baseline Condition Assessment Sheets

Table EDP A6.1: Grassland (Low distinctiveness) Condition Assessment Criteria – Improved Grassland.

Condition Assessment Criteria		Condition Achieved (Y/N)
1	There must be 6-8 species per m². If a grassland has 9 or more species per m² it should be classified as a medium distinctiveness grassland habitat type. **NB - this criterion is essential for achieving moderate condition.**	Y
2	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	N
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.	N
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.	N
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	N
6	Cover of bracken less than 20%.	Y
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y
	Essential criterion 1 achieved (Y/N)	**Y**
	Number of criteria passed	**3**

Condition Assessment Result	Condition Assessment Score	Result Achieved
Passes 6 or 7 of 7 criteria including passing essential criterion 1.	Good (3)	Low
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 criteria but failing criterion 1.	Poor (1)	

Table EDP A6.2: Grassland Med, High & Very High – Poor semi-improved grassland

Condition Assessment Criteria		**Condition Achieved (Y/N)**
1	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. **NB - This criterion is essential for achieving moderate condition for non-acid grassland types only**.	N
2	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20 per cent is more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y
3	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	N
4	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.	Y
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition 1 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.	Y
Additional Group (Non-acid types only)		
6	There are greater than nine species per metre squared. **NB - This criterion is essential for achieving good condition (non-acid grassland types only)**.	N
	Number of criteria passed	**3**

Condition Assessment Result (Non- Acid Grassland Types)	**Condition Assessment Score**	**Result Achieved**
Passes 5 of 6 criteria, including essential criterion 1 and 6.	Good (3)	Poor
Passes 3 or 4 of 6 criteria, including essential criterion 1.	Moderate (2)	
"Passes 0, 1, 2 criteria of 6 criteria; OR	Poor (1)	

Table EDP A6.3: Woodland Condition Assessment Criteria.

Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator
1	**Age distribution of trees**	Three age classes present	Two age classes present	One age class present	1
2	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Evidence of significant browsing pressure is present in 40% or more of whole woodland	2
3	**Invasive plant species**	No invasive species present in woodland	Rhododendron or laurel not present, other invasive species < 10% cover	Rhododendron or laurel present, or other invasive species > 10% cover	3
4	**Number of native tree species**	Five or more native tree or shrub species found across woodland parcel	Three to four native tree or shrub species found across woodland parcel	None to two native tree or shrub species across woodland parcel	3
5	**Cover of native tree and shrub species**	> 80% of canopy trees and >80% of understory shrubs are native	50-80% of canopy trees and 50-80% of understory shrubs are native	< 50% of canopy trees and <50% of understory shrubs are native	2
6	**Open space within woodland**	10 – 20% of woodland has areas of temporary open space, unless woodland is <10ha in which case lower threshold of 10% does not apply	21- 40% of woodland has areas of temporary open space	More than 40% of woodland has areas of temporary open space	3
7	**Woodland regeneration**[18]	All three classes present in woodland: trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	One or two classes only present in woodland	No classes or coppice regrowth present in woodland	1

[18]

Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator
8	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback	11% to 25% mortality and/or crown dieback or low risk pest or disease present	Greater than 25% tree mortality and or any high-risk pest or disease present	3
9	**Vegetation and ground flora**	Ancient woodland flora indicators present	Recognisable NVC plant community present	No recognisable NVC community	1
10	**Woodland vertical structure[6]**	Three or more storeys across all survey plots or a complex woodland	Two storeys across all survey plots	One or less storey across all survey plots	1
11	**Veteran trees[7]**	Two or more veteran trees per hectare	One veteran tree per hectare	No veteran trees present in woodland	1
12	**Amount of deadwood**	50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	1
13	**Woodland disturbance[8]**	No nutrient enrichment or damaged ground evident	Less than 1 hectare in total of nutrient enrichment across woodland area and/or less than 20% of woodland area has damaged ground	More than 1 hectare of nutrient enrichment and/or more than 20% of woodland area has damaged ground	1
Total Score					**23**

Condition Assessment Result	Condition Assessment Score	Result Achieved
Total score >32 (33 to 39)	Good (3)	Poor
Total score 26 to 32	Moderate (2)	
Total score <26 (13 to 25)	Poor (1)	

Table EDP A6.4: Hedgerow Condition Assessment.

