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NATURAL PROGRESSION

Rogers Farm, Ditchling Road, Haywards Heath, West Sussex

Preliminary Ecological Appraisal Report

August 2020

Rogers Farm, Ditchling Road, Haywards Heath, West Sussex

Preliminary Ecological Appraisal Report

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| Client: | Sigma Homes | |
| Report No.: | UE0387_RogersFm_PEA_200804 | |
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| Revision No.: | Status/Comment: | Date: |
| 0 | First issue to client | 4 August 2020 |
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Abbreviations

| | |
|-------|--|
| CHS | Conservation of Habitats and Species Regulations 2017 (as amended) |
| EPS | European Protected Species |
| GCN | Great crested newt |
| HSI | Habitat Suitability Index |
| LGS | Local Geological Site |
| LNR | Local Nature Reserve |
| LWS | Local Wildlife Site |
| NERC | Natural Environment and Rural Communities Act 2006 |
| NNR | National Nature Reserve |
| PEA | Preliminary Ecological Assessment |
| PRF | Potential (bat) Roost Feature |
| SAC | Special Area for Conservation |
| SNCI | Site of Nature Conservation Interest |
| SPA | Special Protection Area |
| SSSI | Site of Special Scientific Interest |
| SxBRC | Sussex Biological Records Centre |
| TN | Target Note |
| WCA | Wildlife & Countryside Act 1981 (as amended) |

0 Executive Summary

0.1 Introduction

- 0.1.1 A Preliminary Ecological Appraisal was undertaken for the site of a proposed residential development at Rogers Farm, Ditchling Road, Haywards Heath, West Sussex (Grid Reference: 533735,121702). The report was prepared to establish the site's suitability for development to inform the design process for the proposal, record the ecological baseline and identify key ecological features within and around the proposal site.

0.2 Results

- 0.2.1 There are no designated wildlife sites within the 1km desk study search area. There are records of a range of protected or notable species in the locality, including amphibians, birds, invertebrates, terrestrial mammals, flowering plants and terrestrial reptiles, together with the following priority habitats: Deciduous Woodland, including Ancient Woodland and Ghyll Woodland, and Open Water.
- 0.2.2 The survey area lies to the south of the town of Haywards Heath in the Mid Sussex district of West Sussex. The site comprises c.1.3ha of land currently formed of a poor semi-improved grassland field with a small area of bracken and boundary woodland, scrub and hedgerow. The site is bounded to the east by the B2112 Ditchling Road and to the north by recent residential development forming part of the southern edge of the built-up area of Haywards Heath. To the south and west it is bounded by grassland fields and isolated residential properties. The wider landscape comprises a mosaic of grassland and arable fields, mostly set within a network of hedgerows, as well as woodland, although the built-up area of Haywards Heath lies to the north. The nearest pond is approximately 500 metres from the site.

0.3 Evaluation

- 0.3.1 Table 0.1 presents a summary of ecological constraints and opportunities identified within the survey area.

Table 0.1: Summary of ecological constraints and opportunities

| Feature | Detail |
|----------------------------|---|
| <u>Constraints:</u> | |
| Designated sites | There are no designated wildlife sites within the 1km radius desk study area. |
| Priority habitats | Deciduous Woodland and Hedgerow priority habitats are present within the survey area and are of high intrinsic ecological value and provide habitats suitable for a range of protected species, including amphibians, nesting birds, invertebrates, bats, |

| Feature | Detail |
|--------------------------------|---|
| | hazel dormouse and reptiles. It is currently understood that the majority of these habitats will be retained and protected as part of any development proposals. |
| Other habitats | The proposed development would result in permanent losses of up to c.0.77ha of poor semi-improved grassland and bracken as well as scattered trees, and a small area of scrub and tall ruderals. A short a section of hedgerow and a small area of woodland may be removed to facilitate development, depending on the extent and layout of the proposals. On the whole these areas are of relatively low ecological value and of importance at the site level only but provide habitats suitable for a number of protected species (e.g. dormice, nesting birds, badger, bats and reptiles). |
| Birds (nesting) | Possible permanent small-scale loss of nesting habitats (hedgerows and scrub). |
| Bats (roosting) | In total 18 trees were identified as having <u>low suitability</u> and two trees as having <u>moderate suitability</u> for roosting bats. It is currently understood that all these trees will be retained and protected as part of any development proposals. |
| Bats (foraging / commuting) | Direct and indirect effects on a relatively small area of high suitability habitats (taller areas of grassland, hedgerow, scrub and woodland habitats) for foraging and commuting bats, including through increases in artificial light. |
| Hazel dormouse | Possible permanent small-scale loss of hedgerow and dense scrub habitat suitable for hazel dormouse. |
| Invasive non-native plants | Himalayan balsam, a non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act, was recorded in the survey area. |
| Reptiles | Permanent losses of suitable habitats (tall grassland, bracken, scrub, woodland, hedgerow bases). |
| <u>Opportunities:</u> | |
| Priority habitats | The hedgerow and woodland priority habitats within the survey area are of high intrinsic value and can provide a focus for ecological enhancement measures. |
| Habitat creation / enhancement | Habitat creation and enhancement opportunities include woodland management, wildflower meadow planting, hedgerow creation, habitat piles and bird/bat boxes. |

0.4 Recommendations

- 0.4.1 Recommendations are made for further botanical or protected species surveys, together with preliminary recommendations for the protection of important ecological features to avoid or mitigate ecological impacts, and to deliver biodiversity net gain on site post-construction; these are summarised in Table 0.2. It is intended that these preliminary recommendations should be considered during future changes to the design of development proposals so that protection of important ecological features is secured and opportunities for ecological enhancement are realised. The recommendations should be reviewed following the completion of further ecological surveys.

Table 0.2: Summary of recommendations

| # | Summary of recommendations |
|--|--|
| Botanical / protected species surveys | |
| R1 | Breeding bird surveys, undertaken from April to July, if significant areas of boundary woodland, scrub and hedgerow are to be removed. |
| R2 | A repeat inspection for badger, undertaken within two/three months before any ground works begin on site. |
| R3 | Presence / absence surveys for roosting bats within trees T2 and T15, undertaken between May and August, if they are affected by proposals for the site. |
| R4 | Bat activity surveys, undertaken between April and October. |
| R5 | Presence / absence surveys for dormouse, undertaken between April and November, if significant areas of boundary woodland, scrub and hedgerow are to be removed. |
| R6 | Presence / absence surveys for reptiles, undertaken between April and September within suitable habitats on site. |
| R7 | A full Ecological Impact Assessment of the effects of the proposed development should be carried out based on the results of recommended surveys. |
| Precautionary measures | |
| R8 | Removal of nesting bird habitats will be undertaken outside of the bird nesting season, which runs from 1 March to 31 August. Any construction works undertaken within the bird breeding season where suitable bird breeding habitat exists will require a site check for nesting birds by a suitably qualified ecologist. |
| R9 | If works to fell or lop the low suitability trees are required, they will be undertaken during March-April or September-October to avoid critical maternity and hibernation periods, and in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to roosting bats. |
| R10 | Works to remove smalls section of hedgerow and scrub will be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to hazel dormouse. |
| Ecological protection measures | |
| R11 | The majority of Deciduous Woodland and Hedgerow priority habitats will be retained and protected during construction. |
| R12 | Standard site procedures to prevent impacts on trees will be adhered to during construction. |
| R13 | A method statement will be prepared to ensure adequate control measures are adopted to prevent the spread of invasive Himalayan balsam during construction. |
| R14 | The use of external lighting will be avoided or reduced to the minimum required for its intended purpose, during both construction and operation. Lighting will not be directed towards the boundary woodland, scrub or hedgerow. |
| R15 | Small access gaps will be provided at the base of new fence boundaries to enable continued dispersal of hedgehogs and other small mammals. |
| R16 | At the end of each working day excavations will be covered over and open pipework capped to prevent entrapment of mammals, amphibians and other fauna. |
| R17 | Destruction of fox dens or rabbit warrens will be done in accordance with the Mammals Act |

| # | Summary of recommendations |
|------------------------------|--|
| | 1996 by a registered pest control company. |
| Biodiversity net gain | |
| R18 | The retained woodland will be enhanced through targeted management. |
| R19 | New green spaces will be sown with a native wildflower and grass seed mix. |
| R20 | Hedgerow creation as part of the landscaping plan for the site will use a range of native shrub species. |
| R21 | The site's landscaping plans will utilise plant species which encourage bats by providing additional food sources or roosting opportunities. |
| R22 | Habitat piles for amphibians, invertebrates and reptiles will be created within areas of retained hedgerow, woodland and scrub. |
| R23 | The value of the site for birds will be enhanced by installing a range of artificial nest boxes onto new buildings and retained trees. |
| R24 | The value of the site for bats will be enhanced by installing a range of artificial roost boxes onto new buildings and retained trees. |

0.5 Conclusions

- 0.5.1 The majority of land proposed for development is of low to moderate ecological value. Significant constraints to development were identified including priority habitats and the potential presence of breeding birds, roosting and foraging/commuting bats, hazel dormouse and reptiles. Further ecological surveys and impact assessment are required prior to submitting a planning application, to determine the value of these features, how they are being used by protected species and to formulate a suitable mitigation strategy. Precautionary and ecological protection measures are recommended on an interim basis to enable offences under the relevant legislation to be avoided.

1 Introduction

1.1 Purpose of this Report

- 1.1.1 This report presents a Preliminary Ecological Appraisal for the site of a proposed residential development at Rogers Farm, Ditchling Road, Haywards Heath, West Sussex (Grid Reference: 533735,121702). The report has been prepared to establish the site's suitability for development, inform the design process for the proposal, record the ecological baseline and identify key ecological features within and around the proposal site.

