

HARPER CREWE BLOOMBRIDGE LTD



**ECOLOGY**SOLUTIONS

Part of the ES Group

THE MOORS,  
KIDLINGTON,  
OXFORDSHIRE

## **Ecological Assessment**

April 2024  
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## 1. INTRODUCTION

### 1.1. Background and Proposals

- 1.1.1. Ecology Solutions was initially commissioned in March 2018 by Harper Crewe Bloombridge Ltd to undertake an initial ecological assessment of land at The Moors, Kidlington, Oxfordshire (see Plan ECO1), hereafter referred to as the Site.
- 1.1.2. Subsequent to this previous assessment work, Ecology Solutions Limited were asked to undertake updated assessment work, inclusive of the completion of a Biodiversity Impact Assessment (BIA) with the DEFRA Metric 4.0, in December 2023 in order to inform Site promotion through the Regulation 18 process.
- 1.1.3. Subsequent to the submission of the previous report (2022), Ecology Solutions have again been commissioned to update the ecological reporting, inclusive of the findings of further survey work undertaken during the 2023 survey season.
- 1.1.4. The Proposals for the Site are for the provision of new residential development, in addition to infrastructure, access, and significant areas of open space.

### 1.2. Site Characteristics

- 1.2.1. The Site is located to the north of Kidlington, Oxfordshire and is approximately 21.33 hectares in size. The Site is bordered to the north by a number of agricultural fields, beyond which lies open scrub habitats and woodland habitat associated with the River Cherwell. Directly east lies St Mary's Church and graveyard, with further agricultural land beyond. The western boundary is formed of further fields and a railway line which runs north to south and separates the Site from wider countryside. The southern boundary sits immediately adjacent to existing residential development associated with the village of Kidlington, situated off The Moors, a residential street.
- 1.2.2. The Site comprises a number of arable crop fields with associated grassland, ruderal vegetation, hedgerows, boundary treelines, native shrub planting, and occasional scrub.

### 1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the Site as a whole. The importance of the habitats present is evaluated with regard to current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)<sup>1</sup>.
- 1.3.2. This report also sets out the existing baseline conditions for the Site, setting these in the correct planning policy and legal framework and

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<sup>1</sup> CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*. Chartered Institute of Ecology and Environmental Management, Winchester.

assessing the need for any further survey work. It also highlights any potential impacts from development at the Site. Appropriate mitigation, where necessary, is identified such that it will offset any negative impacts and where possible provide for ecological enhancement of the Site, in accordance with planning policy.

- 1.3.3. This Ecological Assessment has been undertaken regarding survey work undertaken at the site by Ecology Solutions since 2018 to date. The methodology and findings of the surveys are outlined in detail in this assessment.

## 2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey, and faunal survey. These are discussed in more detail below.

### 2.2. Desk Study

2.2.1. In order to compile background information on the Site and its immediate surroundings, Ecology Solutions contacted the Thames Valley Environmental Records Centre (TVERC) in 2022.

2.2.2. Information was provided by TVERC and is noted in this Ecological Assessment, where relevant. This information is also illustrated where appropriate on Plan ECO1.

2.2.3. Further information on designated sites from a wider search area was also obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)<sup>2</sup> database. This information is reproduced at Appendix 1 and where appropriate on Plan ECO1.

### 2.3. Habitat Survey Methodology

2.3.1. A further habitat survey was undertaken by Ecology Solutions in June 2023, updating the previous assessment undertaken in October 2022. The purpose of these surveys was to ascertain the general ecological value of the land contained within the boundaries of the Site, and to identify the main habitats and associated plant species, with notes on fauna utilising the Site.

2.3.1. The Site was surveyed with regards to both the extended Phase 1 survey methodology<sup>3</sup> (2018 and 2022) and the UK Habitat Classification<sup>4</sup> (2022 and 2023). This allowed the habitat types present to be identified and mapped, together with an assessment of the species composition of each habitat. The principal aim of the UKHab is to provide a system for consistently recording and classifying habitats which can be used for both earth observed and field based surveys. The system comprises a principal hierarchy (primary habitats) – which include ecosystems, broad habitats, priority habitats, Annex 1 habitats, and non-hierarchical secondary codes.

2.3.2. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.

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<sup>2</sup> <http://www.magic.gov.uk/>

<sup>3</sup> Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

<sup>4</sup> Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at <http://www.ukhab.org/>

- 2.3.3. Using the above method, the Site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.
- 2.3.4. All the species that occur in each habitat would not necessarily be detected during survey work carried out at any given time of the year, since different species are apparent at during different seasons. However, given that multiple habitat surveys have been undertaken, including during the optimal period for Phase 1 surveys, and given the limited habitats present, it is considered an accurate and robust assessment has been made.

## 2.4. Faunal Survey

- 2.4.1. General faunal activity observed during the course of the surveys, whether visually or by call, was recorded. Specific attention was paid to the potential presence of any protected, rare, notable or priority species. In addition, specific surveys were undertaken for Badgers *Meles meles*, bats, Reptiles and Amphibians (GCN).
- 2.4.2. **Badgers.** Initial surveys were undertaken by Ecology Solutions in August 2018 to search for evidence of Badgers, with updated surveys completed in October 2022, and May and June 2023. These surveys comprised two main elements. The first was a thorough search for evidence of Badger setts. For any setts encountered each sett entrance would be recorded and plotted, even if the entrance appeared disused. Consideration was also given to the sett type (main, annex, subsidiary, or outlier).
- 2.4.3. Secondly, Badger activity such as well-worn paths and run-throughs, snagged hair, footprints, latrines, and foraging signs were also searched for in order to build up a picture of the use of the Site by Badgers.
- 2.4.4. **Bats.** Specific bat surveys were undertaken by Ecology Solutions in August 2018 and updated in October 2022, and May to September 2023 to assess the potential for roosting bats within the trees on Site. The work was undertaken by an experienced bat worker and aimed to establish the likelihood of the presence/absence of bats.
- 2.4.5. Field surveys were undertaken with regards to best practice guidelines issued by Natural England (NE) (2004<sup>5</sup>), the Joint Nature Conservation Committee (JNCC) (2004<sup>6</sup>) and the Bat Conservation Trust (2016<sup>7</sup>).
- 2.4.6. All trees within the Site were assessed for their potential to support roosting bats. For a tree to be classed as having some potential for roosting bats it must usually have one or more of the following characteristics:

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<sup>5</sup> Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

<sup>6</sup> Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3<sup>rd</sup> edition. Joint Nature Conservation Committee, Peterborough.

<sup>7</sup> Collins, J. (Eds.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edition)*. Bat Conservation Trust, London.

- obvious holes, e.g. rot holes and old Woodpecker holes;
  - dark staining on the tree below a hole;
  - tiny scratch marks around a hole from bats claws;
  - cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc.; and
  - very dense covering of mature Ivy *Hedera helix* over the trunk.
- 2.4.7. In addition, and to obtain an understanding of the bat species likely to utilise the Site, alongside the levels of bat activity, bat activity surveys in the form of transect and static detector deployment are currently being undertaken. Surveys completed so far were carried out in October 2022, May to September 2023.
- 2.4.8. The transect surveys involved surveyors walking a single transect of the Site, incorporating the linear habitats present in addition to areas of open arable land. The surveys utilised an EchoMeter Touch 2 Pro (EMT 2 pro) bat detector to record the data, which was subsequently analysed using Kaleidoscope bat sound analysis software. The evening transect surveys began approximately 15 minutes before sunset and continued until between 1.5 to 2 hours after sunset.
- 2.4.9. The bat transect surveys were accompanied by static monitoring surveys. Four static detectors (SongMeter Mini Bat detectors) were deployed at strategic locations, as shown on Plan ECO2, for 7 consecutive nights. These surveys allowed for a longer-term assessment of the use of the Site by foraging and commuting bats.
- 2.4.10. In addition, with note to the presence of one tree with high bat roosting potential (tree T5) (which may be adversely impacted), emergence and/or re-entry surveys are being conducted at the Site. Initial surveys were undertaken in June, with further surveys undertaken in August 2023.
- 2.4.11. Emergence surveys have, and will, utilise iPads combined with Echo Meter Touch 2 PRO bat detectors to record the data which, together with direct observation, are sufficient to identify any roosting bats leaving the trees in the evening, entering them in the morning, or using the surrounding area for foraging. The emergence surveys have, or will, be undertaken 15 minutes prior to sunset until approximately two hours after sunset. The re-entry surveys have, or will, be undertaken from approximately 1.5 hours prior to sunrise until fifteen minutes after sunrise.
- 2.4.12. Following the completion of surveys, all recorded data is analysed using the Kaleidoscope Pro bat sound analysis software.
- 2.4.13. Surveys are conducted when night-time temperatures are above 10°C. The insectivorous diet of bats means there is reduced food available when temperatures fall below this level, and consequently levels of activity are low and may not accurately reflect the value of the Site for bats. The weather conditions for the surveys were recorded and any limitations noted.

- 2.4.14. **Reptiles.** Whilst there is a limited amount of suitable reptile habitat, there are areas of ruderal and long grass towards the margins of arable fields which are suitable. Furthermore, background records show there is presence of reptiles in the local area.
- 2.4.15. As such, noting their presence in the local area, a suite of refugia surveys were undertaken. A total of 270 'tins' (0.5m x 0.5m squares of heavy roofing felt which are often used as refuges by reptiles) were distributed throughout all suitable reptile habitat within the Site (see Plan ECO3).
- 2.4.16. These tins were left in place for two weeks to 'bed in' and subsequently surveyed for reptiles either beneath or upon the tins during suitable weather conditions. To date, two of seven proposed survey checks have been undertaken.
- 2.4.17. Suitable weather conditions for carrying out surveys are when the air temperature is between 9°C and 18°C. Heavy rain and windy conditions have been avoided.
- 2.4.18. The tins provide shelter and heat up more quickly than the surroundings in the morning, and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask and raise their body temperature, allowing them to forage earlier and later in the day.
- 2.4.19. **Great Crested Newts *Triturus cristatus* (eDNA).** The on-Site pond was subject to eDNA surveys on 21 April 2023. Pond water sampling kits supplied by SureScreen Scientifics were utilised for the eDNA survey work, with the sampling methodology fully according with that recommended by the supplier. Water samples were subsequently sent to SureScreen Scientifics for laboratory analysis.
- 2.4.20. The locations of the waterbody subject to eDNA surveys are detailed on Plan ECO2.

### 3. ECOLOGICAL FEATURES

3.1. The Site was initially subject to ecological survey by Ecology Solutions in August 2018 and October 2022, with an update walkover undertaken most recently in June 2023. The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.

3.2. The following main habitat/vegetation types were identified:

- Arable land
- Other Neutral Grassland
- Hedgerows
- Treelines
- Mixed scrub
- Bramble
- Pond

3.3. The locations of these habitats are shown on Plan ECO2.

3.4. Each habitat present is described below, with an account of their representative plant species.

#### 3.5. Arable Land

3.5.1. The vast majority of the Site (in excess of 90% of the overall area) comprises intensively managed arable fields (labelled **F1** to **F5** on Plan ECO2) which support a monoculture of planted crop and are of negligible intrinsic ecological value.

3.5.2. Field margins are present throughout the Site, adjacent to the field boundaries, and were recorded to be less than 1m wide on average. These margins were species-poor and dominated by coarse grasses consistent with the area of Other Neutral Grassland (see below). Consistent with UKHab methodology, given the narrow width of field margins falling below the Minimum Mapping Unit (MMU) of the survey, for the purposes of the DEFRA Metric they are excluded from the habitat area inputs.

3.5.3. Incidental patches of ruderal vegetation are also present at the field boundaries, most notably towards the west and south of the Site. Species present include Hogweed *Heracleum sphondylium*, Cow Parsley *Anthriscus sylvestris*, Broad-leaved Dock *Rumex obtusifolius*, Great Willowherb *Epilobium hirsutum*, Fat-hen *Chenopodium album*, Tansey *Tanacetum vulgare* and Horseradish *Armoracia rusticana*. Again, on account of their small, incidental nature, they are not individually mapped in the accompanying BIA. The vegetation is of no significant ecological interest.

#### 3.6. Other Neutral Grassland

3.6.1. As above, narrow field margins are present throughout the Site, adjacent to the field boundaries. Additionally, a small area of ruderal

dominated grassland is present in the north-east of the Site, to the north of 'Line of Trees 2' (LoT2).

- 3.6.2. The band of native shrub planting located along the northern and north-western boundaries of the Site also supports incidental patches of grassland.
- 3.6.3. The grassland within the Site supports a range of common and widespread grassland species including False Oat-grass *Arrhenatherum elatius*, Barren Brome *Anisantha sterilis*, Couch *Elytrigia repens*, Yorkshire Fog *Holcus lanatus*, Perennial Rye *Lolium perenne*, Cock's-foot *Dactylis glomerata*, Timothy *Phleum pratense*, Meadow Foxtail *Alopecurus pratensis* and Red Fescue *Festuca rubra*. Herbaceous species present included Common Nettle *Urtica dioica*, Selfheal *Prunella vulgaris*, Wall Barley *Hordeum murinum*, Chicory *Cichorium intybus* Creeping Thistle *Cirsium arvense* Germander Speedwell *Veronica chamaedrys*, Yarrow *Achillea millefolium*, Creeping Cinquefoil *Potentilla reptans*, Hogweed *Heracleum sphondylium*, Common Mouse-ear *Cerastium fontanum*, Red Clover *Trifolium pratense*, Redshank *Persicaria maculosa*, Greater Plantain *Plantago major*, Dandelion *Taraxacum*, Lesser Burdock *Arctium minus*, Wild Carrot *Daucus carota subsp. carota*, Smooth Sow-thistle *Sonchus oleraceus* and Red Barsite *Odontites vernus*.
- 3.6.4. Incidental areas of more disturbed grassland are present within the Site and are typically situated beside tracks and footpaths. These areas support a number of species including Shepherd's-purse *Capsella bursa-pastoris, subsp. arvensis*, Knotgrass *Polygonum aviculare*, Greater Plantain, Scented Mayweed *Matricaria recutita*, Scarlet Pimpernel *Anagallis arvensis*, Cleavers *Galium aparine* and Scentless Mayweed *Tripleurospermum inodorum*.
- 3.6.5. The grassland in the north-east of the Site, with reference to DEFRA Metric condition criteria, is assessed to be in poor ecological condition. This is on account of it being dominated by tall rank vegetation and undesirable arable weeds, having an absence of structural variation, poor species diversity, scrub cover in excess of 5%, and no visible bare ground.
- 3.6.6. Given the incidental nature of the grassland associated with mixed scrub, this is mapped as mixed scrub as part of the accompanying BIA, as opposed to being individually mapped.