Condition Assessment Criteria				**Condition Achieved (Y/N)**	
Attributes and functional groupings (A- E)		**Criteria (the minimum requirements for 'favourable condition'**	**Description**	**H1**	**H2**
A1.	Height	>1.5m 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.	Y	Y
A2.	Width	>1.5m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.	Y	Y
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.	Y	Y
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length and	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 >5m criterion (as this is the typical size of a gate)."	Y	Y

Condition Assessment Criteria				**Condition Achieved (Y/N)**	
Attributes and functional groupings (A- E)		**Criteria (the minimum requirements for 'favourable condition'**	**Description**	**H1**	**H2**
C1.	Undisturbed ground and perennial vegetation	>1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length:	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be 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 hedge. This criterion recognises the value of the hedge 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.	N	N
C2.	Undesirable 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 (*Urtica* spp.), cleavers (*Galium aparine*) and docks (*Rumex* spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	N	N
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.	Y	Y

Condition Assessment Criteria				**Condition Achieved (Y/N)**	
Attributes and functional groupings (A- E)		**Criteria (the minimum requirements for 'favourable condition'**	**Description**	**H1**	**H2**
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.	Y	Y
E1.	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.	N	–
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y	–
Number of criteria passed				7	6

Condition Categories for Hedgerows without trees				
Condition Assessment Score	**Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2**	**Weighting (score)**	**Score Achieved (Y/N)**	
			H1	**H2**
Good	"No more than 2 failures in total; AND No more than 1 in any functional group."	3		Moderate
Moderate	"No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition)."	2		

Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition)."	1		
Condition Categories for Hedgerows with trees				
Category	**Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2**	**Weighting (score)**	**Score Achieved**	
			H1	**H2**
Good	"No more than 2 failures in total; AND No more than 1 failure in any functional group."	3	Moderate	
Moderate	"No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition)."	2		
Poor	"Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition)."	1		

Table EDP A6.5: Line of Trees Condition Assessment

Condition Assessment Criteria		**Condition Achieved (Y/N)**
		H3
1	More than 70% of trees are native species.	Y
2	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	N
3	Includes one or more mature or veteran tree.	N
4	There is an undisturbed naturally vegetated strip of at least 6m on both sides to protect the line of trees from farming and other anthropogenic operations.	N
5	At least 95% of the trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y
Number of criteria passed		**2**
Condition Assessment Result	**Condition Assessment Score**	**Score Achieved**
Passes 5 of 5 criteria	Good (3)	Poor
Passes 3 or 4 of 5 criteria	Moderate (2)	
Passes 0, 1 or 2 of 5 criteria	Poor (1)	

Appendix EDP 7
Post-Development: Habitat Condition Assessment

Table EDP A7.1: Grassland (Low distinctiveness) Condition Assessment Criteria – Public Open Space.

Condition Assessment Criteria		**Condition Achieved (Y/N)**	
		Amenity Grassland	**Rough grassland**
1	There must be 6-8 species per m². If a grassland has 9 or more species per m² it should be classified as a medium distinctiveness grassland habitat type. **NB - this criterion is essential for achieving moderate condition.**	N	Y
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.	N	Y
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.	N	N
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.	N	N
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	N	Y
6	Cover of bracken less than 20%.	Y	Y
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y	Y
Essential criterion 1 achieved (Y/N)		**Y**	**Y**
Number of criteria passed		**3**	**5**
Condition Assessment Result	**Condition Assessment Score**	**Result Achieved**	
Passes 6 or 7 of 7 criteria including passing essential criterion 1	Good (3)	Low	Moderate
Passes 4 or 5 of 7 criteria; OR Passes 4 or 5 of 7 criteria including passing essential criterion 1	Moderate (2)		