1.2 Objectives and Approach of the Study

- 1.2.1 The objectives of the Preliminary Ecological Appraisal were to:
- ▶ Identify features present on the site or adjacent which are ecologically significant and which may act as constraints or opportunities to the proposed development;
 - ▶ Consider the need for further ecological surveys which may be necessary; and
 - ▶ Make preliminary recommendations for the protection of important ecological features, to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction, with the aim of achieving an overall net gain for biodiversity.
- 1.2.2 The approach to establishing the ecological baseline found within this report has been achieved through:
- ▶ A desk study involving a review of statutory and non-statutory nature conservation sites, and records of habitats and species from the local area (1km radius from the centre of the proposed development site);
 - ▶ An extended Phase 1 habitat survey identifying the main habitats on site and adjacent, and the presence of, or potential for, protected and/or notable species; and
 - ▶ A Preliminary Ecological Appraisal of the effects of development proposals with respect to the nature conservation value of the site.

1.3 Survey Area

- 1.3.1 The survey area lies to the south of the town of Haywards Heath in the Mid Sussex district of West Sussex. The site comprises c.1.3ha of land currently formed of a poor semi-improved grassland field with a small area of bracken and boundary woodland, scrub and hedgerow.
- 1.3.2 The site is bounded to the east by the B2112 Ditchling Road and to the north by recent residential development forming part of the southern edge of the built-up area of Haywards Heath. To the south and west it is bounded by grassland fields and isolated residential properties. The extent of the survey area is outlined in red on Figure 1.1.

- 1.3.3 The wider landscape comprises a mosaic of grassland and arable fields, mostly set within a network of hedgerows, as well as woodland, although the built-up area of Haywards Heath lies to the north. The nearest pond is approximately 500 metres from the site.

1.4 Proposed Construction Activities

- 1.4.1 The site is being promoted for a residential development comprising 25 dwellings, together with parking, access, landscaping, and associated facilities. It is currently intended that the majority of the woodland, including mature trees, scrub and hedge on the boundaries of the site would be retained. An indicative site layout is shown in Figure 1.2.

Rogers Farm, Ditchling Road, Haywards Heath, West Sussex

 Survey area

Figure 1.1: Survey area



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Ordnance Survey 0100031673

Scale: 1:5,000 Created by: AD
Date: Jul 2020 Reviewed by: NP
Drawing number:
UE0387ECO-Site200731





Scale: 0 10 30 50m

Sketch Site Layout

Proposed Residential Development, Land at Rogers Farm, Fox Hill, Haywards Heath

Figure 1.2: Sketch layout

ARCHITECTURE
www.architect.co.uk
info@architect.co.uk
 01223 634334

Sigma Homes Ltd

Proposed Residential Development,
 Land at Rogers Farm, Fox Hill, Haywards Heath

Sketch Site Layout

1:500@A3(approx) June 2020 KE

20.212 SK02

Canterbury Studio: Logan House, 51 Andrews Close, Canterbury, CT1 2RF
 London Studio: Ink Rooms, 25-37 Easton Street, Clerkenwell, WC1X 0DS

2 Survey Methodology

2.1 Desk Study

- 2.1.1 A desk-based study was undertaken to examine published information and biological records from within the search area (site centroid plus 1km). The desk study established the presence of designated sites of nature conservation interest, or records of protected/notable habitats/species within the site and its surrounding area. This information was collected from the following sources:
- ▶ The 'MAGIC' (Multi-agency Geographic Information for the Countryside) website: www.magic.gov.uk; and
 - ▶ Sussex Biological Records Centre (SxBRC).

2.2 Preliminary Ecological Appraisal

- 2.2.1 The Preliminary Ecological Appraisal (compliant to British Standard BS42020:2013) is based on a survey of the site undertaken on the 30th of June 2020 by an experienced ecologist. Weather conditions were mild (c.16°C), with a moderate south-westerly wind (Beaufort Scale 3-4), 100% cloud cover and occasional to persistent light rain.
- 2.2.2 Within the survey area every parcel of land was classified, recorded and mapped using standard colour codes, in accordance with a list of ninety habitat types specified within the methodology for Phase 1 habitat survey (Joint Nature Conservation Council, 2010). This allows rapid visual assessment of the extent and distribution of different habitat types. Target notes were used to provide supplementary information on features which were particularly interesting or significant to specific construction proposals, or too small to map, or to provide additional details, for example relating to species composition and structure.
- 2.2.3 This basic methodology was extended to provide more detail in relation to habitats with potential to support rare or protected fauna, as described by the Chartered Institute of Ecology and Environmental Management's *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017b). The assessment of habitat suitability for protected, rare or priority species is based on current good practice guidance such as that presented in the *Herpetofauna Workers' Manual* (Gent and Gibson, 2003) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collin (ed.), 2016). Where a species/group is not specifically evaluated, this indicates that no habitat of potential value for the species was identified during the survey.

Scope of the survey

- 2.2.4 The buffer zone for the desk study was set at 1km from the centre of the site – a distance within which any notable ecological features likely to be affected by the proposed scheme would be identified.

- 2.2.5 All habitats within the survey area as indicated on Figure 1.1 were included in order to identify any ecological constraints that would be likely to apply to the scheme from within this zone. Adjacent habitats were also surveyed where appropriate in order to identify constraints falling outside of the proposed development site and to place the survey area in its ecological context.

Evaluation criteria

- 2.2.6 Important ecological features were evaluated to the extent possible under the survey methods used, and in relation to a geographical frame of reference, i.e. international/European value being most important, then national, regional, metropolitan/county/district/borough, and lastly local (based on CIEEM, 2018). Where a feature is of no more than site value, this is stated.
- 2.2.7 Value judgements are based on various characteristics that contribute to the importance of ecological features. These include site designations (such as Sites of Special Scientific Interest, or for undesignated features, the extent, naturalness, conservation status (local or national importance and so on), and quality of the ecological resource. Quality can refer to habitats (for instance if they are particularly diverse, are a good example of a specific habitat type, or provide for the requirements of important species or assemblages), other features (such as connectivity provided by wildlife corridors or mosaics of habitats) or the richness and abundance of species populations or assemblages.

2.3 Preliminary Roost Assessment

- 2.3.1 Trees within to the survey area were subject to an external inspection for potential bat roost features (subject to safe access). All observable features potentially suitable for bats were noted and the overall suitability of the tree for roosting bats was classified with reference to Box 1 (Collins (ed.), 2016). The objective was to establish whether each feature was of negligible, low, moderate or high roosting bat suitability, or a confirmed roost based on the presence of bats or their droppings.
- 2.3.2 Trees were assessed for PRFs such as woodpecker holes, cavities, cracks or splits in major limbs (e.g. hazard beams, rot holes, frost cracks, knot holes, occlusions, flush cuts, tear-outs, cankers or butt-rots), loose platey bark, aerial deadwood and dense ivy or epicormic growth. The tree inspection was carried out from ground level. One experienced surveyor undertook the inspections over a period of approximately 2hrs.

Box 1: Potential suitability of structures/trees for roosting bats (after Collins, 2016)

| Suitability | Roosting habitats |
|--------------------|---|
| <u>Negligible</u> | Negligible habitat features on site likely to be used by roosting bats |
| <u>Low</u> | A structure with one or more potential roost features (PRF) that could be used by individual bats opportunistically, but do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats A tree of sufficient size and age to contain PRFs but with none seen from the ground / using ladders or features seen with only very limited roosting potential |

Box 1: Potential suitability of structures/trees for roosting bats (after Collins, 2016)

| | |
|------------------------|--|
| <u>Moderate</u> | A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (for roost type only) |
| <u>High</u> | A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat |
| <u>Confirmed roost</u> | Bats or unequivocal evidence of bats found, i.e. bat droppings |

2.4 Limitations

- 2.4.1 Biological records gathered during the desk study can provide an indication of the likely presence of a species on or adjacent to a site, however, the absence of records for protected species does not equate to evidence of their absence from the locality. Data search accuracy is variable and records are often georeferenced to the nearest 1km grid square.
- 2.4.2 Time of year when the survey was carried out and other variations will influence the results of the survey. Botanical species vary considerably in their flowering, seeding and fruiting periods, and surveys outside of these periods can confound accurate species identification. Where this is the case plants have been identified to lowest possible taxonomic group, normally genus. The possibility nonetheless exists for other species to be present on the site which were not recorded or otherwise indicated by the survey. Ornamental species are not included in botanical listings.
- 2.4.3 The survey reported herein was carried out in mid-summer, during the flowering period for many botanical species, and the timing of the survey is not considered to be a significant limitation to meeting the objectives of the survey.
- 2.4.4 There were no difficulties in gaining access to survey the site's habitats and assess protected species suitability. Adjacent habitats were surveyed where appropriate in order to identify constraints falling outside of the proposed development site and to place the survey area in its ecological context.
- 2.4.5 This report aims to provide general advice on the ecological constraints associated with development proposals for the site and includes recommendations for further survey where appropriate. Where impacts are likely or further ecological surveys are recommended, a more detailed Ecological Impact Assessment (EclA) of the effects of the proposed development should be carried out based on the results of recommended surveys. The EclA will include detailed advice on ecological avoidance, mitigation, enhancement and/or compensation measures. This is in line with the latest guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017a, 2017b, 2018).
- 2.4.6 See Appendix VII for general Legal and Technical Limitations which apply to this document.