### 3.7. Hedgerows

- 3.7.1. The arable fields within the Site are divided by a series of managed and occasionally gappy hedgerows (labelled **H1** to **H3** on Plan ECO2) which are dominated by Hawthorn *Crataegus monogyna*.
- 3.7.2. Other species present within these hedgerows include occasional Pedunculate Oak *Quercus robur*, Ash *Fraxinus excelsior*, Blackthorn *Prunus spinose*, Goat Willow *Salix caprea*, and infrequent Elm *Ulmus procera*.

- 3.7.3. **H4** is a small section of hedgerow which lies along the boundary of a track used for access to **F1** by walkers and farm machinery. This feature supports a small number of species including Box *Buxus*, Plum *Prunus domestica*, Bramble *Rubus fruticosus* and Ivy.
- 3.7.4. **H5** runs along the western boundary and contains scattered immature to early mature trees. It is predominantly Hawthorn with frequent Blackthorn and Hazel *Corylus avellana*, and rare instances of Walnut *Juglans regia*. All the standard trees that make up this hedgerow consist of Goat Willow.
- 3.7.5. **H6** makes up the southern boundary of **F2** and is another native hedgerow with trees, it is also predominantly Hawthorn but also has occasional Goat Willow and White Willow *Salix alba*. The early mature trees in **H6** are Hazel.
- 3.7.6. The above hedgerows were recorded to support a limited range of ground flora. Other species recorded in association with the hedgerows include Garlic Mustard *Alliaria petiolate*, Lords-and-Ladies *Arum maculatum*, Cleavers *Galium aparine*, Hedge Woundwort *Stachys sylvatica*, Hedge Bindweed *Calystegia sepium* and Bramble.
- 3.7.7. With the exception of H4 (poor condition), each of the hedgerows within the Site are assessed to be in moderate condition, with reference to the DEFRA Metric condition criteria (see BIA at Appendix 2).

### 3.8. Treelines

- 3.8.1. In addition to hedgerows, four 'Lines of Trees' (LoT) are present, forming a proportion of the field boundaries. They contain a large number of mature trees.
- 3.8.2. These tree belts support a range of species including Ash, Goat Willow, Silver Birch *Betula pendulus*, Sycamore, Cherry *Prunus sp.*, Beech *Fagus sylvatica*, Oak, Field Maple *Acer campestre*, Horsechestnut *Aesculus hippocastanum*, Walnut, and Alder *Alnus glutinosa*.
- 3.8.3. The shrub component associated with these treelines includes Hawthorn, Hazel, Holly *Ilex aquifolium*, Elder *Sambucus nigra* and Blackthorn.
- 3.8.4. Each of the treelines within the Site are assessed to be in moderate condition, with reference to DEFRA Metric criteria (see accompanying BIA at Appendix 2).

### 3.9. Mixed Scrub (Native Shrub Planting)

- 3.9.1. The entire northern boundary of the Site comprises linear native shrub planting (**Scr1**). The planting also runs partially adjacent to the

western boundary of the Site, appears to be several years old and contains a range of native species including Holly, Hazel, Field Maple, Elm, Blackthorn, Hawthorn, Oak, Silver Birch, Wayfaring-tree *Viburnum lantana*, Dogwood *Cornus sanguinea*, and occasional self-seeded Buddleja *Buddleja davidii*.

- 3.9.2. Scr1 is assessed to be in moderate condition, with reasonable age and structural variation, and a good species range. It fails scrub condition criterion D on account of the presence of non-native Buddleia.
- 3.9.3. The belt of shrub planting also supports localised areas of semi-improved grassland (as detailed above).
- 3.9.4. In addition, a belt of mixed scrub (**Scr2**) is present along the southern and western boundary of **F4**. This area of scrub is assessed to be in poor ecological condition, being dominated by Buddleia with little other woody vegetation. It has no significant age or structural variation, nor valuable edge habitat.

### 3.10. **Bramble Scrub**

- 3.10.1. Scattered patches of Bramble scrub are present in the margins of some of the arable fields, including a patch in the south of F1. They are of no significant ecological value.

### 3.11. **Pond**

- 3.11.1. A pond, considered to be seasonally drying, is present at the southern-most point of the Site, adjacent to field F4 (as shown on Plan ECO2).
- 3.11.2. During the course of several visits to the Site by Ecology Solutions, this pond has been recorded as dry. During the most recent survey in June 2023, the pond was recorded as shallow with water draining in and out via artificial drainage. It is heavily over-shaded by encroaching saplings of Goat Willow, Buddleia and Bramble scrub. Occasional Common Sedge *Carex nigra* was recorded at the margins of the basin. The pond surface was also densely vegetated with *algae* sp. allowing very little light into the pond, leaving only a Water Hawthorn *Aponogeton* sp. and Bull rush *Typha latifolia* limited to the edge of the pond.

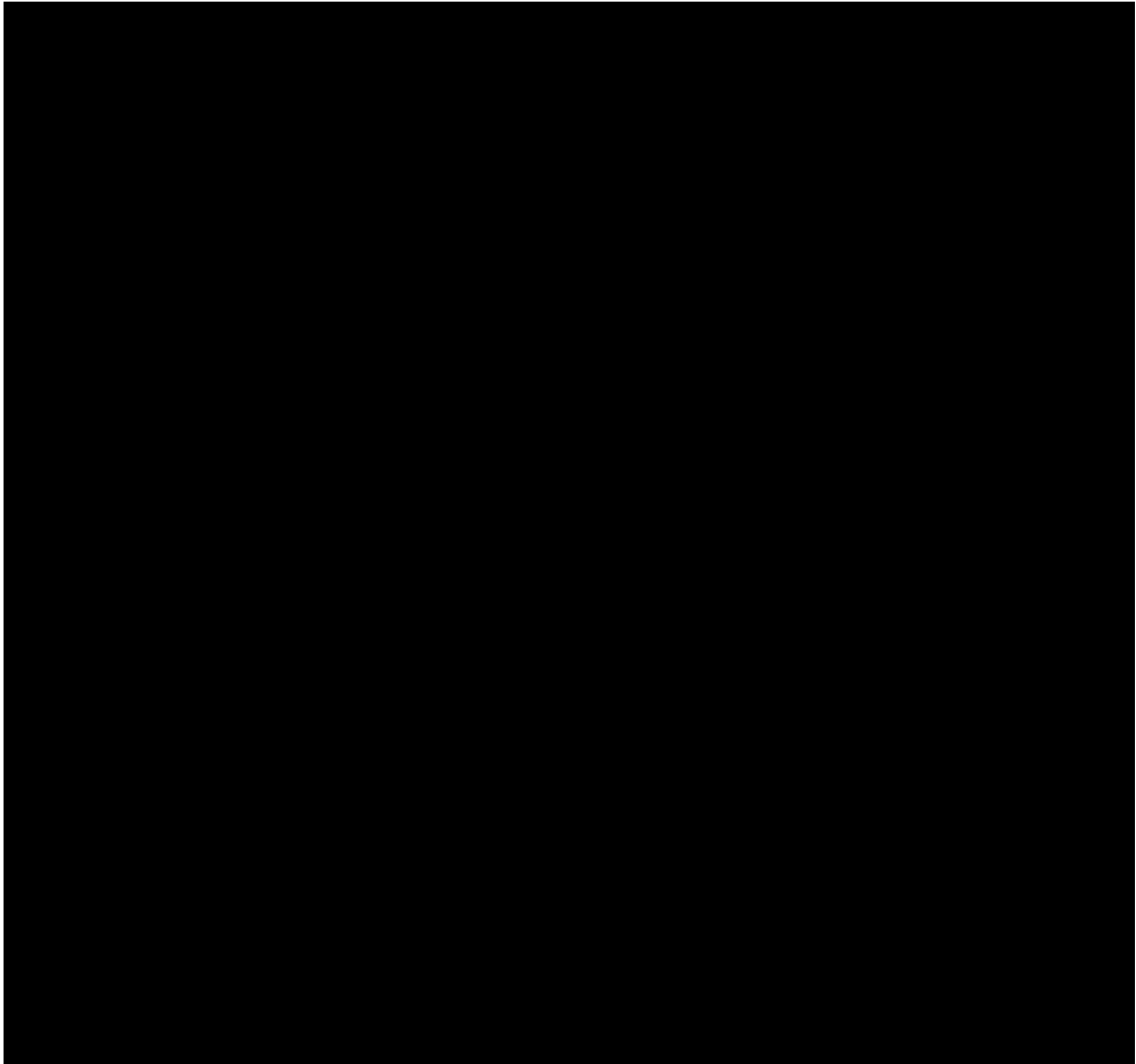
### 3.12. **Background Information**

- 3.12.1. The desk study undertaken with the TVERC returned two counts of Common Valerian *Valeriana officinalis* from within the north of the Site, recorded in 2013. A record of Bluebell *Hyacinthoides non-scripta*, a Schedule 8 plant covered under the Wildlife and Countryside Act 1981, was returned from an area approximately 560m to the north-east of the Site in 2001. Other notable plant

species recorded in the wider area include Distant Sedge *Carex distans*, Lesser Spearwort *Ranunculus flammula*, Tormentil *Potentilla erecta*, Alder Buckthorn *Frangula alnus*, Hoary Plantain *Plantago media*, Corn Mint *Mentha arvensis*, Common Vetch *Vicia sativa*, Dwarf Gorse *Ulex minor*, Water-violet *Hottonia palustrisi*, Ragged-Robin *Silene flos-cuculi*, Large-leaved Lime *Tilia platyphyllos*, Goldenrod *Solidago virgaurea*, Marsh Ragwort *Senecio aquaticus*, Marsh Valerian *Valeriana officinalis* and Greater Water-parsnip *Sium latifolium*.

#### 4. WILDLIFE USE OF THE SITE

- 4.1. During surveys general observations were made of any faunal use of the Site, with specific attention paid to the potential presence of protected or notable species. As detailed above, specific surveys were undertaken for Badgers, GCN, reptiles and bats.



#### 4.3. Bats

##### Roosting

- 4.3.1. Eight trees which support features of potential value for roosting bats, such as splits, cracks and Woodpecker holes, are present within/adjacent to the Site. The approximate locations of these trees are shown on Plan ECO2. Of these trees, T1, T3, T4 and T8 were assessed to have low bat potential, T2, T6 and T7 were assessed as moderate, and T5 was assessed as of high bat potential. No evidence of roosting bats, such as droppings or scratch marks, were identified. Of the above trees, T5, T6, and T7 will be lost to the proposals.
- 4.3.2. Accordingly, each of these trees were subject to surveys in 2023.

### *Emergence/Re-entry Surveys*

- 4.3.3. Table 1 below describes the date, survey type and weather conditions of the surveys undertaken on trees with bat roost potential in 2023.

<b>Date</b>	<b>Survey</b>	<b>Trees surveyed</b>	<b>Weather conditions</b>
06.06.2023	<u>Emergence</u> <b>Start:</b> 21:04 <b>Finish:</b> 23:19	T5, T6, T7 & T8	14C start temperature, 100% cloud cover, no rain and light wind
07.06.2023	<u>Re-entry</u> <b>Start:</b> 2:28 <b>Finish:</b> 5:03	T2	10C start temperature, 100% cloud cover, no rain light winds
20.06.2023	<u>Emergence</u> <b>Start:</b> 21:12 <b>Finish:</b> 23:27	T5, T6 & T7	19C start temperature, 40% cloud cover, intermittent rain, medium winds
21.06.2023	<u>Re-entry</u> <b>Start:</b> 2:46 <b>Finish:</b> 5:01	T6, T7	14C start temperature, 5% cloud cover, slight drizzle but mostly dry, little wind
20.07.2023	<u>Emergence</u> <b>Start:</b> 20:57 <b>Finish:</b> 23:12	T6, T7	16C start temperature, 80% cloud cover, no wind and no rain
21.07.2023	<u>Re-entry</u> <b>Start:</b> 3:11 <b>Finish:</b> 5:26	T5, T6 & T7	10C start temp, no wind, no clouds

*Table 1. Dates, timing and weather conditions experienced during bat emergence surveys.*

- 4.3.4. None of the surveys carried out found any evidence of roosting bats and the level of activity recorded is generally low.

### Foraging/Commuting

- 4.3.5. The Site overall is assessed as of low value to foraging or commuting bats, being dominated by large areas of arable land which would not be of any significant importance for bats.
- 4.3.6. The treelines, native shrub planting, and hedgerows provide suitable foraging and navigational resources for this species group, albeit it is noted similar and, indeed, improved opportunities are widespread in the local area.

### *Transect Survey*

- 4.3.7. A single transect survey was undertaken on 12 October 2022. This identified only low levels of bat activity, with a total of 25 registrations recorded. Activity was dominated by Common Pipistrelle *Pipistrellus pipistrellus* (20 registrations), with only small numbers of registrations for Soprano Pipistrelle *Pipistrellus pygmaeus* (2 registrations) and Nathusius Pipistrelle *Pipistrellus nathusii* (3 registrations).
- 4.3.8. In contrast to the October survey, two transect routes were walked for the surveys on dates listed in Table 2. They show higher levels

of activity compared to the 2022 survey but still in the lower range of activity.