Condition Assessment Criteria		Condition Achieved (Y/N)	
		Amenity Grassland	Rough grassland
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1	Poor (1)		

Table EDP A7.2: Table EDP A6.3: Woodland Condition Assessment Criteria

Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator
1	**Age distribution of trees**	Three age classes present	Two age classes present	One age class present	1
2	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Evidence of significant browsing pressure is present in 40% or more of whole woodland	2
3	**Invasive plant species**	No invasive species present in woodland	Rhododendron or laurel not present, other invasive species < 10% cover	Rhododendron or laurel present, or other invasive species > 10% cover	3
4	**Number of native tree species**	Five or more native tree or shrub species found across woodland parcel	Three to four native tree or shrub species found across woodland parcel	None to two native tree or shrub species across woodland parcel	3
5	**Cover of native tree and shrub species**	> 80% of canopy trees and >80% of understory shrubs are native	50-80% of canopy trees and 50-80% of understory shrubs are native	< 50% of canopy trees and <50% of understory shrubs are native	2
6	**Open space within woodland**	10 – 20% of woodland has areas of temporary open space, unless woodland is <10ha in which case lower threshold of 10% does not apply	21- 40% of woodland has areas of temporary open space	More than 40% of woodland has areas of temporary open space	3

Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator
7	**Woodland regeneration** [19]	All three classes present in woodland: trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	One or two classes only present in woodland	No classes or coppice regrowth present in woodland	1
8	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback	11% to 25% mortality and/or crown dieback or low risk pest or disease present	Greater than 25% tree mortality and or any high-risk pest or disease present	2
9	**Vegetation and ground flora**	Ancient woodland flora indicators present	Recognisable NVC plant community present	No recognisable NVC community	1
10	**Woodland vertical structure**[6]	Three or more storeys across all survey plots or a complex woodland	Two storeys across all survey plots	One or less storey across all survey plots	1
11	**Veteran trees**[7]	Two or more veteran trees per hectare	One veteran tree per hectare	No veteran trees present in woodland	1
12	**Amount of deadwood**	50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	1
13	**Woodland disturbance**[8]	No nutrient enrichment or damaged ground evident	Less than 1 hectare in total of nutrient enrichment across woodland area and/or less than 20% of woodland area has damaged ground	More than 1 hectare of nutrient enrichment and/or more than 20% of woodland area has damaged ground	1
				Total Score	**22**

Condition Assessment Result	Condition Assessment Score	Result Achieved
Total score >32 (33 to 39)	Good (3)	Poor
Total score 26 to 32	Moderate (2)	
Total score <26 (13 to 25)	Poor (1)	

19

Table EDP A7.3: Table EDP A6.4: Hedgerow Condition Assessment.

Condition Assessment Criteria				**Condition Achieved (Y/N)**	
Attributes and functional groupings (A- E)		**Criteria (the minimum requirements for 'favourable condition'**	**Description**	**H1**	**H2**
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.	Y	Y
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.	Y	Y
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.	Y	Y
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length and	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)."	Y	Y

Condition Assessment Criteria				Condition Achieved (Y/N)	
Attributes and functional groupings (A- E)		**Criteria (the minimum requirements for 'favourable condition'**	**Description**	**H1**	**H2**
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length:	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be 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 hedge. This criterion recognises the value of the hedge 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.	Y	NY
C2.	Undesirable 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 (*Urtica* spp.), cleavers (*Galium aparine*) and docks (*Rumex* spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	N	N
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.	Y	Y

Condition Assessment Criteria				**Condition Achieved (Y/N)**	
Attributes and functional groupings (A- E)		**Criteria (the minimum requirements for 'favourable condition'**	**Description**	**H1**	**H2**
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.	Y	Y
E1.	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.	N	–
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y	–
Number of criteria passed				8	7

Condition Categories for Hedgerows without trees				
Condition Assessment Score	**Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2**	**Weighting (score)**	**Score Achieved (Y/N)**	
			H1	**H2**
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	3		Good
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition)	2		

Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition)."	1		
Condition Categories for Hedgerows with trees				
Category	**Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2**	**Weighting (score)**	**Score Achieved**	
			H1	**H2**
Good	"No more than 2 failures in total; AND No more than 1 failure in any functional group."	3	Good	
Moderate	"No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1, C2 & E1 = Moderate condition)."	2		
Poor	"Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition)."	1		

Table EDP A7.4: Line of Trees Condition Assessment

Condition Assessment Criteria		**Condition Achieved (Y/N)**
		H3
1	More than 70% of trees are native species.	Y
2	Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide.	N
3	Includes one or more mature or veteran tree.	N
4	There is an undisturbed naturally vegetated strip of at least 6 m on both sides to protect the line of trees from farming and other anthropogenic operations.	N
5	At least 95% of the trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y
Number of criteria passed		**2**
Condition Assessment Result	**Condition Assessment Score**	**Score Achieved**
Passes 5 of 5 criteria	Good (3)	Poor
Passes 3 or 4 of 5 criteria	Moderate (2)	
Passes 0, 1 or 2 of 5 criteria	Poor (1)	

Table EDP A7.5: Urban Trees

Condition Assessment Criteria		**Condition Achieved (Y/N)**	
		Poor	**Moderate**
1	The tree is a native species (or more than 70% within the block are native species).	Y	Y
2	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).	Y	Y
3	The tree is mature or veteran (or more than 50% within the block are mature or veteran).	N	N
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	N	Y
6	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	N	N
Number of criteria passed		**2**	**3**
Condition Assessment Results	**Condition Assessment Score**	**Score Achieved**	
Passes 5 or 6 of 6 criteria	Good (3)	Poor	Moderate
Passes 3 or 4 of 6 criteria	Moderate (2)		
Passes 0, 1 or 2 of 6 criteria	Poor (1)		

Appendix EDP 8
Proposed Site Plan

BARWOOD LAND

Removal of existing access track and reinforcment of hedgerow planting

Primary vehicular access connecting to new residential development

Potential to connect with existing footpath network

LAP

Pond

SUDS

BALANCING POND

Retain and enhance existing hedgerows

Species enriched grassland with wildflower planting

Foul pumping station

KEY

- Proposed Site Boundary (total area 3.46ha)
- Proposed Trees

bhb architects

3931 Land West of Bloxham Road, Banbury

SK04B | 1:500 @ A1

December 2022

Plans

Plan EDP 1: Extended Phase 1 Habitat Plan
(edp7153_d012a 19 December 2022 MCa/JGw)

Plan EDP 2: Bat Survey Results 2021
(edp7153_d013a 19 December 2022 MCa/JGw)

Plan EDP 3: BIA (Pre-development Habitats)
(edp7153_d014a 19 December 2022 VMS/JGw)

Plan EDP 4: BIA (Post-development Habitats)
(edp7153_d015a 19 December 2022 VMS/JGw)

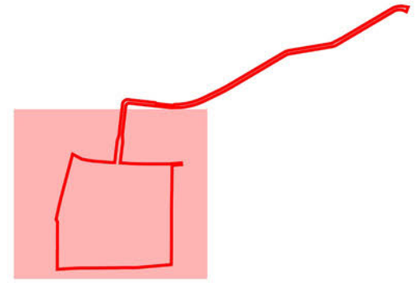
N

SI

I

0 10 20 30 40 50 m

- Site Boundary
- Broadleaved Plantation Woodland
- I — Improved Grassland
- SI — Poor Semi-improved Grassland
- Standing Water
- Hardstanding
- Intact Species-rich Hedgerow and Trees
- Defunct Species-rich Hedgerow
- Scattered Trees/Parkland (Broadleaved)
- Dry Ditch
- Fence
- Scattered Scrub



client

Barwood Development Securities Ltd

project title

Land West of Bloxham Road, Banbury

drawing title

Phase 1 Habitats

date	**19 DECEMBER 2022**	drawn by	**MCa**
drawing number	**edp7153_d012a**	checked	**JGw**
scale	**1:1,000 @ A3**	QA	**RBa**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