2.5 Personnel

- 2.5.1 The site survey was carried out by Dr Richard Bickers BSc(Hons) PhD MCIEEM, a Senior Ecologist with thirteen years' ecological consultancy experience. Richard holds a Natural England Class Licence to survey for great crested newt (WML-CL09).
- 2.5.2 The report was extensively reviewed by Nick Pincombe BA(Hons) MSc CEnv MIEMA MCIEEM, Director of Urban Edge Environmental Consulting, who has fifteen years' experience in leading survey and impact assessment teams for a wide range of ecology and environmental planning projects. Nick holds Natural England Class Licences to survey for bats (WML-CL18) and great crested newt (WML-CL08).

3 Results

3.1 Desk Study

Statutory and non-statutory site designations

- 3.1.1 There are no statutory or non-statutory designated wildlife sites within the 1km desk study search area.

Priority habitats

- 3.1.2 Priority habitats include those listed on local Biodiversity Action Plans and habitats of principal importance listed under section 41 of the Natural Environment and Rural Communities Act 2006. SxBRC and a search of the MAGIC database returned the following data on priority and other habitats within the desk study search area: Deciduous Woodland, Ancient Woodland, Ghyll Woodland and Open Water. Deciduous Woodland is shown as present within the survey area; see Figure 3.1.

Records of protected, rare and notable species

- 3.1.3 Biological records were obtained from SxBRC for the desk study search area and are summarised in Table 3.1.

Map 4: Section 41 habitats and other

Land at Roger's Farm, Ditchling Road, Haywards Heath + 1km radius
 SxBRC/20/236 - 06/07/2020

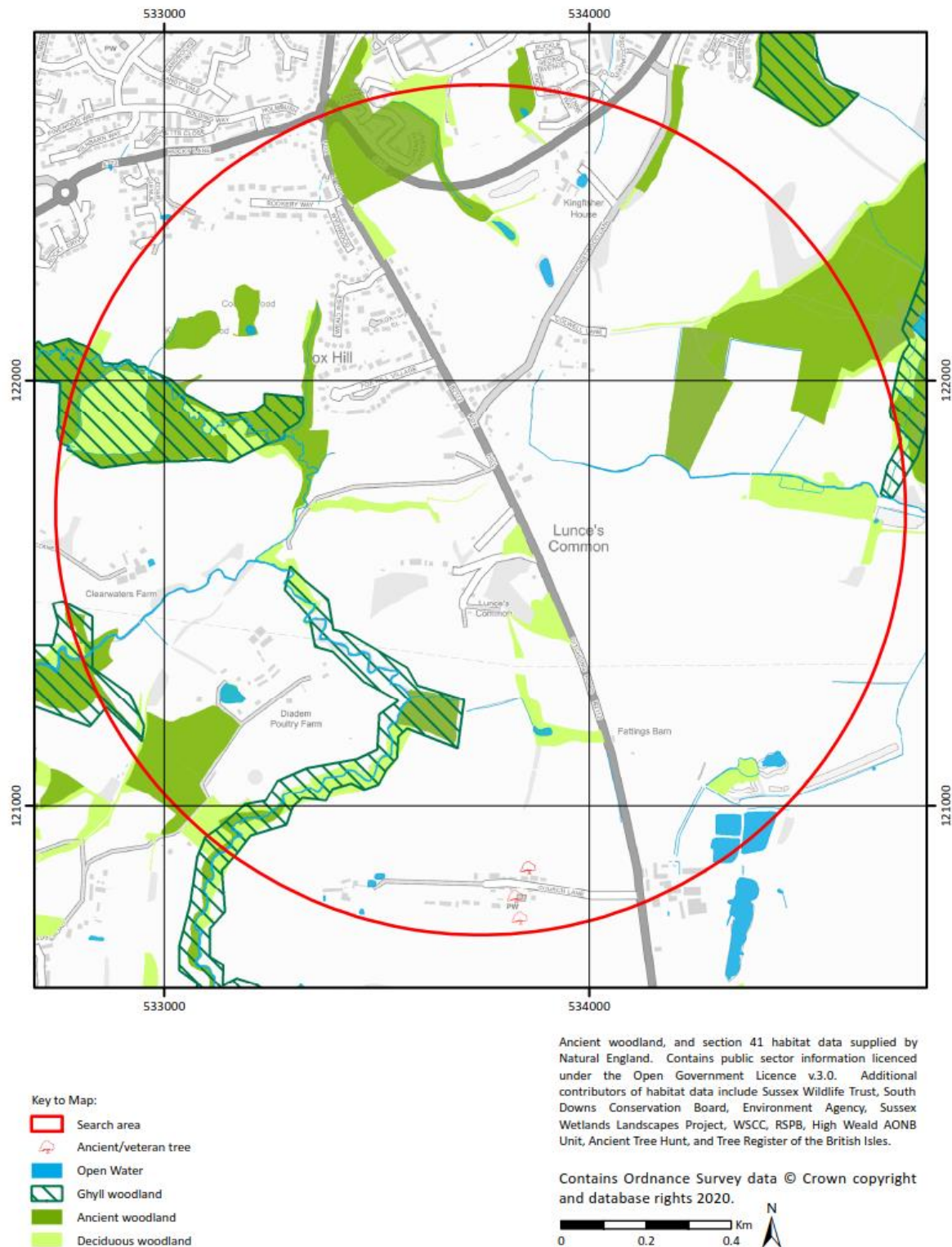


Figure 3.1: Priority habitats within the desk study search area

Table 3.1: Records of protected, rare & notable species within the desk study search area

| Group | Species | Protection |
|---|--|--------------------------|
| Amphibians | Common Toad <i>Bufo bufo</i> | WCA Sch.5 part, NERC s41 |
| | Palmate Newt <i>Lissotriton helveticus</i> , Smooth Newt <i>Lissotriton vulgaris</i> , Common Frog <i>Rana temporaria</i> | WCA Sch.5 part |
| Birds (note: species may appear more than once) | Kingfisher <i>Alcedo atthis</i> , Nightjar <i>Caprimulgus europaeus</i> , Peregrine <i>Falco peregrinus</i> , Red Kite <i>Milvus milvus</i> , Osprey <i>Pandion haliaetus</i> , Honey Buzzard <i>Pernis apivorus</i> | Birds Dir.1 |
| | Kingfisher <i>Alcedo atthis</i> , Garganey <i>Anas querquedula</i> , Peregrine <i>Falco peregrinus</i> , Brambling <i>Fringilla montifringilla</i> , Hobby <i>Falco subbuteo</i> , Red Kite <i>Milvus milvus</i> , Osprey <i>Pandion haliaetus</i> , Honey Buzzard <i>Pernis apivorus</i> , Black Redstart <i>Phoenicurus ochruros</i> , Firecrest <i>Regulus ignicapillus</i> , Redwing <i>Turdus iliacus</i> , Fieldfare <i>Turdus pilaris</i> , Barn Owl <i>Tyto alba</i> | WCA Sch.1 |
| | Lesser Redpoll <i>Acanthis cabaret</i> , Skylark <i>Alauda arvensis</i> , Nightjar <i>Caprimulgus europaeus</i> , Cuckoo <i>Cuculus canorus</i> , Hawfinch <i>Coccothraustes coccothraustes</i> , Yellowhammer <i>Emberiza citrinella</i> , Reed Bunting <i>Emberiza schoeniclus</i> , Lesser Spotted Woodpecker <i>Dendrocopos minor</i> , Dunnock <i>Prunella modularis</i> , Herring Gull <i>Larus argentatus</i> , Linnet <i>Linaria cannabina</i> , Spotted Flycatcher <i>Muscicapa striata</i> , House Sparrow <i>Passer domesticus</i> , Tree Sparrow <i>Passer montanus</i> , Wood Warbler <i>Phylloscopus sibilatrix</i> , Marsh Tit <i>Poecile palustris</i> , Bullfinch <i>Pyrrhula pyrrhula</i> , European Turtle Dove <i>Streptopelia turtur</i> , Starling <i>Sturnus vulgaris</i> , Song Thrush <i>Turdus philomelos</i> , Lapwing <i>Vanellus vanellus</i> | NERC s41 |
| | Lesser Redpoll <i>Acanthis cabaret</i> , Skylark <i>Alauda arvensis</i> , Cuckoo <i>Cuculus canorus</i> , Hawfinch <i>Coccothraustes coccothraustes</i> , Lesser Spotted Woodpecker <i>Dendrocopos minor</i> , Yellowhammer <i>Emberiza citrinella</i> , Pied Flycatcher <i>Ficedula hypoleuca</i> , Herring Gull <i>Larus argentatus</i> , Linnet <i>Linaria cannabina</i> , Nightingale <i>Luscinia megarhynchos</i> , Grey Wagtail <i>Motacilla cinerea</i> , Spotted Flycatcher <i>Muscicapa striata</i> , House Sparrow <i>Passer domesticus</i> , Tree Sparrow <i>Passer montanus</i> , Black Redstart <i>Phoenicurus ochruros</i> , Wood Warbler <i>Phylloscopus sibilatrix</i> , Marsh Tit <i>Poecile palustris</i> , Turtle Dove <i>Streptopelia turtur</i> , Starling <i>Sturnus vulgaris</i> , Redwing <i>Turdus iliacus</i> , Fieldfare <i>Turdus pilaris</i> , Mistle Thrush <i>Turdus viscivorus</i> , Song Thrush <i>Turdus philomelos</i> , Lapwing <i>Vanellus vanellus</i> | RL |
| | Kingfisher <i>Alcedo atthis</i> , Greylag Goose <i>Anser anser</i> , Mallard <i>Anas platyrhynchos</i> , Meadow Pipit <i>Anthus pratensis</i> , Garganey <i>Anas querquedula</i> , Swift <i>Apus apus</i> , Nightjar <i>Caprimulgus europaeus</i> , Black-headed Gull <i>Chroicocephalus ridibundus</i> , Stock Dove <i>Columba oenas</i> , House Martin <i>Delichon urbicum</i> , Reed Bunting <i>Emberiza schoeniclus</i> , Kestrel <i>Falco tinnunculus</i> , Common Gull <i>Larus canus</i> , Lesser Black-backed Gull <i>Larus fuscus</i> , Osprey <i>Pandion haliaetus</i> , Honey Buzzard <i>Pernis apivorus</i> , Dunnock <i>Prunella modularis</i> , Willow Warbler <i>Phylloscopus trochilus</i> , Grey plover <i>Pluvialis squatarola</i> , | AL |