Survey Date	Species and number of registrations
23.05.2023	Common Pipistrelle: 53; Soprano Pipistrelle 17; <i>Myotis</i> sp.: 3; Noctule: 76; Lesler: 34; Serotine: 2; Brown Long-eared: 1.
11.07.2023	Common Pipistrelle: 34; Soprano Pipistrelle 7; Noctule: 21; Lesler: 31;
06.09.2023	Common Pipistrelle: 34; Soprano Pipistrelle 25; <i>Myotis</i> sp.: 3; Noctule: 141; Lesler: 4; Brown Long-eared: 3.

Table 2. Summary of bat activity levels recorded across Transect surveys.  
\*Note that these were recorded across two detectors on each survey.

- 4.3.9. Activity was concentrated along linear features, particularly the southern edge of the Site, with no activity recorded across the open arable fields.
- 4.3.10. Surveys indicate the Site to be of low significance to local bat assemblages, supporting relatively low activity levels dominated by common and widespread bat species.

#### Static Deployment

- 4.3.11. **2022.** A total of four static detectors were deployed at the Site between 11 October and 17 October 2022 (seven nights). The locations of detector deployment are identified on Plan ECO2.
- 4.3.12. **2023.** A total of three static detectors were deployed at the Site between May and September 2023 (for between six and seven nights). The locations of detector deployment are identified on Plan ECO2.
- 4.3.13. The details of these static surveys are described below in Table 3, with the date and number of recordings per species.

Date	Species and number of registrations
11.10.2022-17.10.2022	Common Pipistrelle: 335; Soprano Pipistrelle; 160; <i>Myotis</i> sp.: 14; Noctule: 17; Leisler 3; Serotine: 2;
31.05.2023-06.06.2023	Common Pipistrelle: 2202; Soprano Pipistrelle 545; <i>Myotis</i> sp.: 11; Noctule: 342; Leisler 110; Serotine: 2; Barbastelle: 53; Brown Long-eared: 3.
20.07.2023-27.07.2023	Common Pipistrelle: 1776; Soprano Pipistrelle 570; <i>Myotis</i> sp.: 81; Noctule: 85; Leisler 97; Serotine: 5; Barbastelle: 2; Brown Long-eared: 14.
06.09.2023-12.09.2023	Common Pipistrelle: 649; Soprano Pipistrelle 270; Nathusius Pipistrelle; 3; <i>Myotis</i> sp.: 180; Noctule: 342; Leisler 41; Barbastelle: 15; Brown Long-eared: 76.

Table 3. Summary of bat activity levels recorded across statics detectors.

- 4.3.14. The results of the static detectors are broadly consistent with the findings of the activity surveys, comprising predominantly of Pipistrelle sp. and Noctule bat. The static detectors also show low numbers of *Myotis* sp., Barbastelle and Brown Long-eared bat.

- 4.3.15. Regarding the Barbastelle records, it is noted that the majority of these records relate to static detectors located in adjacent to Hedgerow H1 and LoT1.
- 4.3.16. In summary, bat activity survey work to date has shown that the linear features of the Site are of some value to some rarer species as navigational features for commuting, but unlikely for foraging as the arable land offers little in the form of opportunities. The remainder of the Site appears to be of low value to bats, with the majority of activity pertaining to common and widespread species. As would be expected, bat activity was associated with the linear features within and adjacent to the Site, with no activity recorded over arable habitats.
- 4.3.17. The desk study undertaken with TVERC returned no records of bat activity or bat roosts from within the Site. However, a number of records were returned from areas immediately adjacent to the Site, as well as the wider area. The closest records returned were from Thornbury House, and from a residential property directly to the south, located within 30m of the south-eastern boundary. A suite of surveys undertaken in 2009 recorded several species, including Brown Long-eared bat, Common Pipistrelle, *Myotis sp.* *Myotis sp.*, and Noctule. Within the aforementioned residential property, a suspected Leisler's bat roost was recorded. Other species recorded within the wider area include Daubenton's bat *Myotis daubentonii*, Lesser Horseshoe bat *Rhinolophus hipposideros*, Natterer's bat *Myotis nattereri*, Serotine *Eptesicus serotinus*, Soprano Pipistrelle and Barbastelle. The closest confirmed roost, used by Brown Long-eared bat, is located approximately 1.4km to the north of the Site.

#### 4.4. Reptiles

- 4.4.1. Areas of suitable reptile habitat are limited to the narrow field margins associated with a number of arable fields on Site, including within the native shrub planting on the northern and north-western boundary.
- 4.4.2. Given the presence of suitable (albeit limited) habitat, a suite of reptile surveys were undertaken at the Site. Reptile tins were laid out in April 2023 and left to bed in for two weeks, with the first surveys carried out in May. The findings of the surveys are detailed in Table 4 below.

Survey Number	Date (2023)	Temp °C	Weather Conditions	Results
1	1 May	15	80% cloud cover, mild and dry	2 female Slow Worm <i>Anguis fragilis</i> 1 male Slow Worm 1 male Common lizard <i>Zootoca vivipara</i>
2	6 June	18	10% cloud cover, dry	1 female Grass Snake <i>Natrix natrix</i> , 1 Male Grass snake 1 Juvenile
3	15 June	15	10% cloud cover, mild	7 Female Slow worms

Survey Number	Date (2023)	Temp °C	Weather Conditions	Results
4	20 June	17	100% cloud cover, warm	2 female Slow Worm, 2 male Slow Worm, 5 juvenile Slow Worm, 1 Grass Snake
5	26 June	16	50% cloud cover, warm	4 female Slow worm 3 male Slow worm 2 juvenile slow worm
6	2 August	17	95% cloud cover, dry and warm	2 Common lizards (sex unknown) 3 male Slow worm 12 female Slow worm 14 Juvenile slow worm 2 Grass snake (sex unknown)
7	21 September	17	85% cloud cover, light rain and warm.	1 juvenile Slow Worm

Table 4. reptile survey results

4.4.3. Evidence of reptiles has been recorded during the surveys to date and confirmed the presence of Slow Worm, Common Lizard and Grass Snake. The peak count of Reptiles recorded was during August with 15 adult Slow Worm, two adult Common Lizard and two adult Grass Snakes recorded during the survey.

4.4.4. To ascertain the relative importance of common reptile populations recorded within the Application Site, the tinning density, which on average is 121 tins/ha of suitable habitat, has been taken into account, in line with guidance and population size estimates set out by the Herpetofauna Groups of Britain and Ireland (HGBI). On this basis it is considered grassland/field edge habitats (totalling approximately 1.4ha) within the Application Site support a low population of Slow Worm, Common Lizard and Grass Snake respectively.

4.4.5. The desk study undertaken with TVERC returned no records of reptiles from within the Site. From the wider area a number of results were returned, including records of Common Lizard Slow Worm and Grass Snake. The closest record of a reptile was returned from an area within Kidlington Meadows, located approximately 80m to the north-east of the Site, and references a sighting of three Slow Worms and a single Grass Snake.

#### 4.5. Great Crested Newts

4.5.1. A seasonal pond basin is located within an area of scrub at the southern part of the Site. Analysis of desk study information shows this pond was recorded to support a number of GCN following surveys in 2002 (see Appendix 3). In addition, information received from TVERC indicates the pond supported GCN when surveys were undertaken in 2009.

4.5.2. Ecology Solutions have visited this pond on numerous occasions, including in August 2018, October 2018, October 2022 and again in

both April and June 2023. Only during each of the most recent visits was this feature recorded as wet. However, there was evidence of shrub invasion and ecological succession. Furthermore, during the later Site visit in June 2023, the water level was shown to be significantly lower owing likely to its seasonally drying nature and artificial water outlets.

- 4.5.3. Given the pond clearly dries on an annual basis during the early summer months, it is not capable of supporting viable breeding populations of GCN. This is on the basis GCN juveniles require aquatic habitat until at least late August of each year for their survival. Notwithstanding, on a precautionary basis, a GCN eDNA survey was carried out in April 2023. This confirmed the pond to have evidence of GCN presence, with 12 positive replicates. This indicates GCN are present within the Site and local area, and that they will make use of the pond as part of a wider foraging resource. As above, despite the presence of GCN eDNA, the pond is not assessed to support a viable breeding feature.
- 4.5.4. As noted above, the desk study undertaken with TVERC returned records of a peak count of 10 adult GCN from within the Site in 2009, in addition to juveniles and eggs. The next closest record confirms the presence of GCN within a waterbody approximately 2.3km to the south-east of the Site.

#### 4.6. **Birds**

- 4.6.1. The hedgerows, scrub, and tree belts within the Site provide suitable foraging and nesting habitat for common bird species, albeit again it is noted improved opportunities are present in the wider area.
- 4.6.2. Bird species recorded at the Site during the habitat surveys were Wood Pigeon *Columba palumbus*, Blackbird *Turdus merula*, Chaffinch *Fringilla coelebs*, Magpie *Pica pica*, Green Woodpecker *Picus viridis*, Carrion Crow *Corvus corone*, Robin *Erithacus rubecula*, Jay *Garrulus glandarius*, Blue Tit *Cyanistes caeruleus*, Great Tit *Parus major*, Wren *Troglodytes troglodytes*, Pheasant *Phasianus colchicus* and Red Kite *Milvus milvus*.
- 4.6.3. The desk study undertaken with TVERC returned several records of protected and notable bird species from the wider area, many of which have limited accuracy given the confidentiality TVERC grants its bird records. Bird records returned from either a 1km or 2km grid reference, which encompass either all or a partial area of the Site include Barn Owl *Tyto alba*, Cuckoo *Cuculus canorus*, Firecrest *Regulus ignicapilla*, Hobby *Falco subbuteo*, Kingfisher *Alcedo atthis*, Little Egret *Egretta garzetta*, Grey Wagtail *Motacilla cinerea*, Starling *Sturnus vulgaris*, Fieldfare *Turdus pilaris*, Mistle Thrush *Turdus viscivorus*, Lesser Redpoll *Acanthis cabaret* and Willow Tit *Poecile montana*. Other notable or protected species from further afield include Bittern *Botaurus stellaris*, Black Redstart *Phoenicurus ochruros*, Brambling *Fringilla montifringilla*, Cetti's Warbler *Cettia cetti*, Green Sandpiper *Tringa ochropus*, Greenshank *Tringa ochropus*, Little Ringed Plover *Charadrius dubius*, Marsh Harrier

*Circus aeruginosus*, Merlin *Falco columbarius*, Osprey *Pandion haliaetus*, Peregrine *Falco peregrinus*, Pintail *Anas acuta*, Red Kite, Redwing *Turdus iliacus* and Wryneck *Jynx torquilla*.

#### 4.7. Invertebrates

- 4.7.1. The habitats at the Site are likely to support a range of common invertebrate species, but there is no reason to suggest any protected or notable species may be present.
- 4.7.2. The desk study undertaken with TVERC returned one result of Cinnabar larvae *Tyria jacobaeae*, found within the north of the Site. The closest protected species record is of Black Hairstreak *Satyrrium pruni*, recorded within Kidlington Meadows, approximately 160m to the north-east. Furthermore, the Rushy Meadows Site of Special Scientific Interest (SSSI), located approximately 720m to the south-west of the Site, returned a number of notable records, including Garden Tiger *Arctia caja*, Latticed Heath *Chiasmia clathrata*, Sulphur Pearl *Sitochroa palealis*, Rosy Rustic *Hydraecia micacea*, Sallow *Cirrhia icteritia*, Dot Moth *Melanchra persicariae*, Crescent *Helotropha leucostigma*, Mouse Moth *Amphipyra tragopoginis*, Grey Dagger *Acronicta psi*, Mottled Rustic *Caradrina morpheus*, Oak Hook-tip *Watsonalla binaria*, Knot Grass *Acronicta rumicis*, Brown-spot Pinion *Agrochola litura*, Autumnal Rustic *Eugnorisma glareosa*, Deep-brown Dart *Aporophyla lutulenta* and Brown-spot Pinion *Agrochola litura*.

#### 4.8. Other Species

- 4.8.1. Given the habitats present, it is considered the Site is unlikely to provide significant opportunities to any other protected or notable species.
- 4.8.2. No evidence of Dormouse *Muscardinus avellanarius* were returned as part of the desk study and, indeed, this species is rarely recorded within the district. In any event, the vast majority of potentially suitable habitat is being retained.
- 4.8.3. The hedgerows and scrub are likely to offer a degree of suitable habitat for European Hedgehog *Erinaceus europaeus*, should this species be present in the local area. To a lesser extent, the arable fields may provide some opportunities for Brown Hare *Lepus europaeus*, albeit the intensive management greatly tempers any value.
- 4.8.4. The desk study undertaken with TVERC returned one record of White-clawed Freshwater Crayfish *Austropotamobius pallipes* from a point within the River Cherwell, approximately 1.4km to the south-east of the Site. Furthermore, several records of both Water Vole *Arvicola amphibious* and European Otter *Lutra lutra* were returned from the wider area in 2000 and 2009 respectively, the closest confirmed location being within an area of the River Cherwell, approximately 420m to the north-west of the Site. The Site does not afford suitable opportunities to these species.