Site Boundary

Bat Transect Route

Anabat Locations

Bat Species

Common Pipistrelle

Soprano Pipistrelle

Noctule

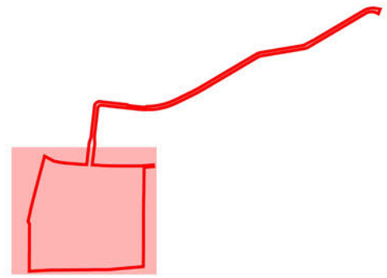
Myotis sp.

Month

May

July

September



client

Barwood Development Securities Ltd

project title

Land West of Bloxham Road, Banbury

drawing title

Bat Survy Results 2021

date	**19 DECEMBER 2022**	drawn by	**MCa**
drawing number	**edp7153_d013a**	checked	**JGw**
scale	**1:750 @ A3**	QA	**RBa**

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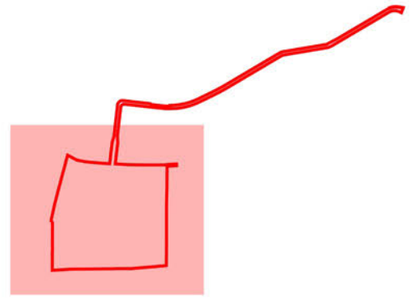
- Site Boundary
- Developed Land; Sealed Surface
- Modified Grassland
- Other Neutral Grassland
- Other Woodland; Broadleaved
- Line of Trees (Ecologically Valuable) - with Bank or Ditch
- Native Species-rich Hedgerow - Associated with Bank or Ditch
- Native Species-rich Hedgerow with Trees - Associated with Bank or Ditch



client

Barwood Development Securities Ltd

project title

Land West of Bloxham Road, Banbury

drawing title

BIA (Pre-development Habitats)

date	**19 DECEMBER 2022**	drawn by	**VMS**
drawing number	**edp7153_d014a**	checked	**JGw**
scale	**1:1,000 @ A3**	QA	**RBa**

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Site Boundary

Developed Land; Sealed Surface - Roads, Footpaths, Dwellings and other Built Structure

Modified grassland - Public Open Greenspace with 50:50 Ratio of Amenity Grassland and Rough Grassland Wildflower/Meadow. Rough Grassland around the Edge of the SUDs Basin

Other Woodland; Broadleaved

Sustainable Urban Drainage Feature

Intact Species-poor Hedgerow

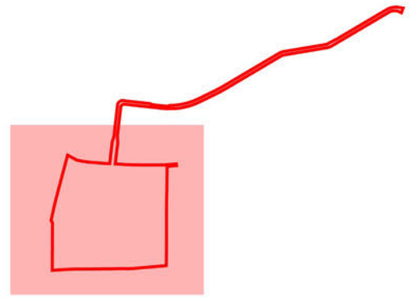
Line of Trees (Ecologically Valuable) - with Bank or Ditch

Native Species Rich Hedgerow - Associated with Bank or Ditch

Native Species Rich Hedgerow with Trees - Associated with Bank or Ditch

Proposed Medium Tree

Proposed Small Tree



client

Barwood Development Securities Ltd

project title

Land West of Bloxham Road, Banbury

drawing title

BIA (Post-development Habitats)

date	**19 DECEMBER 2022**	drawn by	**VMS**
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scale	**1:1,000 @ A3**	QA	**RBa**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

edp | the environmental dimension partnership

CARDIFF
02921 671900

CHELTENHAM
01242 903110

CIRENCESTER
01285 740427

info@edp-uk.co.uk
www.edp-uk.co.uk

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REGISTERED ORGANISATION CIfA

URBAN DESIGN GROUP REGISTERED PRACTICE

IEMA CORPORATE PARTNER

Landscape Institute
Registered practice