| Group | Species | Protection |
|-------------------------------|--|---|
| | Bullfinch <i>Pyrrhula pyrrhula</i> , Tawny Owl <i>Strix aluco</i> | |
| Invertebrates | White-letter Hairstreak <i>satyrium w-album</i> | WCA Sch.5 part, NERC s41 |
| Mammals (terrestrial) | Noctule <i>Nyctalus noctula</i> , Hazel Dormouse <i>Muscardinus avellanarius</i> , Soprano Pipistrelle <i>Pipistrellus pygmaeus</i> , Brown Long-eared Bat <i>Plecotus auritus</i> | Habs.Dir.4, CHS Sch.2, WCA Sch.5 full, NERC s41 |
| | Serotine <i>Eptesicus serotinus</i> , Common Pipistrelle <i>Pipistrellus pipistrellus</i> | Habs.Dir.4, CHS Sch.2, WCA Sch.5 full |
| | West European Hedgehog <i>Erinaceus europaeus</i> | NERC s41 |
| Plants | Bluebell <i>Hyacinthoides non-scripta</i> | WCA Sch.8 |
| Lower plants | Slender Thread-moss <i>Orthodontium gracile</i> | NERC s41 |
| Reptiles (terrestrial) | Slow Worm <i>Anguis fragilis</i> , Grass Snake <i>Natrix natrix</i> , Adder <i>Vipera berus</i> , Common Lizard <i>Zootoca vivipara</i> | WCA Sch.5 part, NERC s41 |

| | |
|--------------|---|
| Birds.Dir.1 | Wild Birds Directive 2009/147/EC Annex 1 |
| Habs.Dir.2/4 | Habitats Directive 92/43/EEC Annex 2 or 4 |
| CHS Sch.X | Conservation of Habitats & Species Regulations 2017 Schedules 2 (EPS animals) or 5 (EPS plants) |
| WCA s1/Sch.X | Wildlife and Countryside Act 1981 Section 1 / Schedules 1, 5 (fully or partially protected), 6 or 8 |
| PBA | Protection of Badgers Act 1992 |
| NERC s41 | Natural Environment & Rural Communities Act 2006 Section 41 Species of Principal Importance |
| RL/AL | Red/Amber Listed (IUCN or Birds of Conservation Concern 4 (Eaton et al., 2015)) |
| NR | Nationally Rare |
| | NS Nationally Scarce |

3.2 Phase 1 Habitats

3.2.1 The following Phase 1 habitats were identified within or adjacent to the survey area and are shown on the Phase 1 habitats map at Appendix I. The habitats are described below.

- ▶ Poor semi-improved grassland
- ▶ Broadleaved semi-natural woodland
- ▶ Dense scrub
- ▶ Scattered broadleaved trees
- ▶ Bracken
- ▶ Species poor hedgerow

Poor semi-improved grassland

3.2.2 The centre of the site comprised a grassland field. Most of the grassland was tall and locally tussocky in structure, although there were some small shorter areas due to localised rabbit and other grazing. Although generally rather species poor, with forb content not more than c.20%, it did include a number of species characteristic of less improved and wet or marshy grasslands, such as locally frequent tufted hair grass *Deschampsia cespitosa*, and hairy sedge *Carex hirta*, and occasional rushes *Juncus* spp., as well as locally abundant greater birds foot trefoil *Lotus*

pedunculatus, locally frequent meadow vetchling *Lathyrus pratensis* and lesser spearwort *Ranunculus flammula*, frequent common sorrel *Rumex acetosa* and lesser stichtwort *Stellaria graminea* and occasional marsh thistle *Cirsium palustre*. Apart from such species the most abundant and frequent grasses were Yorkshire fog *Holcus lanatus*, sweet vernal grass *Anthoxanthum odoratum*, common bent *Agrostis capillaris*, false oat grass *Arrhenatherum elatius* and meadow foxtail *Alopecurus pratensis*. Other species included meadow and red fescue *Festuca pratensis* and *F. rubra*, creeping buttercup *Ranunculus repens* and occasional docks *Rumex* spp.. Bramble *Rubus fruticosus* and tree seedlings were occasional, suggesting that the grassland has been unmanaged for some time.



Grassland from the west and east respectively

Broadleaved semi-natural woodland

- 3.2.3 There was a narrow woodland strip along the northern, western and southern boundaries, as well as a wider area in the north west corner of the site. A boundary bank and ditch were present along these boundaries and it is likely that the woodland has developed and expanded from a hedgerow or hedgerows located along these features as a result of lack of management.
- 3.2.4 The canopy consisted largely of mature pedunculate oak *Quercus robur*, with frequent ash *Fraxinus excelsior* and locally frequent hornbeam *Carpinus betulus* along the northern boundary, much of which appeared to have been coppiced in the past. Many of these trees supported features such as deadwood, cracks, holes and growths of ivy *Hedera helix* and 20 trees were identified as supporting potential roost features for bats and are preliminarily assessed as having low or moderate suitability for roosting bats (see Table 3.2 below).
- 3.2.5 Hazel *Corylus avellana* was the most abundant shrub species, but hawthorn *Crataegus monogyna* and holly *Ilex aquifolium* were frequent and blackthorn *Prunus spinosa* and hornbeam were locally frequent. Other species included grey willow *Salix cinerea*, elder *Sambucus nigra* and rose *Rosa* sp..
- 3.2.6 Although variable the field layer was moderately species rich, and several Ancient Woodland Indicator species were identified, including frequent bluebell *Hyacinthoides non-scriptus* as well as three-nerved sandwort *Moehringia trinerva*, ramsons *Allium ursinum*, blackcurrant *Ribes nigrum* and remote sedge *Carex remota*. Other species included bramble, wood avens *Geum urbanum*, ground ivy *Glechoma hederacea*, bugle *Ajuga reptans*, cleavers *Galium aparine*, foxglove *Digitalis purpurea*, enchanters nightshade *Circaea lutetiana*, red campion *Silene dioica*, rough meadow grass *Poa trivialis*, male fern *Dryopteris felix-mas* and broad buckler fern *Dryopteris dilatata*. Honeysuckle *Lonicera periclymenum* was frequent and ivy occasional.

- 3.2.7 A small area of wet woodland, with a canopy of crack willow *Salix fragilis* and alder *Alnus glutinosa* and a distinctive field layer, including abundant creeping buttercup, lesser spearwort, woody nightshade *Solanum dulcamara* and flote grass *Glyceria fluitans*, locally frequent water pepper *Persicaria hydropiper* and sedge *Carex* sp. and occasional marsh bedstraw *Galium palustre* and soft rush *Juncus effusus*, was located in the north western corner of the site (TN1).
- 3.2.8 A small stand of Himalayan balsam *Impatiens glandulifera* (listed on Schedule 9 of the Wildlife and Countryside Act) was present in and on the edge of the woodland near part of the southern boundary of the site (TN2).



Woodland, southern boundary, from the east



Woodland, northern boundary from the west



Within woodland, northern boundary



Typical coppiced hornbeam, northern bdy



Mature oaks, western end of northern bdy



Wet woodland, north west corner of site

Dense scrub

- 3.2.9 There was an area of scrub on the northern boundary, in a section that lacks trees, as well as in the east of the site, adjoining the hedgerow. The latter is dominated by blackthorn and bramble, with occasional young pedunculate oak trees.



Dense scrub on northern boundary (to right)



Dense scrub on eastern boundary

Scattered broadleaved trees

- 3.2.10 A stand of young alder trees was located in the northern edge of the grassland.

Bracken

- 3.2.11 A stand of bracken *Pteridium aquilinum* was present in the south eastern corner of the site, between the grassland and the hedge.



Young alder trees, northern edge of grassland



Bracken, south east corner of site

Species poor hedge

- 3.2.12 A hedge of c.75m length was present on the eastern and the most easterly part of the southern boundary. It was species poor, with the northern section dominated by blackthorn, although small numbers of young oak and ash trees were present, and the southern section dominated by hawthorn and hazel. The hedge appeared unmanaged, apart from the eastern side of the northern section, where it adjoined the B112, where the side appeared to have been flailed.