## 5. ECOLOGICAL EVALUATION

### The Principles of Site Evaluation

- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe<sup>8</sup>. These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current SSSI designation maintains a system of data analysis roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity, and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological/geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment, and therefore additional factors need to be taken into account, e.g. a woodland type with comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local BAP. The local BAP currently lists a number of Conservation Target Areas (CTAs) which in turn support a wide range of habitats and/or species of Principal Importance.
- 5.1.7. Levels of importance can be determined within a defined geographical context, from the immediate site or locality through to the International level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

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<sup>8</sup> Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

## 5.2. Habitat Evaluation

### Designated Sites

- 5.2.1. **Statutory sites.** There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the Site.
- 5.2.2. The closest statutory site of biological interest is Rushy Meadows Site of Special Scientific Interest (SSSI), located approximately 0.6km south-west of the Site at its closest point. This SSSI is designated on account of the diverse meadow habitats and associated faunal species it supports.
- 5.2.3. The next closest statutory designated site is Blenheim Park SSSI, which is situated approximately 3.8km to the west of the Site boundary at its closest point. This site is designated on account of the woodland and open water habitat it supports. Additionally, the SSSI supports a range of invertebrates, as well as breeding and overwintering wildfowl.
- 5.2.4. Only one European designated site is located within 10km of the site; Oxford Meadows Special Area of Conservation (SAC), situated approximately 4km south of the Site at its closest point. This SAC supports Annex I habitat lowland hay meadows *Alopecurus pratensis*, *Sanguisorba officinalis* which have been subject to centuries of traditional management. The SAC also supports the Annex II species Creeping Marshwort *Apium repens*.
- 5.2.5. Given the separation of the above designated sites from the Site by significant areas of open space, roads, and built form, any significant adverse effects during construction (direct or indirect) are considered highly unlikely and will be more than mitigated for through standard engineering practices.
- 5.2.6. With reference to NEs Impact Risk Zone (IRZ) tool, it is noted approximately half the Site is located within an IRZ for which large scale residential development (>100 units) would require consultation from NE. It is important to note this tool 'flags' the potential for impacts based on proximity, rather than site specific assessment, to identify a likely risk. Given the separation of the Site from this SSSI, the only feasible impact pathway is assessed to be via potential recreational impacts.
- 5.2.7. In this regard, the proposals include for significant formal and informal open space which will offer a range of recreational opportunities for new residents, and can be expected to avoid any net increase in recreational pressure on off-site receptors. In any event, it is noted no direct formal public rights of way (PRoW) lead to Rushy Meadows SSSI. Moreover, with reference to the condition of the underpinning SSSI units, recreational pressures are not identified as resulting in any adverse impacts on the SSSI at the current time.

- 5.2.8. Noting the above, it is not considered there is potential for any significant increase in recreational pressure to result on either the above or any other designated sites.
- 5.2.9. Again, all other statutory designated sites are separated from the Site by existing roads and areas of open space. As such it is considered there would not be any significant effects arising from the proposed development which could not be mitigated through the adoption of an appropriately designed scheme, and through implementation of standard engineering protocols and best practice during the construction period.
- 5.2.10. **Non-statutory sites.** The closest non-statutory designated site is Langford Meadows Local Wildlife Site (LWS), located approximately 360m to the west of the Site, beyond a canal and railway. Other designated sites in the local area include for the Bletchingdon Road Verge (East) LWS, Bletchingdon Quarry and Fen LWS, Bunkers Hill Quarry LWS, Shipton-on-Cherwell and Whitehill Farm Quarries LWS, Begbroke Wood LWS, Meadows West of the Oxford Canal LWS, and the Stratfield Brake Woodland Trust Reserve (WTR).
- 5.2.11. The above sites are further incorporated into the *Lower Cherwell Valley Conservation Target Area (CTA)*. The predominant habitats of value within the CTA comprise of wetland habitats. In particular, the BAP Habitats of Coastal and Floodplain Grazing Marsh, Lowland Fens and Eutrophic Standing Water account for a significant proportion of the CTA, with Lowland Mixed Deciduous Woodland also well represented.
- 5.2.12. As for statutory designated sites, it is considered any potential direct or indirect significant adverse effects on these non-statutory sites, during construction, may be fully mitigated through the adoption of an appropriately designed development scheme, such as the Development Proposals, and through the implementation of best engineering practices (particularly in relation to construction dust) during the construction phase.
- 5.2.13. Post development, the creation of large areas of semi-natural open space will offer opportunities for significant biodiversity enhancements. As well as providing an alternative recreational resource for new and existing residents (alleviating potential pressure on existing local sites), the delivery of new open space offers opportunities to create new areas of high quality habitat, complementing the features recorded within the Lower Cherwell Valley CTA.
- 5.2.14. The delivery of extensive new areas of species rich grassland, for example, would contribute directly towards the Oxfordshire BAP target to manage, restore, and create new areas of Lowland Meadow habitat, and would represent a significant enhancement over the existing situation. Opportunities for habitat creation may also be realised elsewhere within the GI, for example through new

wet woodland planting and the creation of new ponds and wet ditches. The mosaic of habitats will contribute positively towards biodiversity in the local area and will ensure measurable net gains in biodiversity, in excess of 10%, as is clearly desired in local policy (not least Policy ESD 11 of the Local Plan).

- 5.2.15. Further consideration is given to habitat creation in the Habitats Section below.

#### Habitats within the Site

- 5.2.16. A majority of the Site is of negligible intrinsic ecological value, comprising extensive areas of intensively managed arable. Given the negligible value of the arable habitats, no habitat specific ecological mitigation would be required for any losses.
- 5.2.17. Equally, areas of scattered scrub and the narrow grassland and ruderal field margins are of limited ecological value and no specific mitigation would be required should losses to these habitats occur.
- 5.2.18. Notwithstanding the above, the Proposals include the creation of an extensive GI network, with this including over 10ha of formal and informal semi-natural habitats (excluding gardens).
- 5.2.19. The Proposals are anticipated to include extensive new wetland planting, mixed scrub planting, meadow grassland, hedgerows, and areas of native orchard.
- 5.2.20. As detailed above in relation to designated sites, habitat creation proposals for the Site have been informed by those recorded in the nearby Cherwell Valley CTA. This targeted habitat creation will not only ensure significant intrinsic enhancements within the Site in its own right, but will provide a supporting role to off-site habitats (and the species reliant on them). It is considered the provision of these habitats, as part of an appropriately designed landscape planting scheme, would fully mitigate for any losses to low quality habitats and realise significant biodiversity enhancements over the existing situation.
- 5.2.21. A Biodiversity Impact Assessment (BIA) was initially undertaken to inform the submission made in November 2022. This has now been updated to the latest V4.0 Metric with reference to minor updates to the outline masterplan proposals.
- 5.2.22. The updated BIA work identifies that the proposals can comfortably secure a measurable biodiversity net gain (BNG), in excess of 10%, exceeding the requirements of the emerging Environment Act and, indeed, local planning policy. The current BIA (as shown in Appendix 2) indicates measurable net gains of +23.88% (+11.98 units) can be achieved, alongside hedgerow gains of +11.77% (1.01 units). This is a clear, positive ecology outcome for the Site.
- 5.2.23. The existing habitats of greater interest within the Site include the hedgerows, mature treelines, and shrub planting along the northern

boundary of the Site (see below). These habitats are proposed to be largely retained and incorporated into the GI proposals for the Site.

#### Treelines and Hedgerows

- 5.2.24. The mature treelines and hedgerows within the Site are considered of relatively higher intrinsic ecological value in the context of the Site, primarily on account of these habitats providing connectivity and supporting a range of mature trees.
- 5.2.25. In light of this, the Development Proposals for the Site seek to retain the majority of these habitats, with losses limited to H3, alongside minor losses to facilitate access, drainage, and built form.
- 5.2.26. Where losses to these habitats occur, it is considered they would be more than mitigated for through the provision of new species-rich wet-woodland, tree, and shrub planting, and/or bolster planting of retained habitats within the Site to enhance their biodiversity value. This new planting will strengthen existing habitat corridors, delivering a diverse, native shrub layer to complement the treelines and enhance the structural variety of the habitats present on Site.
- 5.2.27. New planting will be designed to ensure some linear features may be classified as species-rich, with wide, sensitively managed margins and edge habitats such that they maintain good ecological condition.

#### Mixed Scrub

- 5.2.28. As above, the Site supports a band of native shrub planting along the north-western and northern boundaries of the Site. Although this semi-natural habitat is relatively young, it is nonetheless fairly diverse, will be largely retained and incorporated into the Development Proposals.
- 5.2.29. Moreover, opportunities exist as part of the Development Proposals to enhance the value of existing native shrubs through bolster planting and the instigation of long-term management. Such measures will improve overall green corridor connectivity and ensure biodiversity gains over the existing situation.
- 5.2.30. It is considered the adoption of a suitable landscaping scheme for the Site (inclusive of a 30-year biodiversity led management regime), in line with the recommendations set out above, will ensure the biodiversity value of the habitats present within the Site are retained and, indeed, enhanced as part of the development. The biodiversity value of these habitats would be further enhanced through the establishment of an appropriate management regime. Such a document would form an integral element of the Development Proposals, as is consistent with the emerging requirements of the Environment Act 2021.
- 5.2.31. All new planting within the GI network will utilise native species of local provenance, with planting mixes informed by the communities

recorded within the Cherwell Valley CTA, to maximise benefits to biodiversity.

#### Biodiversity Net Gain (Biodiversity Impact Assessment)

- 5.2.32. As detailed above, the proposals for the Site have been informed (and indeed guided by) BIA work undertaken to date, including for updated assessment in December 2023, utilising the latest DEFRA Metric Tool (V4.0).
- 5.2.33. With reference to this tool, which forms Appendix 2 of this Ecological Assessment, and is additionally submitted (in Excel format) alongside this Assessment, the Proposals are predicted to deliver measurable BNGs significantly in excess of the 10% threshold targeted by policy and emerging legislation.
- 5.2.34. On the basis of the GI layout, it is calculated that measurable habitat net gains of +23.88% (11.98 units) can be achieved, alongside hedgerow gains of +11.77% (1.01 units). The post development habitats have been carefully informed by the GI proposals, with Ecology Solutions engaging with the project design team to confirm and agree post development land uses and indicative management opportunities. This ensures a realistic and deliverable post development outcome has been identified.
- 5.2.35. Through ensuring measurable net gains in biodiversity, in excess of 10%, the Proposals will secure a positive ecology outcome for the Site.

#### Summary

- 5.2.36. The vast majority of habitats present within the Site are of negligible intrinsic ecological value, comprising arable land, scattered, species-poor grassland and ruderal vegetation. Where habitats of relatively greater value have been recorded, such as the hedgerows and treelines, these are recognised by the Development Proposals and will be largely retained.
- 5.2.37. Indeed, the Proposals offer a valuable opportunity to realise significant biodiversity enhancements in the local area through the creation and establishment of extensive areas of GI. The integration of retained habitats within this GI, alongside the creation of extensive new areas of species rich grassland, wetland, and woody planting would not only mitigate for any minor losses to habitats of value but would contribute to local BAP targets and ensure targeted enhancements for biodiversity present both within the Site and local area.
- 5.2.38. A Landscape and Ecology Management Plan (LEMP) would form an integral element of the Proposals for the Site, securing biodiversity led management for a minimum 30-year period.
- 5.2.39. On the basis of the GI layout, it is calculated that measurable habitat net gains of +23.88% can be achieved, alongside hedgerow gains

of +11.77%. This will secure a significant positive ecology outcome for the Site.

### 5.3. Faunal Evaluation

#### Badgers

- 5.3.1. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is, in fact, common over most of Britain, with particularly high populations in the south-west.
- 5.3.2. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage, or obstruction of a Badger sett an offence. A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. ‘Current use’ is usually defined as any use within the preceding 12 months, although there is a degree of professional judgement.
- 5.3.3. In addition, the intentional elimination of a foraging area sufficient to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’ of a Badger.
- 5.3.4. Previous guidelines were issued by NE on the types of activity it considers should be licensed within certain distances of sett entrances. They stated works that may require a licence include using heavy machinery within 30m of any entrance to an active sett, using lighter machinery within 20m, and light work such as hand digging within 10m. However, interim guidance issued by NE in September 2007 specifically states:
- “It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no Badger is disturbed and the sett is not damaged or obstructed.”*
- 5.3.5. More recent guidance produced by NE in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts<sup>9</sup>. However, NE’s guidance continues by stating that any activity that will, or is likely to cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance), will continue to be licensed.
- 5.3.6. In addition, this latest guidance no longer makes reference to any 30m/20m/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m, so care needs to be taken when implementing excavating operations

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<sup>9</sup> Natural England. 2009. Protection of Badgers Act 1992 (as amended). Interpretation of Disturbance in relation to Badgers occupying a sett.

within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires/chemicals within 20m of a sett should specifically be avoided.

- 5.3.7. This interim guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30m exclusion zone to the north.
- 5.3.8. **Site Evaluation.** Evidence of Badger within the Site was limited to the presence of recent activity at a previously disused sett. From the evidence available, this sett is assessed as a likely outlier sett, subject to periodic use by the local population.
- 5.3.9. Other evidence of Badger was limited to the presence of a latrine and mammal paths in the north-east of the Site found in October 2022, these were not observed again during the June 2023 surveys.
- 5.3.10. **Mitigation and Enhancements.** Given the mobile nature of the species, a further update Badger survey would be required at a more detailed stage of planning. This check would be sufficient to ascertain the current value of the Site to Badgers and any mitigation which may be required.
- 5.3.11. At this stage, it is anticipated the Badger sett will be retained as part of the Proposals, noting its siting within an area of proposed GI. However, noting the potential proximity of construction, there is potential for impacts to arise. Where works are identified within 20m of an active sett, these would be discussed and agreed with an ecologist in the first instance.
- 5.3.12. Subject to the nature of works in due course, forthcoming works may require a NE licence to facilitate elements of the masterplan. The Proposals would be able to easily accommodate any mitigation measures which may be required as part of this licence process (including an artificial sett in the unlikely scenario this is required).
- 5.3.13. In addition, and on a precautionary basis, the following construction safeguards are proposed for the Site:
- All Site personnel should attend a tool-box talk, such that they may be made aware of the potential presence of Badgers within the Site, and the implications this will have on their working methodology;
  - Wherever possible new excavations (such as trenches) will not be left open overnight. Should excavations be required, they should preferably be covered overnight. If this is not feasible, scaffolding board (or similar) will be left within the feature, or otherwise a graded bank will be retained, in order to provide a means of escape for any animals which may become trapped;
  - Where soil bunds (or similar) cannot be avoided, it is recommended these features are subject to regular checks by

Site staff (daily where possible), to identify any areas of digging. Any new excavations will be filled in before a full sett is excavated, wherever possible.