Hedge, eastern bdy, flailed on side by road



Hedge, eastern part of southern bdy

Table 3.2: Preliminary Roost Assessment of trees within the survey area

| Preliminary Roost Assessment of trees * | |
|--|---|
| T1: Ash | |
| <i>Description</i> | |
| | Large mature tree. |
| <i>Evidence of bats</i> | |
| | None observed |
| <i>Potential roost features (PRF)</i> | |
| | No obvious PRFs observed but extensive ivy present, though much dead. |
| <i>Overall suitability for roosting bats</i> | |
| | Low |
| T2: Ash | |
| <i>Description</i> | |
| | Mature tree |
| <i>Evidence of bats</i> | |
| | None observed |
| <i>Potential roost features (PRF)</i> | |
| | At least 3 woodpecker holes on dead branch in centre of tree, north side. |
| <i>Overall suitability for roosting bats</i> | |
| | Moderate |
| T3: Ash | |
| <i>Description</i> | |
| | Large mature multi stemmed tree |
| <i>Evidence of bats</i> | |
| | None observed |
| <i>Potential roost features (PRF)</i> | |
| | Lifted bark northern side of southern most stem. Extensive dense ivy. |
| <i>Overall suitability for roosting bats</i> | |
| | Low |
| T4: Oak | |
| <i>Description</i> | |
| | Large mature tree |
| <i>Evidence of bats</i> | |
| | None observed |
| <i>Potential roost features (PRF)</i> | |
| | Deadwood snags, including one with probable cracks north side |

| Preliminary Roost Assessment of trees * | |
|--|--|
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T5: Ash | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags, including possible cracks. Extensive dense ivy. | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T6: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags, including possible cracks. | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T7: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Decay with associated cracks/possible cavity on north east side of trunk | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T8: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |

| Preliminary Roost Assessment of trees * | |
|---|--|
| Deadwood snags with cracks etc and extensive dense ivy | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T9: Oak | |
| <i>Description</i> | |
| Mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags low on north and east sides have possible cracks, patchy ivy | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T10: Ash | |
| <i>Description</i> | |
| Mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Cavity (probably shallow due to rot from branch loss) base of northern main branch, east side | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T11: Alder | |
| <i>Description</i> | |
| Mature tree but of modest size | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Woodpecker hole c.5m up south east side | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T12: Oak | |
| <i>Description</i> | |
| Mature tree | |
| <i>Evidence of bats</i> | |

| Preliminary Roost Assessment of trees * | |
|--|--|
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T13: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T14: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T15: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Relatively large deadwood snags with cracks, holes etc | |
| <i>Overall suitability for roosting bats</i> | |
| Moderate | |
| T16: Oak | |
| <i>Description</i> | |
| Large mature tree | |

| Preliminary Roost Assessment of trees * | |
|--|--|
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T17: Oak | |
| <i>Description</i> | |
| Large mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T18: Hornbeam | |
| <i>Description</i> | |
| Mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T19: Oak | |
| <i>Description</i> | |
| Mature tree | |
| <i>Evidence of bats</i> | |
| None observed | |
| <i>Potential roost features (PRF)</i> | |
| Deadwood snags with possible cracks | |
| <i>Overall suitability for roosting bats</i> | |
| Low | |
| T20: Oak | |
| <i>Description</i> | |

| Preliminary Roost Assessment of trees * |
|--|
| Mature tree |
| <i>Evidence of bats</i> |
| None observed |
| <i>Potential roost features (PRF)</i> |
| Deadwood snags and extensive dense ivy |
| <i>Overall suitability for roosting bats</i> |
| Low |

* Any other trees within the survey area were not of sufficient size/age to present PRFs

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4 Evaluation

4.1 Introduction

- 4.1.1 This section evaluates the survey area in terms of the habitats and species present or potentially present on site or its immediate vicinity, in the context of relevant legislation and planning policy. See Appendix VI for a review of the legislation and planning context.

4.2 Designated Sites

- 4.2.1 There are no statutory or non-statutory wildlife sites within the 1km desk-study search zone. The nearest Ancient Woodland (Rookery Wood) is located approximately 280m to the west of the site. Given the size and scale of the proposals and the distance of the Ancient Woodland from the site it is considered unlikely that they will have an adverse impact on the Ancient Woodland.

4.3 Habitats

Evaluation

- 4.3.1 Table 4.1 presents a preliminary evaluation of the habitats recorded within or adjacent to the survey area, with reference to the criteria defined at section 2.2.6. It is important to note that these preliminary evaluations may be updated following completion of more detailed botanical or protected species surveys.

Table 4.1: Preliminary evaluation of habitats within the survey area

| Habitat | Evaluation | Justification |
|-----------------------------------|------------|---|
| Poor semi-improved grassland | Site | Relatively species poor but does include frequent species characteristic of less improved and wet or marshy grassland types. Value also lies in the potential to support protected species, such as reptiles. |
| Broadleaved semi-natural woodland | Local | Priority habitat; relatively diverse in terms of species and structure and includes mature trees and a small area of wet woodland. Value also lies in the potential to support protected species, such as bats, dormice and breeding birds. |
| Dense scrub | Site | Relatively small areas of common and widespread species. Area on north boundary forms part of wider boundary vegetation with woodland. Includes value to support protected species, such as breeding birds and reptiles. |

| Habitat | Evaluation | Justification |
|-----------------------------|------------|--|
| Scattered broadleaved trees | Site | Small number of relatively young trees. Potential to support protected species, such as breeding birds and reptiles. |
| Bracken | Site | Small area of relatively common and widespread habitat. Value largely lies in potential to support protected species, such as reptiles. |
| Species poor hedgerow | Site | Priority habitat; species poor hedge but intact without gaps and forms part of wider woody boundary vegetation. Includes value to support protected species, such as dormice, breeding birds and reptiles. |

Priority habitats

4.3.2 Priority habitats present within the survey area or at its boundaries include:

- ▶ Lowland Mixed Deciduous Woodland
- ▶ Hedgerow

4.3.3 Most of the vegetation on the northern, western and southern boundaries can be identified as Lowland Mixed Deciduous Woodland. It is relatively diverse in terms of structure and species, including a number of Ancient Woodland Indicators. It includes mature trees and a small area of wet woodland. Woodland of this type is of high intrinsic ecological value. It provides habitats suitable for a range of protected species, including nesting birds, badger *Meles meles* (foraging and sett creation), foraging, commuting and roosting bats, and hazel dormouse *Muscardinus avellanarius*. Dead wood within these habitats also provides valuable habitat for fungi and saproxylic invertebrates (e.g. stag beetle *Lucanus cervus*) and refuge/hibernation habitats for widespread amphibians, great crested newt *Triturus cristatus* and reptile species. It is currently understood that the majority of woodland will be retained and protected during development.

4.3.4 The hedgerow was classified as species-poor. Priority hedgerow habitats are defined "as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide..., consisting predominantly (i.e. 80% cover or more) of at least one woody UK native species" (any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow) (Maddock, 2008). The survey area's hedgerow falls within this classification.

4.3.5 Hedgerow priority habitats are of high intrinsic ecological value and provide habitats suitable for a range of protected species, including amphibians and reptiles (shelter and dispersal), nesting birds, invertebrates, foraging/commuting bats, and hazel dormouse *Muscardinus avellanarius*. Although detailed proposals for the site are not yet finalised, it is currently anticipated that the majority of the hedgerow will be retained and protected during construction.

- 4.3.6 The hedgerow within the site was assessed according to criteria set out in the Hedgerow Regulations 1997. A table showing full survey results is presented in Appendix IV. The hedgerow does not qualify as important, largely due to its species poor character.

Other habitats

- 4.3.7 The proposed development would result in permanent losses of up to c.0.77ha of poor semi-improved grassland and bracken as well as scattered trees, and a small area of scrub and tall ruderals. A short section of hedgerow and a small area of woodland may be removed to facilitate development, depending on the extent and layout of the proposals. On the whole these areas are of relatively low ecological value and of importance at the site level only but provide habitats suitable for a number of protected species (e.g. dormice, nesting birds, badger, bats and reptiles).

4.4 Species

Amphibians (excluding great crested newt)

- 4.4.1 SxBRC returned 14 records of common toad *Bufo bufo*, common frog *Rana temporaria*, smooth newt *Lissotriton vulgaris* and palmate newt *Lissotriton helveticus* from within the desk-study search zone, dating mostly from the 1990s but with some records from the early 2000s. One of the most recent records (2002) was of common frog located c.100m south of the site.
- 4.4.2 All of the habitats on site represent suitable terrestrial habitat for common amphibians. However, it is understood that a large proportion of high value habitat on and adjacent to the site boundaries, will be retained and protected as part of the proposals, and habitats of similar suitability are widely available in the surrounding area. Common amphibians are not considered to present a constraint to the development proposals.

Great crested newt

- 4.4.3 SxBRC returned no records of great crested newt (GCN) *Triturus cristatus* from within the desk-study search zone.
- 4.4.4 The survey area contains good quality terrestrial habitats for GCN, dominated by coarse grasses and variable sward height and structure which is suitable for foraging. Boundary hedgerows, scrub and woodland provide dispersal, shelter and hibernation habitat. However, there are no ponds within the survey area, and analysis of Ordnance Survey maps and aerial photography indicated that the nearest ponds are c.500m of the site.
- 4.4.5 Research undertaken by Natural England (Cresswell & Whitworth, 2004) suggests GCN will rarely move further than 200-250m from a breeding pond, with much reduced distances recorded where adjacent habitats are of good quality. Jehle (2000) also determined a terrestrial zone of 63m, within which 95% of summer GCN refuges were located. In addition, following the breeding season, Jehle and Arntzen (2000) recorded 64% of newts within 20m of the pond edge. In conclusion, GCN is unlikely to be present within the survey area and is not considered

to present a constraint to the development proposals. No further surveys for this species are required.

Birds (nesting)

- 4.4.6 SxBRC returned 452 records of 57 notable bird species from within the desk-study search zone during a date range of 1980 to 2018. The survey area's boundary woodland, scrub and hedgerow, as well as scattered trees are suitable for nesting birds. The grassland is unlikely to support ground-nesting species such as skylark *Alauda arvensis* (BoCC4 Red-listed) due to the relatively small field size. Removal of the suitable habitats on site could result in a detrimental effect on bird populations and, depending on the timing of vegetation clearance works, could result in the killing/injury of birds/eggs or destruction of active nests. Further breeding bird surveys are recommended at section 5.2 if significant areas of woodland, scrub or hedgerow on the site boundaries are to be removed. Precautionary measures for nesting birds are recommended at section 5.3.

Invertebrates

- 4.4.7 SxBRC returned nine records of eight species of protected invertebrate from within the desk-study search zone, during a date range of 2002 to 2011, comprising mostly beetles, but also a butterfly and a spider.
- 4.4.8 The survey area's combination of unmanaged grassland, scrub, woodland and hedgerow habitats provide are likely to provide moderate value for a range of common and widespread invertebrates. Deadwood within the woodland on site also provides potential habitat for saproxylic species such as stag beetle *Lucanus cervus*. However, it is currently understood that much of the most valuable habitat, including the woodland, scrub and hedgerow on the site boundaries will be retained and protected as part of the proposals. Thus the limited losses within the site resulting from development are not considered likely to significantly affect invertebrate communities. Invertebrates are not considered to present a constraint to the development proposals and no further surveys for this group are required.

Mammals (terrestrial)

Badger

- 4.4.9 SxBRC does not supply badger *Meles meles* records for animal welfare reasons.
- 4.4.10 The survey area provides suitable habitat for forging and sett creation by badgers. A search for badger setts and signs of their presence was undertaken within and adjacent to the site boundary, but no setts or other field signs were recorded. Badger is not considered to present a constraint to the development proposals but, given the presence of suitable habitat for sett creation, a repeat inspection for badgers two/three months before any ground works begin on site is recommended. General ecological protection measures for badgers and other mammals are advised in section 5.4.

Bats

- 4.4.11 SxBRC returned 17 records of five species of bat from within 1km of the survey area, during a date range of 2000 to 2016, including serotine *Eptesicus serotinus*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus* and brown long-eared *Plecotus auritus* bats. Most of these records were of bats in flight but included five roost sites, the closest to the survey area being located c.240m north in 2004.
- 4.4.12 A total of 18 trees within the woodland were noted to be of low suitability for roosting bats and two trees were of moderate suitability and contained potential roost features. Felling or arboricultural works to these trees, if required to facilitate the proposals, could result in destruction of a bat roost or present a risk of killing, injury or disturbance if bats are present during the works. Low suitability trees are not required to undergo further surveys, instead if felling or other tree works are necessary, this should be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to bats, as recommended at section 5.3. However, should such works be required to the moderate suitability trees then further surveys for bats roosting in trees are recommended at section 5.2.
- 4.4.13 The survey area's habitats, including woodland, scrub, hedgerow, scattered trees, and tall semi-improved grassland are considered to represent relatively small area of high suitability habitat for foraging and commuting bats. Although it is understood that most of the higher value habitats on or close the site boundaries will be retained and protected as part of any proposals, there will be a loss particularly of the grassland, and it is likely that the retained habitats will experience an increase in artificial lighting following development, which may render them less suitable for foraging/commuting in future. Further bat activity surveys are recommended at section 5.2.

Hazel dormouse

- 4.4.14 SxBRC returned six records of hazel dormouse *Muscardinus avellanarius* within the desk study search area, during a date range of 2002 to 2015, the nearest record being located c.130m north-west in 2015.
- 4.4.15 The woodland, scrub and hedgerow are suitable habitat for dormice, with good structure and a range of food plants. In addition, the site is relatively well connected to the network of hedgerows and woodland in the wider landscape. However, most of these habitats are currently expected to be retained and protected under proposals for the site. Removal of a small section of hedgerow in the south east corner of the site to enable access could be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to hazel dormouse, as recommended at section 5.3. However, should removal of larger sections of these habitats be required further surveys for hazel dormouse are recommended at section 5.2

Water vole and otter

- 4.4.16 SxBRC returned no records of European water vole *Arvicola amphibius* from within the desk study search area. SxBRC does not supply records of otter *Lutra lutra*.

- 4.4.17 There are no riparian habitats running through or adjacent to the site, making it unlikely that either species would be present. Neither species is considered to present a constraint to development proposals and further surveys are not required.

Plants, native

- 4.4.18 SxBRC returned 90 records of 25 protected and notable plant species from within the desk-study search zone during a date range of 1950 to 2016.
- 4.4.19 Native bluebell was recorded in the woodland and scrub on the site boundaries; the species is listed on schedule 8 of the Wildlife and Countryside Act 1981 which affords it protection against possession, transport and trade. No other rare or protected plant species were recorded within the site, although the woodland and scrub habitats on the site boundaries support a moderate diversity of species, including some, such as Ancient Woodland Indicators, associated with long established habitats. However, it is currently understood that these habitats will be retained and protected as part of the proposals. Plant species and communities are not considered to present a constraint to the development proposals and no further botanical surveys are considered necessary.

Plants – invasive non-native species and injurious weeds

- 4.4.20 A small stand of Himalayan balsam *Impatiens glandulifera*, an invasive non-native species listed on Schedule 9 of the Wildlife and Countryside Act, was present on the edge of the woodland on the southern edge of the site at TN2. This will require treatment and removal prior to site development, and recommendations with respect to this are given at section 5.4. No other schedule 9 plants were recorded.
- 4.4.21 No significant stands of injurious weed species were noted (ragwort *Senecio jacobea*, spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, curled dock *Rumex crispus*, and broad-leaved dock *Rumex obtusifolius*).

Reptiles (terrestrial)

- 4.4.22 SxBRC returned 21 records of terrestrial reptile species from within the desk-study search area, during a date range of 1991 to 2016. All four widespread species have been recorded in the vicinity; slow worm *Anguis fragilis*, common lizard *Zootoca vivipara*, grass snake *Natrix natrix* and adder *Vipera berus*. The closest record to the site was a slow worm located c.120m west in 2015.
- 4.4.23 The survey area contains good quality habitats for reptiles, including structurally diverse grassland with variable sward height and structure and bracken. Boundary hedgerow and scrub provide shelter and dispersal habitat, while nearby areas of woodland offer hibernation potential. Construction works would involve site clearance, creation of access tracks and materials storage compounds, vehicle movements and groundworks, which together could present a risk of killing or injury for reptiles if present within the survey area. Further surveys for reptiles are recommended at section 5.2.

Other protected, rare or notable species

- 4.4.24 SxBRC returned two records of hedgehog *Erinaceus europaeus* from within the desk-study search zone during a date range of 2015 to 2017. The closest to the site was located c.190m north in 2017. The survey area contains habitats suitable for this species, including grassland, woodland, scrub and hedgerow. Hedgehog is listed as a species of principal importance under the NERC Act 2006 and is undergoing a significant population decline. Measures should be taken to continue accommodating this species on the site post-development (see section 5.4).

5 Recommendations

5.1 Introduction

- 5.1.1 With regard to the objectives of this Preliminary Ecological Appraisal, recommendations are made below for further protected species survey where necessary. Preliminary recommendations are also made for the protection of important ecological features, and/or to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction with the aim of achieving an overall net gain for biodiversity. It is intended that these preliminary recommendations should be considered during future changes to the design of development proposals so that protection of important ecological features is secured and opportunities for ecological enhancement are realised. The recommendations should be reviewed following the completion of further ecological surveys.

5.2 Protected Species Surveys

- 5.2.1 The following species / groups (Table 5.1) will require additional surveys prior to refining development designs and formulating a suitable avoidance and mitigation strategy (if required).

Table 5.1: Recommendations for further ecological surveys

| # | Recommendations for further ecological survey |
|-----------|--|
| R1 | Breeding bird surveys, undertaken from April to July, if significant areas of boundary woodland, scrub and hedgerow are to be removed. |
| R2 | A repeat inspection for badger, undertaken within two/three months before any ground works begin on site. |
| R3 | Presence / absence surveys for roosting bats within trees T2 and T15, undertaken between May and August, if they are affected by proposals for the site. |
| R4 | Bat activity surveys, undertaken between April and October. |
| R5 | Presence / absence surveys for dormouse, undertaken between April and November, if significant areas of boundary woodland, scrub and hedgerow are to be removed. |
| R6 | Presence / absence surveys for reptiles, undertaken between April and September within suitable habitats on site. |
| R7 | A full Ecological Impact Assessment (EclA) of the effects of the proposed development should be carried out based on the results of recommended surveys. |

Breeding birds

- 5.2.2 Woodland, scrub, scattered trees and hedgerow provide potential breeding habitats for a range of bird species, including Birds of Conservation Concern. Loss of these habitats could

result in a detrimental effect on bird populations and, depending on the timing of clearance and demolition works, could result in an offence under the relevant legislation.

- 5.2.3 If these habitats are to be removed as part of the proposals, apart from a small loss of hedgerow and scrub in the south eastern corner to facilitate site access, a breeding bird survey is recommended and should be undertaken with reference to the Common Bird Census (CBC) methodology (Gilbert *et al.*, 1998) comprising at least three visits to the site between April and July, with all species mapped using standard British Trust for Ornithology species codes and annotations. The objective of the surveys will be to make an assessment of the breeding bird assemblage using the site, the number of territories of each species present in the survey area, and the overall importance of the site as a breeding habitat in the context of surrounding habitats which will continue to exist once the development is operational.
- 5.2.4 On each survey, early morning transects should be slowly walked around all field boundaries and across fields such that no part of the survey area is further than 50m from the transect route. Route directions should be varied between visits to avoid systematically surveying the same areas at similar times of day on each visit.

Badger

- 5.2.5 Although no badger setts or other field signs were recorded during the survey, due to the presence of suitable habitat for sett construction and foraging it is recommended that a repeat inspection should be undertaken for badgers within two/three months before ground works begin on site. This should be focused on suitable sett building habitats (dense scrub, hedgerow and woodland) and surrounding habitats within 30 meters of the site boundary, and include searching for the following evidence of badger activity: badger setts, latrines, dung pits, footprints, hairs, pathways, scratching posts or evidence of foraging.