- 5.3.14. The retention and establishment of significant areas of semi-natural habitat, alongside the provision of high quality habitats committed within the wider site, will ensure substantial foraging and sett building opportunities are retained for Badger, both within the Site and wider area.
- 5.3.15. Indeed, specific consideration will be given to new shrub planting, with a range of native fruit and nut bearing species proposed, which will provide an optimal foraging resource for Badger populations within the local area.
- 5.3.16. The commencement of the long-term habitat management regime for the Site, as set out above, will ensure opportunities for Badgers are further enhanced in the long-term, and will also ensure the favourable conservation status (FCS) of this faunal group is maintained.

### Bats

- 5.3.17. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as Amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (“the Habitats Regulations”). These include provisions making it an offence to:
- Deliberately to kill, injure or take (capture) bats;
  - Deliberately to disturb bats in such a way as to:
    - i. be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
    - ii. affect significantly the local distribution or abundance of the species to which they belong;
  - Damage or destroy any breeding or resting place used by bats;
  - Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.
- 5.3.18. While the legislation is deemed to apply even when bats are not in residence, NE guidance suggests certain activities such as re-roofing can be completed outside sensitive periods when bats are not in residence provided these do not damage or destroy the roost.
- 5.3.19. The words ‘deliberately’ and ‘intentionally’ include actions where a court can infer the defendant knew the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.20. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an

offence to be committed.

- 5.3.21. European Protected Species licences are available from NE in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.22. Licences can usually only be granted if the development is in receipt of full planning permission and it is considered that:
- (i) There is no satisfactory alternative; or
  - (ii) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 5.3.23. **Site Evaluation.** There are eight trees present within the Site which have features of potential value for roosting bats, with only three potentially affected by the Proposals, albeit, no confirmed evidence of past or present use has been recorded of roosting bats to date.
- 5.3.24. The Site overall is assessed as of low value to foraging or commuting bats, being dominated by large areas of arable land which would not be of any significant importance for bats. The treelines, native shrub planting, and hedgerows provide some suitable foraging and navigational resources for this species group, albeit it is noted improved opportunities are present in the wider area.
- 5.3.25. Bat activity surveys undertaken in 2022 and 2023 recorded low levels of bat activity, with this dominated by common and widespread species.
- 5.3.26. **Mitigation and Enhancements.** At this stage it is considered three trees with bat potential (T5, T6 and T7) are likely to be lost to the Proposals, with all other features to be retained and safeguarded from direct and in-direct impacts.
- 5.3.27. As above, no confirmed roosts have been identified within these trees, however it proposed that 30% of new built form will include integrated bat roosting features, thereby ensuring a significant enhancement for roosting bats. Suitable examples of roosting features are included at Appendix 4.
- 5.3.28. The hedgerows and trees within the Site offer some foraging and navigational opportunities for bats. However, given the presence of similar or better opportunities in the wider area, it is not considered that habitats within the Site would be of particular significance to bats.
- 5.3.29. In any event, the Proposals seek to retain the vast majority of features of potential value to this group, with only minor losses envisaged (i.e. the loss of H2 and minor removal of other features for access). Moreover, the existing opportunities within the Site will be significantly enhanced through the provision of bolster planting and new species rich habitat creation (such as new waterbodies and

orchard and meadow). These measures would ensure significant qualitative enhancements for foraging bats, whilst maintaining commuting opportunities within and across the Site.

- 5.3.30. The adoption of an appropriate lighting strategy alongside the retention of the vast majority of these habitats and the provision of a range of new high quality habitats as part of the Development Proposals will ensure opportunities for bats are retained and enhanced in the long-term. In achieving this, the lighting regime for the Site will give due regard to the Bat Conservation Trust's *Guidance Note 08/18 (Bats and artificial lighting in the UK)*.
- 5.3.31. On the basis of the survey work undertaken, and noting the significant habitat creation and roost provision proposed, there is no reason to consider the FCS of bats would be adversely impacted by the Proposals. To the contrary, the Proposals offer a mechanism to positively contribute towards the FCS of local species and ensure benefits for the local area.

#### Great Crested Newts

- 5.3.32. **Legislation.** All British amphibian species receive a degree of protection under the 1981 Wildlife and Countryside Act (as Amended). The level of protection varies from protection from sale or trade only, as is the case with species such as Smooth Newt *Lissotriton vulgaris* and Common Toad *Bufo bufo*, to the more rigorous protection afforded to GCN, which are protected at the European level.
- 5.3.33. GCN are regularly encountered locally and throughout much of England, and the UK holds a large percentage of the world population of the species. As such the UK has an international obligation to conserve the species and they receive full protection under domestic and European legislation, and are a material consideration under the National Planning Policy Framework (NPPF).
- 5.3.34. GCN are also listed in Annex IV(a) of the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. The Habitats Directive was transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (as Amended), which lists GCN under Schedule 2.
- 5.3.35. The legislation includes provisions making it an offence to:
- Deliberately kill, injure or take (capture) GCN;
  - Deliberately disturb GCN in such a way as to:
    - i. Be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
    - ii. Affect significantly the local distribution or abundance of the species to which they belong;
  - Deliberately take or destroys GCN eggs;

- Damage or destroy any breeding or resting place used by GCN;
  - Intentionally or recklessly to obstruct access to any place used by GCN for shelter or protection (even if individuals are not in residence).
- 5.3.36. Licences can be granted that permit otherwise unlawful activities. In every case, a licence cannot be granted unless:
- i. There is no satisfactory alternative; and
  - ii. The action authorised would not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 5.3.37. It should be noted that a licence could only be granted following the receipt of a full valid planning permission.
- 5.3.38. **Site Evaluation.** An eDNA survey carried out in April 2023 confirmed the presence of GCN eDNA. This indicates GCN are present within the Site and local area, and that they will make use of the pond as part of a wider foraging resource. Despite the presence of GCN eDNA, the pond is not assessed to support a viable breeding feature, given it remains dry for significant periods of the year.
- 5.3.39. The terrestrial habitats within the Site are largely sub-optimal for GCN (comprising extensive areas of arable). Very little terrestrial habitat is present.
- 5.3.40. **Recommendations.** On the basis the pond has returned positive eDNA results a GCN licence will need to be acquired. There are two licensing opportunities available, the District Licence and the conventional NE licence.
- 5.3.41. At this stage, it is anticipated a Nature Space District Licence will be sought, noting the Site is located in a 'green' and 'amber' area. This will involve a compensation payment to Nature Space (the district licence provider) who will then secure off-site mitigation commensurate to on site impacts.
- 5.3.42. Notwithstanding that the District licence route is proposed, the Proposals will deliver significant enhancements for GCN within the Site. This is expected to be achieved through the provision of a series of permanently wet waterbodies (including dedicated biodiversity ponds) and rough grassland habitats with the proposed GI network.
- 5.3.43. On the basis of the above, the Proposals offer significant opportunities to enhance the value of the Site to a range of amphibian species, not least GCN, providing a mechanism by which the Site's historic value for this faunal group can be restored. The FCS of the GCN population will be further secured through obtaining a District Licence in due course. On this basis, there is no reason to consider the potential presence of GCN would represent an over-riding constraint to the Development Proposals.

## Reptiles

- 5.3.44. **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
- 5.3.45. Rare, endangered, or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 as well as protection under The Conservation of Habitats and Species Regulations 2010, which transposed into UK law the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. Species that are fully protected include Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:
- Killing, injuring, taking;
  - Possession or control (of live or dead animals, their parts or derivatives);
  - Damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;
  - Disturbance of any animal occupying such a structure or place; and
  - Selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).
- 5.3.46. Due to their abundance in Britain, Common Lizard, Slow Worm, Grass Snake and Adder are only 'partially protected' under the Wildlife and Countryside Act 1981 (as Amended) and as such only receive protection from:
- Deliberate killing and injuring;
  - Being sold or other forms of trading.
- 5.3.47. **Site Evaluation.** The semi-improved grassland habitat (field margins) and to some extent the Other Neutral Grassland within the Site offers a degree of suitable habitat to common reptiles, should they be present in the local area.
- 5.3.48. Evidence of reptiles has been recorded during the reptile surveys, and indicate the presence of small populations of Slow Worm, Common Lizard and Grass Snake respectively.
- 5.3.49. **Recommendations.** As reptiles are confirmed as present on Site, all suitable habitat (much of the retained field margin to be largely retained and incorporated within the GI network) will be safeguarded during works in line with the below methodology.
- 5.3.50. Any areas of suitable reptile habitat to be lost would first be subject to habitat manipulation under the watching brief of an ecologist. This habitat manipulation would only be undertaken in suitable weather conditions (dry, >10C) during the reptile active season (typically late

March to October) and would comprise a directional, two-stage cut. The first cut would reduce sward height to no less than 10cm, with arisings subsequently removed. A second cut would then be undertaken to ground level, removing the suitability of the habitat for reptiles, and ensuring they would not be present during subsequent works.

- 5.3.51. In addition to the above methodology, reptile exclusion fencing could be provided at suitable locations to further exclude reptiles from active work areas, should this be deemed necessary. Together these measures would be sufficient to ensure the potential for adverse impacts on reptiles would be avoided during construction.
- 5.3.52. Post-development, the creation of an extensive GI network, with substantial areas of new meadow grassland would realise a significant improvement for reptiles; realising extensive new breeding, foraging and resting habitats for this faunal group.

### Birds

- 5.3.53. **Legislation.** Section 1 of the Wildlife and Countryside Act is concerned with the protection of wild birds, whilst Schedule 1 lists species which are protected by special penalties.
- 5.3.54. **Site Evaluation.** There are opportunities for nesting birds in the treelines, hedgerows, shrub planting, and scrub within the Site.
- 5.3.55. A range of generally bird common bird species were recorded on Site during the surveys undertaken. There is nothing to indicate a resource of raised ornithological significance.
- 5.3.56. **Recommendations.** As all species of birds receive general protection whilst nesting, to avoid a possible offence, it is recommended any clearance of suitable nesting vegetation (including any tree felling) should be undertaken outside of the main breeding season (March to July inclusive) or that checks be made for nesting birds by an ecologist immediately prior to removal.
- 5.3.57. Where minor losses to features of potential value to breeding birds are required, it is considered these could be more than compensated for through new planting within the Site. Indeed, the creation of an extensive GI network as part of the Proposals, which will include extensive new shrub and woody planting, and will ensure substantial quantitative and qualitative gains in nesting and foraging habitat within the Site, ensuring enhanced opportunities for birds in the long-term.
- 5.3.58. In order to realise a significant enhancement for urban birds it is proposed for the equivalent 30% of new built form to include integrated bird nesting features for urban bird species, including for Swift *Apodidae*, House Sparrow *Passer domesticus* and House Martin *Delichon urbicum*.

- 5.3.59. Noting the colonial nature of Swifts, and their preference for nesting at height, Swift bricks would be installed in clusters at the apex of buildings (height: approximately 5m). Clusters (groups of three boxes) will be located on the northern and eastern elevations of new buildings. House Sparrow and House Martin boxes will also be installed on the northern and eastern elevation of buildings, in preference, again at building eaves. Suitable examples of nesting features are included at Appendix 4.
- 5.3.60. As with bats, through allowing a significant net gain in nesting opportunities, the Proposals offer a mechanism to enhance the conservation status of urban bird populations, many of which have undergone significant declines in recent years and are resultantly identified as local conservation priorities.

#### Invertebrates

- 5.3.61. **Site Evaluation.** It is considered the habitats present within the majority of the Site are likely to support a limited range of common invertebrate species, but are unlikely to be of any significant value to protected, rare or notable species.
- 5.3.62. The provision of extensive new areas of landscaping within the GI, to include a range of species rich habitats such as wet and dry meadow, diverse native scrub, and new wetland pools, will provide a range of new opportunities for invertebrates within the Site.

#### Other Species

- 5.3.63. **Application Site Evaluation.** Given the habitats present, it is considered the Site is unlikely to provide significant opportunities to any other protected or notable species.
- 5.3.64. Given the habitats present, it is possible notable species such as Brown Hare and Hedgehog, both of which are UK BAP Priority Species, may utilise the Site as part of a wider resource.
- 5.3.65. **Recommendations.** Noting the potential for notable species to be present within the Site, it is recommended that habitat clearance is undertaken in a sensitive, systematic manner. This should include the two stage reduction in vegetation (grass and scrub), first to a height of 10 to 15cm and subsequently (ideally the following day) to ground level or as near as practical.
- 5.3.66. Clearance should be undertaken in warm conditions (i.e. avoiding the removal of potential hibernation habitat during the winter months). Clearance should commence at the furthest point from retained habitats and extend toward retained habitats without leaving islands of suitable habitat. This will encourage any notable species within the Site to disperse into off site habitats.
- 5.3.67. In due course, the delivery of high quality areas of GI will offer new opportunities for the above species, not least with a significant net increase in grassland and ground cover habitats. Further

enhancements would also be sought through the provision of dedicated hibernacula at suitable locations within the Site. These could be created from arisings obtained on Site and would ensure suitable resting/hibernation opportunities for a range of small mammals and amphibians.

- 5.3.68. Moreover, in order to ensure dispersal opportunities for Hedgehog (should they be present), new boundary features (including garden fences) will be fitted with 'hedgehog tunnels' to allow dispersal within and across the Site. Hedgehog tunnels will comprise small (13cm x 13cm) openings in the base of garden fences and boundary walls, providing a means for this species to migrate between gardens in the Site.
- 5.3.69. It is proposed for one Hedgehog tunnel to be provided at each aspect of residential gardens (i.e. 3 in total per garden), as well as within all boundary walls. This will ensure Hedgehogs are able to disperse throughout residential parcels.