Roosting bats

- 5.2.6 If the proposed development requires felling or arboricultural works to trees T2 and/or T15 these could result in destruction of a bat roost or killing, injury or disturbance to roosting bats, and further surveys are recommended to determine their presence or likely absence with these features. The surveys should follow current guidelines (Collins, 2016), comprising dusk emergence and/or dawn re-entry surveys, and can be carried out between May and September (May to August is the optimal period). Surveys should begin at least quarter of an hour before dusk and continue for up to 2 hours after sunset, or begin 1.5 to 2 hours before dawn and continue until at least 15mins after sunrise. The level of survey effort required is dependent on each feature's suitability for roosting bats, as follows:
- ▶ Confirmed roost / High suitability: At least three surveys visits in total, including at least one dusk emergence and at least one separate dawn re-entry survey;
 - ▶ Moderate suitability: At least one dusk emergence and a separate dawn re-entry survey;
 - ▶ Low suitability: At least one dusk emergence or dawn re-entry survey.
- 5.2.7 An alternative approach for trees is to carry out a PRF inspection by a suitably licenced tree-climber in the first instance, to determine whether there is a need for presence/absence survey.

Foraging and commuting bats

- 5.2.8 Bat activity surveys are recommended due to the good quality foraging and commuting habitats (woodland, scrub, hedgerow and tall grassland) which may be directly or indirectly affected by development proposals. Bat activity surveys should follow current guidelines (Collins (ed.), 2016), combining transect surveys with static automated monitoring and supplementary methods as appropriate, and can be carried out between April and October. Transect surveys should begin at sunset and continue for 2–3hrs, or begin 2 hours before dawn and continue at least until sunrise, or continue through the night.

Hazel dormouse

- 5.2.9 Woodland, scrub and hedgerow habitats within the survey area provide potential habitat for hazel dormouse. It is currently understood that the majority of these are to be retained and protected as part of the development proposals, apart from a small section of hedgerow and scrub in the south eastern corner of the site. However, should removal of a larger area of such habitat be required, surveys to establish the presence or likely absence of hazel dormouse are recommended.
- 5.2.10 These surveys should be undertaken by a suitably experienced and licensed ecologist following current guidelines (Bright *et al.*, 2006), comprising hazel nut searches and nest tube surveys, and can be carried out between April and November. The required survey effort will depend on the extent of the removal of suitable habitat proposed.

Reptiles

- 5.2.11 The survey area contains habitats suitable for reptiles including rough grassland, bracken, scrub, hedgerow and woodland. There is hence a risk of killing or injury to reptiles and further surveys by an experienced herpetologist are required to establish their presence or likely absence within the proposed construction footprint. The survey should involve a minimum of seven visits to the site in suitable weather conditions during the active season (broadly April to September), following current guidelines (Froglife, 1999; Gent & Gibson, 2003). Methods include visual encounter surveys (i.e. targeted transects) and searches of artificial and natural refuges.

Ecological Impact Assessment

- 5.2.12 A full Ecological Impact Assessment (EclA) of the effects of the proposed development should be carried out based on the results of recommended surveys. The EclA will include detailed advice on ecological avoidance, mitigation, enhancement and/or compensation measures. This is in line with the latest guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017a, 2017b, 2018).

5.3 Precautionary Measures

- 5.3.1 The following species/groups (Table 5.2) require specific precautionary measures to be adhered to prior to and during construction to ensure that an offence under the relevant legislation is

avoided. These measures may need to be added to or amended following completion of the protected species surveys described above.

Table 5.2: Recommended precautionary measures

| # | Recommended precautionary measures |
|------------|---|
| R8 | <p>Removal of nesting bird habitats will be undertaken outside of the bird nesting season, which runs from 1 March to 31 August. It will therefore be carried out between September and February, but should be planned and implemented in accordance with the findings of the further ecological surveys recommended above, as other protected species may still be present outside of the bird breeding season.</p> <p>Any construction works undertaken within the bird breeding season where suitable bird breeding habitat exists will require a site check for nesting birds by a suitably qualified ecologist. This will take place no more than two days prior to works commencing. This is to ensure that no disturbance to active bird nests occurs. If a nest is found it must be cordoned off and works adjacent to the nest must be delayed until such time that the chicks have fledged from the nest. This will be supervised by a suitably qualified ecologist.</p> |
| R9 | <p>If works to fell or lop the low suitability trees are required, they will be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to roosting bats. The Method Statement will specify reasonable avoidance measures including timing restrictions (works to be carried out during March-April or September-October to avoid critical maternity and hibernation periods), 'soft felling' techniques to enable bats to disperse, and will be carried out under the supervision of a suitably qualified ecologist.</p> |
| R10 | <p>Works to remove small sections of the hedgerow and scrub to facilitate site access will be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to hazel dormouse. The Method Statement will specify reasonable avoidance measures including progressive reduction of vegetation height by hand (initial cut to 15cm max during November to March, stump removal from May) to enable any dormice present to disperse into suitable surrounding areas of retained habitat, and will be carried out under the supervision of a suitably qualified ecologist.</p> |

5.4 Ecological Protection Measures

5.4.1 The following protection measures (Table 5.3) will be carried out as part of the proposed scheme, alongside any specific measures that are recommended following the protected species surveys described above.

Table 5.3: Recommended ecological protection measures

| # | Recommended ecological protection measures |
|------------|---|
| R11 | <p>Deciduous Woodland and Hedgerow priority habitat within the survey area are of high intrinsic ecological value and provide habitats suitable for a range of protected species. The majority of these habitats will be retained and protected during construction, and will also provide a focus for ecological enhancement measures (see below).</p> |
| R12 | <p>British Standard BS 5837:2012 and/or National Joint Utilities Group Guidelines (NJUG, 1995) will be followed at all times during construction when working in close proximity to trees or shrubs which are to be retained. According to NJUG Guidelines the root protection zone or</p> |

| # | Recommended ecological protection measures |
|------------|--|
| | precautionary area is 4x the circumference of the trunk (circumference is measured around the trunk at a height of 1.5m above ground level). The distance is measured from the centre of the trunk to the nearest part of any excavation or other work. If a separate tree survey is carried out for the proposed development, works will be undertaken in accordance with the recommendations therein. |
| R13 | A suitably qualified contractor will be appointed to remove the stand of Himalayan balsam close to the southern boundary of the survey area, prior to any works commencing in this part of the site. It is recommended that early preventative measures are undertaken to avoid the infestation spreading further into the developable area or onto neighbouring properties. |
| R14 | The use of external lighting will be avoided or reduced to the minimum required for its intended purpose, during both construction and operation. This will be of benefit to nocturnal species e.g. bats. Where external lighting is to be provided, it will be low-level, directional lighting with minimal spill and glare, and consideration will be given to reduced hours of operation and/or a movement responsive system of control. Use narrow-spectrum bulbs and light sources that emit minimal UV light, avoiding white and blue wavelengths of the spectrum. Use glass lantern covers instead of plastic to filter UV light. Lighting will not be directed towards the boundary woodland, scrub or hedgerow. |
| R15 | To enable continued dispersal of hedgehogs (which require large territory sizes) and other small mammals across the site and within the local area following development, small access gaps to measure c.13x13cm are recommended to be provisioned at the base of all new fence boundaries. These will allow easy passage for small mammals to continue foraging in the area while still being small enough to contain pets. |
| R16 | All excavations left overnight will either be covered over, or provided with a ramp to enable easy escape of badgers, hedgehogs, small mammals, amphibians and other fauna, and inspected each morning prior to recommencement. Open pipework greater than 150mm outside diameter will be blanked off at the end of each working day. |
| R17 | Where fox dens or rabbit warrens are to be damaged or destroyed as part of the proposed works, this will be done in accordance with the Mammals Act 1996 by a registered pest control company. |

5.5 Recommendations for Biodiversity Net Gain

- 5.5.1 The following ecological enhancements (Table 5.4) should be considered for the site to achieve an overall net gain for biodiversity in line with the requirements of local and national policy and guidance, but should be reviewed and specified further following the completion of recommended protected species surveys.

Table 5.4: Preliminary recommendations for biodiversity net gain

| # | Preliminary recommendations for biodiversity net gain |
|------------|--|
| R18 | The woodland to be retained around the boundary of the site outside of the developable area will be enhanced through a more active management regime, for example through carefully targeted coppicing of shrubs and younger trees. This will increase light penetration to benefit the ground flora as well as a range of dependent invertebrate species. |