## 6. PLANNING POLICY CONTEXT

6.1. The planning policy framework that relates to nature conservation in Kidlington, Oxfordshire, is issued at two main administrative levels: nationally through the National Planning Policy framework (NPPF); and at a local level through policies in the Cherwell Local Plan 2011- 2031, in addition to saved policies in the Cherwell Local Plan 1996 and policies in the non-statutory Cherwell Local Plan 2011. Any proposed development will be judged in relation to the policies contained within these documents.

### 6.2. National Policy

#### National Planning Policy Framework

- 6.2.1. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012, revised on 24 July 2018, 19 February 2019 and again on 20 July 2021. It is noted, the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA/ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).
- 6.2.2. The key element of the NPPF is that there should be “*a presumption in favour of sustainable development*” (paragraphs 10 to 11). It is important to note this presumption “*does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site*” (paragraph 182). ‘Habitats site’ has the same meaning as the term ‘European site’ as used in the Habitats Regulations 2017.
- 6.2.3. Hence, the direction of Government policy is clear. That is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European site, if it has been shown there will be no adverse effect on that designated site as a result of the development in prospect.
- 6.2.4. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity (paragraph 174).
- 6.2.5. The NPPF also considers the strategic approach local authorities should adopt with regard to the protection, maintenance and enhancement of GI, priority habitats, and ecological networks, and the recovery of priority species.
- 6.2.6. Paragraphs 179 to 181 of the NPPF comprise a number of principles local authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs, possible SACs, listed or

proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats – unless there are 'wholly exceptional reasons' (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.

- 6.2.7. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

### 6.3. Local Policy

#### Cherwell Local Plan 2011-2031

- 6.3.1. The principal document for planning control purposes in Cherwell District is the Cherwell Local Plan 2011-2031, Part 1 of which was adopted in July 2015 and re-adopted in December 2016. The Plan provides the strategic planning policy framework for the district and outlines the basis for decisions on land use planning affecting the Cherwell District.
- 6.3.2. There are six policies relevant to ecology and nature conservation in the Local Plan.
- 6.3.3. Policy ESD7 concerns SuDS and identifies that, where possible, new developments should incorporate SuDS features which provide biodiversity benefits.
- 6.3.4. Policy ESD9 relates specifically to the protection of Oxford Water Meadows SAC. Given the distance between this designated site and the Site, this policy is not considered to be of any relevance in this case.
- 6.3.5. Policy ESD10 is the primary policy in the Local Plan which relates to ecology and nature conservation, and is concerned with the protection and enhancement of biodiversity and the natural environment. The policy makes reference to the protection afforded to sites of international, national, regional or local importance and notes that proposals will be expected to incorporate features to encourage biodiversity, as well as maintain and enhance existing ecological networks and provide new GI.
- 6.3.6. Policy ESD11 refers to the approach to be adopted in CTAs. Whilst the Site does not lie within or immediately adjacent to a CTA, it is within close proximity of the Cherwell Valley CTA. This policy is therefore of relevance to the Proposals and indeed the scheme gives due regard to this nearby CTA.
- 6.3.7. Policy ESD16 relates to the protection of the Oxford Canal and identifies the need for its biodiversity value to be protected.

- 6.3.8. Policy ESD17 relates to GI, and highlights the importance of maintaining and improving the GI network, with reference made to its contribution to biodiversity and nature conservation.

The Cherwell Local Plan 2011-2031 (Part 1): Partial Review – Oxford's Unmet Housing Needs document.

- 6.3.9. A Partial Review of the adopted Cherwell Local Plan 2011-2031 (Part 1) is in preparation to help meet the unmet housing needs of Oxford. When adopted it will become part of the statutory Development Plan to which regard must be given in the determination of planning applications.
- 6.3.10. CDC submitted the Local Plan Partial Review (Oxford's Unmet Housing Need) to the Secretary of State for Housing, Communities and Local Government, for formal examination on Monday 5 March 2018
- 6.3.11. Policy PR3 of the Partial Review document seeks to modify the green belt primarily to meet Oxford's unmet housing needs, in line with the NPPF. The Partial Review document therefore considers a number of proposed allocations should the existing Oxford green belt boundaries be realigned to accommodate housing needs.

Developer Contributions Supplementary Planning Document (February 2018)

- 6.3.12. The Developer Contributions SPD was adopted by CDC in February 2018 and, amongst other matters, sets out the mechanism by which financial contributions will be sought from developers.
- 6.3.13. Of relevance to biodiversity and nature conservation, the SPD notes that in some instances (where developments result in net harm to biodiversity as measured by DEFRA Offsetting Metrics), financial contributions may be sought to deliver off-site compensation within appropriate CTAs.

Cherwell Local Plan 1996.

- 6.3.14. The Cherwell Local Plan 1996 was adopted in November 1996 and contains a number of saved policies which remain a material consideration in determining planning applications.
- 6.3.15. There are four saved policies within the Local Plan 1996 that relate to nature conservation. Policy C1 relates to the protection of statutory and non-statutory designated sites, Policy C2 relates to protected species, Policy C4 refers to the creation of new habitats and Policy C5 relates to the protection of specific features of ecological value within the district.

Non-Statutory Cherwell Local Plan 2011

- 6.3.16. There are also a number of policies relevant to ecology and nature conservation in the Non-Statutory Cherwell Local Plan 2011. The

Non-Statutory Cherwell Local Plan 2011 is a discontinued document, the policies of which are largely superseded by those in the adopted Local Plan. Nonetheless, as the document was approved as interim planning policy for development control purposes, some weight may also be given to the policies contained in this document.

- 6.3.17. There are nine policies within the Non-Statutory Local Plan 2011 that relate to nature conservation.
- 6.3.18. Policy EN1 states that in determining planning applications the council will take into account the likely impact of the proposal on the natural environment. Policy EN2 relates to environmental replacement through provision of compensatory habitat. Policy EN6 refers to the impact of light pollution, whilst policy EN13 relates to development adjacent to watercourses. Policy EN22 states that development proposals will be expected to incorporate features of nature conservation interest, and retain and enhance features of value where possible. Policy EN23 relates to ecological surveys, while policies EN24 and EN25 relate to the protection of designated sites and species respectively. Policy EN27 states that development proposals should also incorporate the creation of new habitats.

#### 6.4. Discussion

- 6.4.1. It is considered that following the recommendations in this report, the Development Proposals would fully accord with national and local policy and avoid any significant impacts on any designated sites for nature conservation.
- 6.4.2. In regards habitats the Proposals are predicted to achieve significant measurable habitat net gains. On the basis of indicative assessment to date, biodiversity gains in the region of 23.88% (11.98 units), alongside hedgerow gains of 11.77% (1.01 units) are deemed feasible. This will secure a significant positive ecology outcome for the Site, in excess of that required by current and emerging legislation and planning policy.
- 6.4.3. The presence or potential presence of protected species is acknowledged through survey work and assessment. These surveys have been undertaken with reference to relevant best practice guidelines and are sufficient to ensure the presence/absence of these species can be robustly assessed and mitigated for. Those habitats of ecological importance have been identified and measures recommended to ensure their protection and enhancement in the long-term. As such there are no ecological reasons why this Site should not be allocated in a review of the Local Plan and come forward for development.
- 6.4.4. Indeed, to the contrary, the development of the Site offers significant opportunity for betterment in biodiversity terms. Such opportunities for biodiversity enhancement fully accord with the ethos of policy at a national and local level and should be considered positively (i.e. as a contribution towards sustainable development and *'exceptional*

*circumstances*') when assessing the overall suitability of the Site for allocation, relative to alternative schemes.

## 7. SUMMARY AND CONCLUSIONS

- 7.1. Ecology Solutions was initially commissioned in March 2018 by Harper Crewe Bloombridge Ltd to undertake an initial ecological assessment of land at The Moors, Kidlington, Oxford (see Plan ECO1), referred to as the Site.
- 7.2. Subsequent to this previous assessment work, Ecology Solutions Limited were asked to undertake updated assessment work, inclusive of the completion of a BIA, with the DEFRA Metric V3.1, in November 2022 in order to inform Site promotion through the Regulation 18 process. The BIA was updated again in December 2023 with the DEFRA Metric V4.0.
- 7.3. Subsequent to the submission of the previous report, Ecology Solutions have again been commissioned to update the ecological reporting, inclusive of the findings of further survey work undertaken during the 2023 survey season.
- 7.4. The Proposals for the Site are for the provision of new residential development, in addition to infrastructure, access and significant areas of open space.

### **Designated Sites**

- 7.5. There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the Site.
- 7.6. A number of statutory designated sites are located within the local area of the Site, the closest of which is Rushy Meadows SSSI (adjoining the proposed allocation at Begbroke Science Park) and Blenheim Park SSSI which are located approximately 0.6km south-west and 3.8km west of the Site respectively. The closest European designated site is Oxford Meadows SAC, located approximately 4km south of the Site.
- 7.7. Given the separation of designated sites, the nature of the Proposals and with reference to the significant GI proposed, it is concluded that any significant adverse effects (direct or indirect) are considered highly unlikely and will be more than mitigated for through standard engineering practices.

### **Non-statutory designated sites**

- 7.8. As for statutory designated sites, it is considered any potential direct or indirect significant adverse effects on these non-statutory sites may be fully mitigated through the implementation of best engineering practices during construction phase.
- 7.9. In fact, the Proposals for the Site offer opportunities to enhance biodiversity in the local area, contributing to the value of local sites and CTAs. Within the GI opportunities will be sought to establish local Priority (BAP) Habitats to complement those present in the Lower Cherwell Valley CTA. Such measures would significantly enhance the GI network at a landscape scale.

### **Habitats**

- 7.10. The majority of the Site is of negligible intrinsic ecological value comprising extensive areas of intensively managed arable. Given the negligible value of arable habitats, no specific ecological mitigation would be required for any losses. Species poor grassland habitats, typically restricted to field margins, are also considered to be of very limited ecological value.
- 7.11. The habitats of greater interest within the Site include the treelines, hedgerows and native shrub planting. The vast majority of these features will be retained as part of the Development Proposals and incorporated into a high quality GI.
- 7.12. The creation of a GI as part of the Proposals will ensure the biodiversity value of the habitats present within the Site are retained and, indeed, greatly enhanced as part of any development and that significant ecological gains can therefore be realised over the existing situation.
- 7.13. The updated BIA work identifies the Proposals can comfortably secure a measurable BNG, in excess of 10%, exceeding the requirements of the emerging Environment Act and, indeed, local planning policy.

#### **Protected Species**

- 7.14. From the survey work undertaken to date, there is no evidence to indicate any overriding constraints that would prevent a suitably designed scheme coming forward. Indeed, it is considered the Proposals offer significant opportunities to enhance the value of the Site for protected and notable faunal species.
- 7.15. A suite of targeted faunal surveys were undertaken in 2023, of which the findings have informed the Proposals. The completion of surveys were appropriate to fine tune mitigation and enhancement measures for the Site proposals.

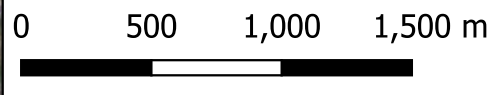
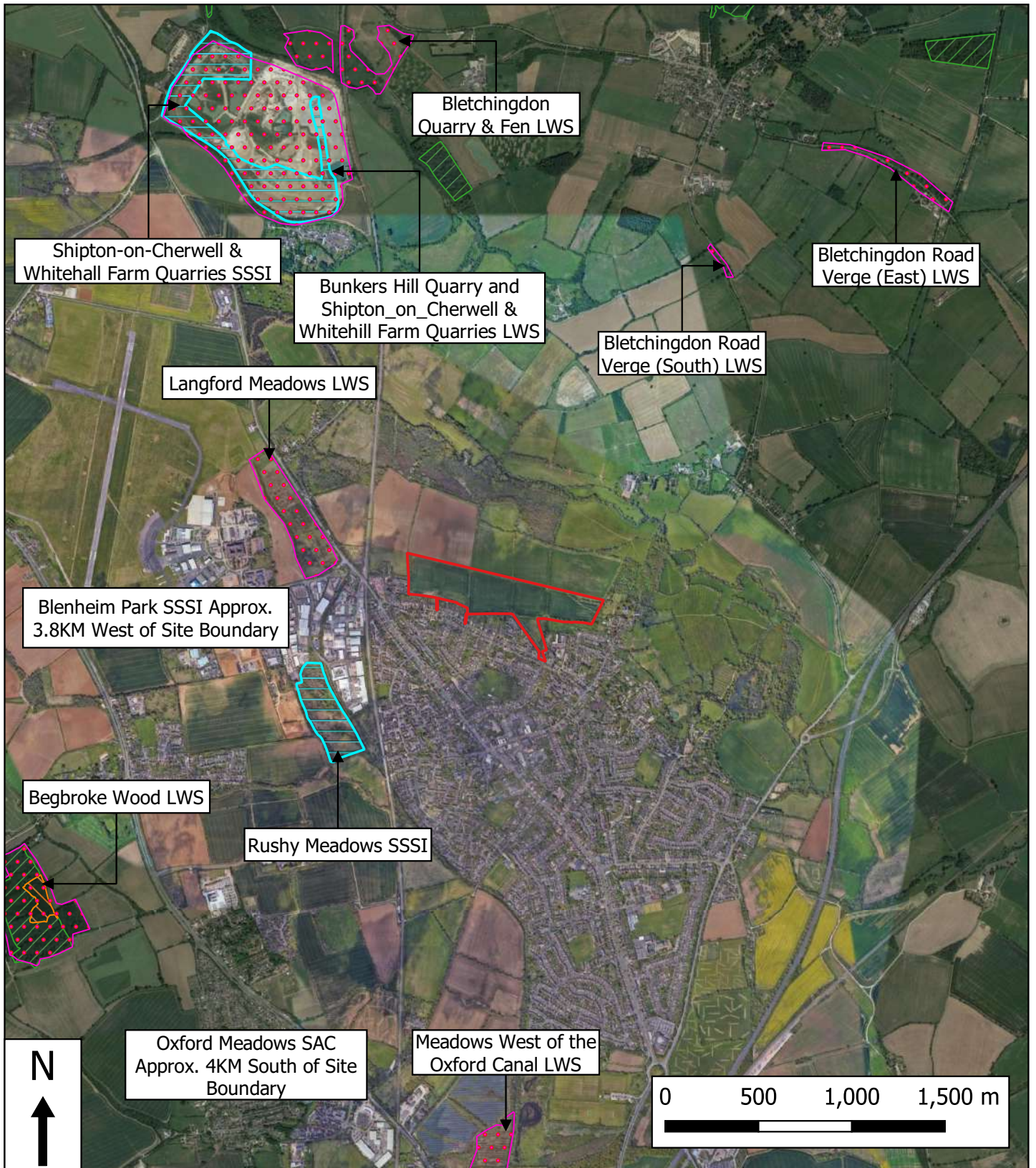
#### **Conclusions**

- 7.16. In conclusion, it is considered there is no evidence to suggest there would be any overriding ecological constraints which would prevent the delivery of an appropriately designed development at the Site.
- 7.17. Indeed, to the contrary, the development of the Site offers significant opportunity for betterment in biodiversity terms. Such opportunities for biodiversity enhancement fully accord with the ethos of policy at a national and local level, and should be considered within the planning process.

## PLANS

## **PLAN ECO1**

Site Location and Ecological Designations



Key:

- Site Boundary
- Local Wildlife Site (LWS)
- Site of Special Scientific Interest (SSSI)
- Ancient Semi-Natural Woodland (ASNW)
- Plantation on Ancient Woodland Site (PAWS)



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7815M: THE MOORS, KIDLINGTON, OXFORD

PLAN ECO1: SITE LOCATION &  
ECOLOGICAL DESIGNATION

REV A  
APR 2024

## **PLAN ECO2**

Ecological Features and Protected Species



**Key:**

- Site Boundary
- Tree with High bat potential
- Tree with Moderate bat potential
- Tree with Low bat potential
- October 2022 Static
- May 2023 Static
- July 2023 Static
- September 2023 Static
- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Arable land
- Bramble Scrub
- Species-rich mixed scrub
- Other Neutral Grassland
- Unsealed surface
- Sealed surface
- Seasonally drying pond

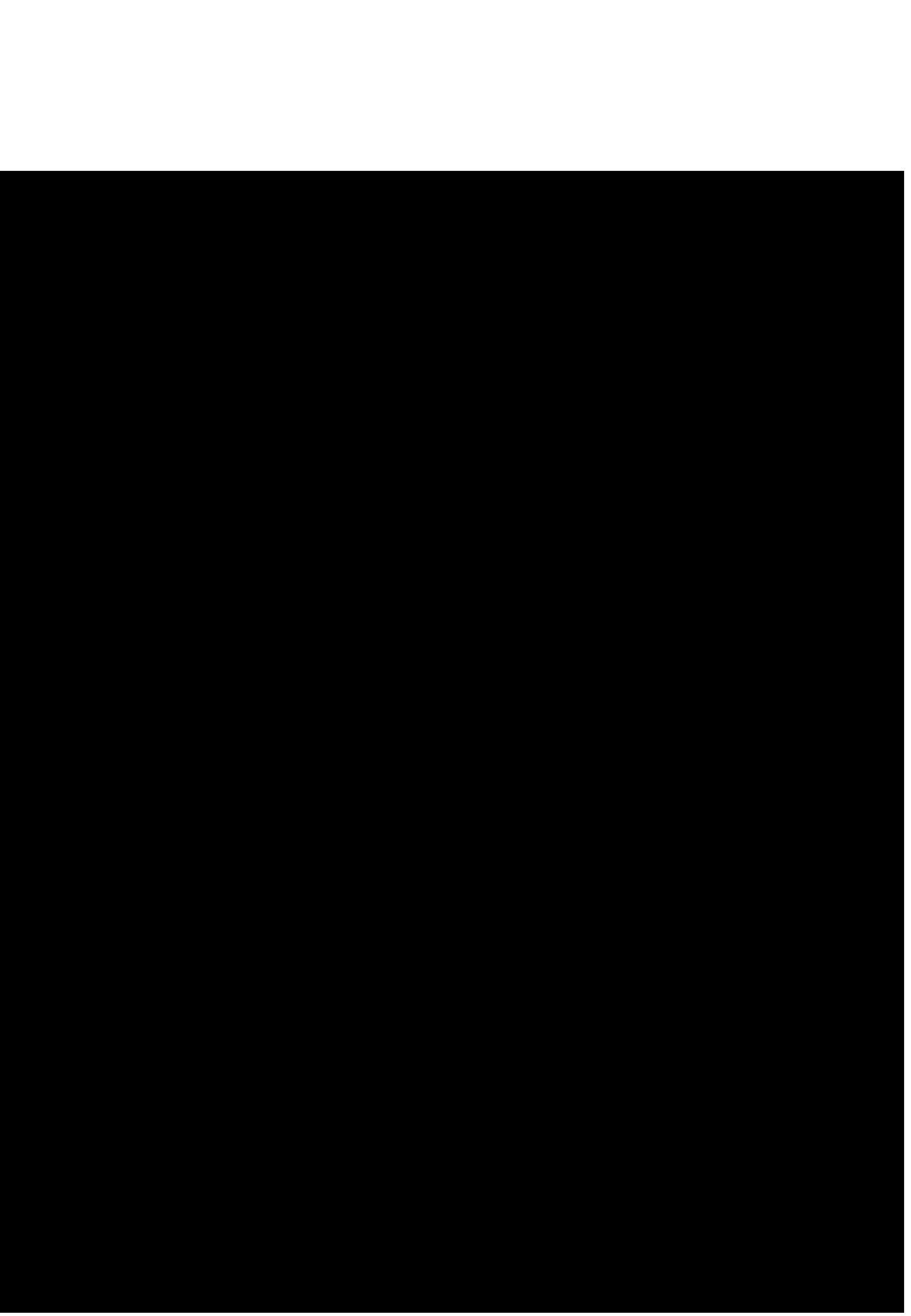


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7815M KIDLINGTON

PLANE ECO 2: ECOLOGICAL FEATURES AND PROTECTED SPECIES	REV A APR 2024
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## **PLAN ECO3**

Reptile Tin Locations and Results



**Key:**

Site Boundary

Tin locations

Tins with Reptiles recorded in:

- 2023-05-01
- 2023-06-06
- 2023-06-15
- 2023-06-20
- 2023-06-23
- 2023-08-02
- 2023-08-21



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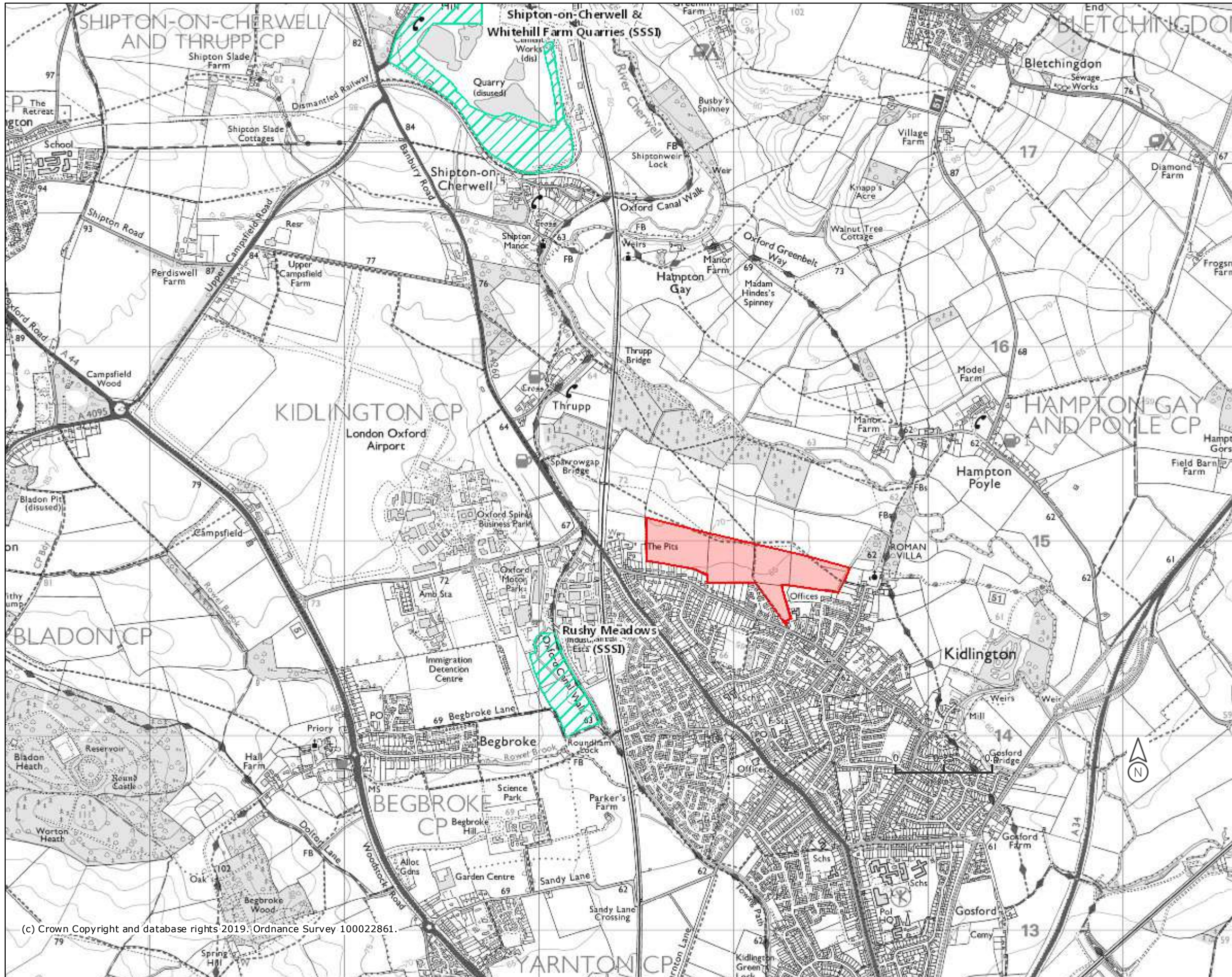
7815M THE MOORS, KIDLINGTON

PLAN ECO 3: REPTILE TIN LOCATIONS	REV A APR 2024
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## **APPENDICES**

## **APPENDIX 1**

Information Obtained from MAGIC



**Legend**

-  Local Nature Reserves (England)
-  Sites of Special Scientific Interest (England)

Projection = OSGB36  
 xmin = 443400  
 ymin = 212700  
 xmax = 453500  
 ymax = 217800



Map produced by MAGIC on 5 February, 2019.  
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

## **APPENDIX 2**

Biodiversity Impact Assessment (DEFRA Metric  
V4.0)

7915M Kidlington

**Headline Results**

Scroll down for final results 

Return to results menu

On-site baseline	Habitat units	50.16	
	Hedgerow units	8.58	
	Watercourse units	0.00	
On-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	Habitat units	62.14	
	Hedgerow units	9.59	
	Watercourse units	0.00	
On-site net change <small>(units &amp; percentage)</small>	Habitat units	11.98	23.88%
	Hedgerow units	1.01	11.77%
	Watercourse units	0.00	0.00%

Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change <small>(units &amp; percentage)</small>	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	Habitat units	11.98
	Hedgerow units	1.01
	Watercourse units	0.00
Spatial risk multiplier (SRM) deductions	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00

**FINAL RESULTS**

Total net unit change <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	Habitat units	11.98
	Hedgerow units	1.01
	Watercourse units	0.00

Total net % change <small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	Habitat units	23.88%
	Hedgerow units	11.77%
	Watercourse units	0.00%

Trading rules satisfied?	Yes ✓
--------------------------	-------

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	50.16	55.18	0.00
Hedgerow units	10.00%	8.58	9.44	0.00
Watercourse units	10.00%	0.00	0.00	0.00

Unit requirement met or surpassed ✓

Unit requirement met or surpassed ✓

Unit requirement met or surpassed ✓

Project Name: 7015M Kidlington Map Reference:  
**A-1 On-Site Habitat Baseline**

Area habitat summary	
Total Net Unit Change	11.98
Total Net % Change	23.85%
Trading Rules Satisfied	Yes ✓

Condense / Show Columns      Condense / Show Rows  
 Main Menu      Instructions

Ref	Existing area habitats		Area (hectares)	Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline Total habitat units
	Broad Habitat	Habitat Type						
1	Cropland	Cereal crops	19.4	Low	Condition Assessment N/A	As ea/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required?	38.80
2	Heathland/shrub	Bramble scrub	0.11	Medium	Condition Assessment N/A	As ea/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required?	0.44
3	Heathland/shrub	Mixed scrub	1.01	Medium	Moderate	As ea/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required?	8.08
4	Heathland/shrub	Mixed scrub	0.43	Medium	Poor	As ea/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required?	1.72
5	Grassland	Other neutral grassland	0.28	Medium	Poor	As ea/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required?	1.12
6	Urban	Developed land, sealed surface	0.06	V.Low	N/A - Other	As ea/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
7	Urban	Artificial unvegetated unsealed surface	0.04	V.Low	N/A - Other	As ea/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
8								
9								
<b>Total habitat area</b>			<b>21.33</b>					<b>80.18</b>
<b>Site Area (Excluding area of individual trees and Green walls)</b>			<b>21.33</b>					

Retention category biodiversity value						Bespoke compensation agreed for unacceptable losses	Comments		
Area retained	Area enhanced	Baseline units	Baseline habitat lost	Area habitat lost	Units lost		User comments	Consenting body comments	GIS reference number
0	0	0.00	0.00	19.40	38.80				
0	0	0.00	0.00	0.11	0.44		Bramble dominated scrub		
0	0.93	0.00	7.44	0.08	0.64		Northern Boundary Scrub: high sp. diversity, occasional bushes 4-5 criteria attained frequent gaps. Recently planted approx 5+ years old. Retained in development. Distinct from C, but 10m.		
0	0	0.00	0.00	0.43	1.72		SCR 3& 4 (OGS ref) - 2 & 3: Dominant Buddleia, thistle, bramble and burdock, merges w/ LOR, passed 1/5 criteria. Failed on A, B, C and E little woody plants, no shrubs or trees, only 1 woody species poor, dominant thistle and nettle, no criteria passed all high lime sward height, no bare ground visible, high proportion of bramble, large dsc present. May sp. diversity		
0	0	0.00	0.00	0.28	1.12		Chickens nets		
0	0	0.00	0.00	0.06	0.00		Bare access track		
0	0	0.00	0.00	0.04	0.00				
<b>0.00</b>	<b>0.93</b>	<b>0.00</b>	<b>7.44</b>	<b>20.40</b>	<b>48.72</b>				

**Total area lost (excluding area of individual trees and Green walls)**      **20.40**

M<sup>2</sup> to hectares conversion tool:      Select a      Hectares      M<sup>2</sup>

Project Name: 7915M Kidlington Map Reference:  
A-2 On-Site Habitat Creation

Condense / Show Columns      Condense / Show Rows  
Main Menu      Instructions

Area habitat summary	
Total Net Unit Change	11.98
Total Net % Change	23.88%
Trading Rules Satisfied	Yes ✓
Area Check (excluding individual trees and green space)	Area Acceptable ✓

Post development/ post intervention habitats												
Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty	Habitat units delivered	Comments		GIS reference number
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation		User comments	Consenting body comments	
Urban	Developed land, sealed surface	0.16	V Low	N/A - Other	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00	Buildings - not residential		
Grassland	Modified grassland	3.04	Low	Poor	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	5.87	Crochet patches		
Grassland	Other neutral grassland	4.78	Medium	Moderate	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	32.00	CNG moderate on precautionary basis, heavy additional enhancements secured at a later date - meadow grass		
Grassland	Traditional orchards	0.95	High	Moderate	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	20	Low	5.59	Traditional Orchard - considered to meet moderate as Time to target for Good condition is 30 years		
Lakes	Ponds (non-priority habitat)	0.02	Medium	Moderate	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Low	0.14	Pond - specifically managed as pond but potentially ornamental		
Urban	Developed land, sealed surface	5.44	V Low	N/A - Other	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00	10% of residential area as per guidance		
Urban	Vegetated garden	2.33	Low	Condition As assessment N/A	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	4.50	30% of residential area as per guidance		
Urban	Developed land, sealed surface	3.03	V Low	N/A - Other	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00	Roads - excluded from residential requirements		
Urban	Sustainable drainage system	0.24	Low	Poor	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Medium	0.31	SUDS features. Poor as precautionary response, enhancements can be made at later stage.		
Lakes	Ponds (non-priority habitat)	0.41	Medium	Moderate	As ea/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Low	2.95	SUDS features that could be managed as pond		
<b>Total habitat area</b>		<b>20.40</b>							<b>81.36</b>			

Site Area (Excluding area of individual trees and Green w) 20.40

M<sup>2</sup> to hectares conversion tool: select a unit      Hectares      M<sup>2</sup>





Object Name: 7915M Kidlington Map Reference:  
B-2 On-Site Hedge Creation

Hedgerow summary	
Total Net Unit Change	1.01
Total Net % Change	11.77%
Trading Rules Satisfied	Yes ✓

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Baseline ref	New hedge number	Proposed habitats		Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty risk multiplier	Hedge units delivered	Comments		GIS reference number
		Habitat type	Length (km)				Standard or adjusted time to target condition	Final time to target condition			User comments	Consenting body comments	
1	NH1	Species rich native hedgerow with trees	0.09	High	Good	Ar ea/compensation not in local strategy/ no local strategy	Standard time to target condition assessed	20	Low	0.79	Expected that field maple and/or apple can reach maturity		
2	NH2	Native hedgerow	0.04	Low	Good	Ar ea/compensation not in local strategy/ no local strategy	Standard time to target condition assessed	12	Low	0.16			
3	NH3	Native hedgerow	0.03	Low	Good	Ar ea/compensation not in local strategy/ no local strategy	Standard time to target condition assessed	12	Low	0.12			
4													
5													
			0.18							1.07			



### **APPENDIX 3**

Letter Detailing Great Crested Newt Results (23 April  
2002)

Licensing Manager  
 European Wildlife Division  
 Department for Environment, Food and Rural Affairs  
 Room 1/08  
 Temple Quay House  
 2 The Square  
 Temple Way  
 Bristol  
 BS1 6EB

Your ref: WLF 28/2/315  
 Our ref: BIZIP04/E1005/CGMKLR02

23<sup>rd</sup> April 2002

**DRAFT for client approval**

Dear Sir

**Report on monitoring for License WLF 017838 – The Moors, Kidlington**

I visited the above site earlier today to carry out the timed egg search and habitat appraisal as set out in the method statement for the above license.

Habitat structure and vegetation distribution remain good for newt breeding, with some open water as well as abundant aquatic vegetation in which floating mats of watercress are conspicuous. As noted in 2001, this structure produces superabundant potential oviposition sites for newts.

Eventually, scrub on the hedgerow side of the pond may need control to reduce shading, but this will not be needed for some years yet.

As last year (prior to DEFRA licensed work being carried out), I did a timed search for 15 minutes in this small area. The combined figures for numbers of eggs are given in the table below.

	Great crested newt	Small newts
3 <sup>rd</sup> May 2001	4	6
23 <sup>rd</sup> April 2002	27	15

As last year's count may have been a little late for the breeding peak because of foot and mouth restrictions, the apparent increase may mean little. However the newt populations clearly remain healthy. I also noted more activity while searching than I did last year: one female smooth and one great crested newt seen in the pond and one female great crested newt and five common frogs together under a stone slab at the water's edge.

The above work was carried out under my 2002 survey license for great crested newts from English Nature: number 20020569.

## **APPENDIX 4**

### Examples of Suitable Wildlife Features

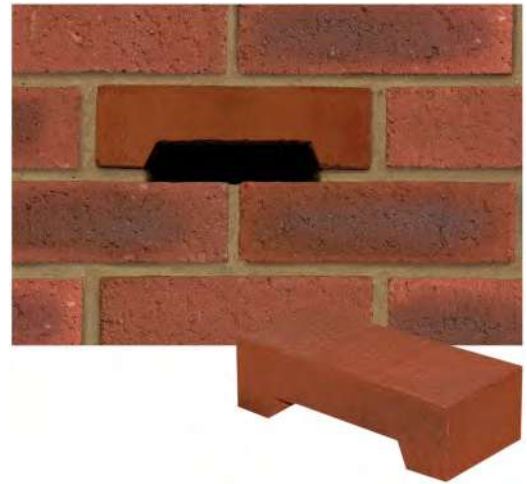
# Bat Boxes

## Ibstock Bat Box A

A discrete, easy to install single bat brick that allows bats to create a natural home habitat within the cavity of the building

*Height: 215mm  
Width: 65mm*

*Please note that this box is designed to be installed flush with a wall.*



## Enclosed Bat Box B

This bat box is designed specifically for the pipistrelle bats, providing a discrete roosting feature which is available in all brick types.

Bats are contained within the bat box itself, within which several roosting zones are provided.

This feature is maintenance free and ideal for new build & conservation work

*Height: 290mm  
Width: 215mm*

*Please note that this box is designed to be installed flush with a wall.*

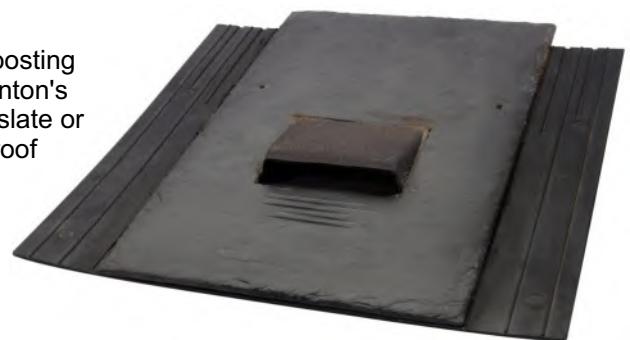


## Habibat Bat Access Slate

The Bat Access Slate consists of a standard sized slate, with a capped vent which allows access to roof felt (for roosting Pipistrelles) or roof space (for Serotine, Leisler's, Daubenton's and Barbastelle Bats). We can supply either a standard slate or custom slate that is coloured and sanded to match your roof exactly.

*Height: 215mm  
Width: 65mm  
Depth: 80mm*

*Habibat Bat Access Slates are made to order and you may need to provide a slate to the manufacturer for customisation. Slates are shipped direct from the manufacturer and will incur a shipping cost of £30-40 (ex VAT) for between one and ten slates. Delivery time is expected to be 2 - 3 weeks.*



Images and text adapted from manufacturer's websites:

[www.ibstock.com/eco-products](http://www.ibstock.com/eco-products)  
[www.habibat.co.uk](http://www.habibat.co.uk)

# Bird Boxes



## 1SP Schwegler Sparrow Terrace

A Woodcrete bird box which allows for several Sparrow pairs to nest in a single location. The box can either be integrated within the fabric of a building or otherwise fitted to the exterior of the building walls.

*Dimensions: 245 x 430 x 200mm*  
*Weight: 15kg*

## Vivara Pro Invisible Swift Box

The Vivipara Pro Invisible Swift Box is manufactured to UK brick sizes. This nest box is made from WoodStone®, a mixture of wood fibre and concrete.

It is designed to be built into a wall, where narrow cavity is present. An entrance hole of at least 3 x 6cm should be left, by leaving a slightly larger entrance, around 3.5cm will encourage other species such as house sparrows to occupy the nest. Leaving most of the entrance exposed and siting the box below five metres will encourage robins, wagtails and black redstarts to occupy the nest box.

*Dimensions: 440 x 140 x 150mm*



## Habitat Starling Nest Box

This box provides an insulated concrete nesting chamber with a hole that is specifically designed to attract Starlings.

The box is designed to be integrated into the structure of the building and can be supplied with brick, block, stone, wood and rendered faces or can be left unfaced.

*Dimensions: 215 x 215 x 120mm*  
*Weight: 3kg*

Images and text adapted from manufacturer's websites:

[www.schwegler-natur.de](http://www.schwegler-natur.de)  
[www.viviparapro.co.uk](http://www.viviparapro.co.uk)  
[www.habitat.co.uk](http://www.habitat.co.uk)



# Examples of Swift Boxes

## Ibstock Swift Box

A specially designed Swift nesting feature which can be integrated into the fabric of the building.

*Size / Width / Height - 327 x 140 x 140mm.*



## Schwegler Type 25 Nest Brick

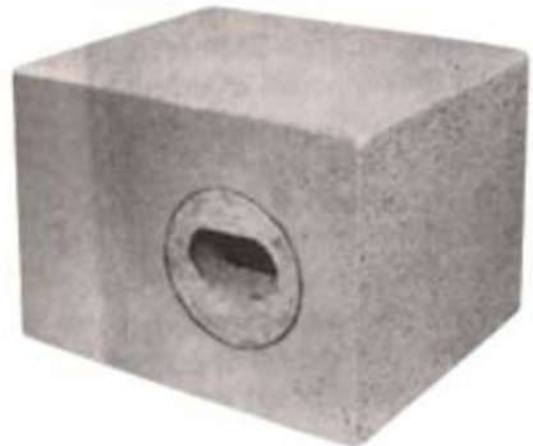
Designed for installation into the fabric of a building, this box is suitable for swifts.

*Woodcrete*

*Entrance hole 55 x 33mm*

*Dimensions 265mm wide x 220mm deep x 180mm high*

*Weight 8.8kg*



## Green & Blue Swift Box

Designed for installation into the fabric of buildings. Cast concrete construction.

*Size / Width / Height - 440 x 215 x 160mm.*



# Bird Boxes

## Vivara Pro WoodStone House Sparrow Nest Box

The Vivara Pro WoodStone House Sparrow Nest Box is an attractive, hardwearing bird box that will provide nesting space for House Sparrows and other communal nesting species. This box is made from WoodStone, a mixture of wood fibres from fully certified FSC wood sources and concrete, and it is designed to last for years. It is breathable and maintains a consistent temperature inside, providing excellent insulation for nesting birds. This bird box has been designed to either be built into the fabric of a new building or attached to the external wall.

*Height: 220mm  
Width: 290mm  
Depth: 165mm*

*Weight: 7kg*

*Hole size: Oval*



## Vivara Pro WoodStone Build-in Swift Nest Box

The Vivara Pro WoodStone Swift Nest Box is an attractive, hardwearing bird box that will provide nesting space for Swifts, and should ideally be placed on the north or east elevations, at least 5m up and beneath an eave.

This box is made from WoodStone, a mixture of wood fibres from fully certified FSC wood sources and concrete, and it is designed to last for years. It is breathable and maintains a consistent temperature inside, providing excellent insulation for nesting birds. This bird box has been designed to be built into the fabric of a new building.

*Height: 185mm  
Width: 335mm  
Depth: 160mm*

*Weight: 7kg*

*Hole size: Oval 34mm*





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