| # | Preliminary recommendations for biodiversity net gain |
|------------|--|
| R19 | New green spaces will be sown with a native wildflower and grass seed mix (i.e. wildflower meadow) to increase botanical richness above that currently present. This will be particularly targeted towards retained habitat features such as woodland, scrub and hedgerow, but will also be extended to public realm areas such as open spaces and road verges. The wildflower meadow treatment could include tussock-forming grass species (such as cock's foot <i>Dactylis glomerata</i> , Yorkshire fog <i>Holcus lanatus</i> , tufted hair-grass <i>Deschampsia cespitosa</i> and false oat-grass <i>Arrhenatherum elatius</i>) to provide shelter and ecological connectivity for reptiles, amphibians and small mammals, and provide forage for invertebrates. |
| R20 | Hedgerow creation as part of the landscaping plan for the site will use a range of native shrub species of local provenance. Fruit, seed, nut and nectar-bearing species will be used preferentially when selecting species for landscape planting, so that food sources are available throughout the year (e.g. hazel <i>Corylus avellana</i> , hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , rowan <i>Sorbus aucuparia</i> and honeysuckle <i>Lonicera periclymenum</i>). If an evergreen hedge is required for landscape screening, suitable native species include holly <i>Ilex aquifolium</i> , holm oak <i>Quercus ilex</i> although both can be rather slow growing, ivy <i>Hedera helix</i> and privet <i>Ligustrum vulgare</i> . Beech <i>Fagus sylvatica</i> and hornbeam <i>Carpinus betulus</i> are also widely used as hedging plants and, although not evergreen, these will keep their brown leaves through winter if trimmed in late summer. |
| R21 | The site's landscaping plans will utilise plant species which encourage bats. The table at Appendix V lists species of plants that can provide benefit for bats either by providing scrub a food source for insects on which bats feed, or providing additional roosting opportunities (Gunnell et al., 2012). The plant species are predominantly native to Britain, but not all species will be suitable in all situations. The aim is to encourage a diverse range of invertebrate food sources and increased bat roost potential. |
| R22 | Habitat piles will be created within areas of retained rough grassland or marginal vegetation, at the edges of the site close to boundary hedgerow, woodland and scrub. These will provide additional hibernation and shelter resources for amphibians, invertebrates, reptiles, and a range of other wildlife, and egg-laying substrate for grass snakes. Hibernacula can be created by partially burying logs and stones in sheltered areas away from flood risk, and covering over with earth or turf. Breeding habitats can be created by collecting grass clippings and other prunings arising from landscape management of the site, and composting them in a secluded corner of the site. Deadwood piles can be created using arisings from site clearance to provide shelter and breeding opportunities for invertebrates, particularly saproxylic species which are dependent on deadwood. |
| R23 | <p>The value of the site for birds will be enhanced by installing a range of artificial nest boxes. These will be placed on retained mature trees within the development or at the site boundaries, or incorporated within building facades. For instance:</p> <ul style="list-style-type: none"> ▪ New buildings: nest boxes can be installed under the eaves for birds that utilise buildings for nesting, e.g. house martin <i>Delichon urbica</i>, house sparrow <i>Passer domesticus</i>, swallow <i>Hirundo rustica</i> and swift <i>Apus apus</i>. These species are of principal importance, of conservation concern and/or are notable in Sussex. ▪ Trees: nest boxes with entrance holes suitable for tit species, woodpeckers and nuthatches, and open-fronted boxes suitable for spotted flycatcher <i>Muscicapa striata</i> or song thrush <i>Turdus philomelos</i>, and treecreeper <i>Certhia familiaris</i> boxes. |
| R24 | The value of the site for bats will be enhanced by installing a range of artificial roost boxes. |

| # | Preliminary recommendations for biodiversity net gain |
|---|--|
| | <p>These will be placed on retained mature trees within the development or at the site boundaries, or incorporated within building facades. Boxes suitable for a range of species should be used, for instance:</p> <ul style="list-style-type: none"> ▪ New buildings: integral bat tubes can be installed within buildings which face vegetated areas. Bat tubes can be incorporated into the design of the building so that only the access holes are visible from the exterior of the building. The Schwegler 1FR or 2FR Bat Tube is designed to meet the characteristic requirements of the types of bats that inhabit buildings such as pipistrelles <i>Pipistrellus spp.</i> or serotines <i>Eptesicus serotinus</i>. It is designed to be installed on the external walls of buildings, either flush or beneath a rendered surface. ▪ Pipistrelles: bat boxes suitable to install on mature trees either within or at the edges of the development include the Schwegler 1FF Flat Bat Box, or other manufacturer's equivalent. ▪ Noctules <i>Nyctalus spp.</i> and brown long eared bats <i>Plecotus auritus</i>: bat boxes suitable to install on mature trees either within or at the edges of the development include the Schwegler 2F General Purpose Bat Box or the 2FN Woodland Bat Box, or other manufacturer's equivalent. Bat boxes should ideally be located south-facing (between south-east and south-west) and above 4m from ground level. They should be installed facing vegetation features such as mature hedgerows or trees, but with a clear line of flight for bats exiting the roost, and away from sources of artificial light. |

6 Summary and Conclusions

6.1 Introduction

- 6.1.1 A Preliminary Ecological Appraisal was undertaken for the site of a proposed residential development at Rogers Farm, Ditchling Road, Haywards Heath, West Sussex. The report was prepared to establish the site's suitability for development to inform the design process for the proposal, record the ecological baseline and identify key ecological features within and around the proposal site.

6.2 Results

- 6.2.1 There are no designated wildlife sites within the 1km desk study search area. There are records of a range of protected or notable species in the locality, including amphibians, birds, invertebrates, terrestrial mammals, flowering plants and terrestrial reptiles, together with the following priority habitats: Deciduous Woodland, including Ancient Woodland and Ghyll Woodland, and Open Water.
- 6.2.2 The survey area lies to the south of the town of Haywards Heath in the Mid Sussex district of West Sussex. The site comprises c.1.3ha of land currently formed of a poor semi-improved grassland field with a small area of bracken and boundary woodland, scrub and hedgerow. The site is bounded to the east by the B2112 Ditchling Road and to the north by recent residential development forming part of the southern edge of the built-up area of Haywards Heath. To the south and west it is bounded by grassland fields and isolated residential properties. The wider landscape comprises a mosaic of grassland and arable fields, mostly set within a network of hedgerows, as well as woodland, although the built-up area of Haywards Heath lies to the north. The nearest pond is approximately 500 metres from the site.

6.3 Evaluation

- 6.3.1 Table 6.1 presents a summary of ecological constraints and opportunities identified within the survey area.

Table 6.1: Summary of ecological constraints and opportunities

| Feature | Detail |
|---------------------|---|
| Constraints: | |
| Designated sites | There are no designated wildlife sites within the 1km radius desk study area. |
| Priority habitats | Deciduous Woodland and Hedgerow priority habitats are present within the survey area and are of high intrinsic ecological value and provide habitats suitable for a range of protected species, including amphibians, nesting birds, invertebrates, bats, |

| Feature | Detail |
|--------------------------------|---|
| | hazel dormouse and reptiles. It is currently understood that the majority of these habitats will be retained and protected as part of any development proposals. |
| Other habitats | The proposed development would result in permanent losses of up to c.0.77ha of poor semi-improved grassland and bracken as well as scattered trees, and a small area of scrub and tall ruderals. A short a section of hedgerow and a small area of woodland may be removed to facilitate development, depending on the extent and layout of the proposals. On the whole these areas are of relatively low ecological value and of importance at the site level only but provide habitats suitable for a number of protected species (e.g. dormice, nesting birds, badger, bats and reptiles). |
| Birds (nesting) | Possible permanent small-scale loss of nesting habitats (hedgerows and scrub). |
| Bats (roosting) | In total 18 trees were identified as having <u>low suitability</u> and two trees as having <u>moderate suitability</u> for roosting bats. It is currently understood that all these trees will be retained and protected as part of any development proposals. |
| Bats (foraging / commuting) | Direct and indirect effects on a relatively small area of high suitability habitats (taller areas of grassland, hedgerow, scrub and woodland habitats) for foraging and commuting bats, including through increases in artificial light. |
| Hazel dormouse | Possible permanent small-scale loss of hedgerow and dense scrub habitat suitable for hazel dormouse. |
| Invasive non-native plants | Himalayan balsam, a non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act, was recorded in the survey area. |
| Reptiles | Permanent losses of suitable habitats (tall grassland, bracken, scrub, woodland, hedgerow bases). |
| <u>Opportunities:</u> | |
| Priority habitats | The hedgerow and woodland priority habitats within the survey area are of high intrinsic value and can provide a focus for ecological enhancement measures. |
| Habitat creation / enhancement | Habitat creation and enhancement opportunities include woodland management, wildflower meadow planting, hedgerow creation, habitat piles and bird/bat boxes. |

6.4 Recommendations

- 6.4.1 Recommendations are made for further protected species surveys, together with preliminary recommendations for the protection of important ecological features to avoid or mitigate ecological impacts, and to deliver biodiversity net gain on site post-construction; these are summarised in Table 6.2. It is intended that these preliminary recommendations should be considered during future changes to the design of development proposals so that protection of important ecological features is secured and opportunities for ecological enhancement are realised. The recommendations should be reviewed following the completion of further ecological surveys.

Table 6.2: Summary of recommendations

| # | Summary of recommendations |
|---|--|
| | Botanical / protected species surveys |

| # | Summary of recommendations |
|---------------------------------------|--|
| R1 | Breeding bird surveys, undertaken from April to July, if significant areas of boundary woodland, scrub and hedgerow are to be removed. |
| R2 | A repeat inspection for badger, undertaken within two/three months before any ground works begin on site. |
| R3 | Presence / absence surveys for roosting bats within trees T2 and T15, undertaken between May and August, if they are affected by proposals for the site. |
| R4 | Bat activity surveys, undertaken between April and October. |
| R5 | Presence / absence surveys for dormouse, undertaken between April and November, if significant areas of boundary woodland, scrub and hedgerow are to be removed. |
| R6 | Presence / absence surveys for reptiles, undertaken between April and September within suitable habitats on site. |
| R7 | A full Ecological Impact Assessment of the effects of the proposed development should be carried out based on the results of recommended surveys. |
| Precautionary measures | |
| R8 | Removal of nesting bird habitats will be undertaken outside of the bird nesting season, which runs from 1 March to 31 August. Any construction works undertaken within the bird breeding season where suitable bird breeding habitat exists will require a site check for nesting birds by a suitably qualified ecologist. |
| R9 | If works to fell or lop the low suitability trees are required, they will be undertaken during March-April or September-October to avoid critical maternity and hibernation periods, and in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to roosting bats. |
| R10 | Works to remove smalls section of hedgerow and scrub will be undertaken in accordance with a Non-Licensed Method Statement to reduce the risk of killing/injury to hazel dormouse. |
| Ecological protection measures | |
| R11 | The majority of Deciduous Woodland and Hedgerow priority habitats will be retained and protected during construction. |
| R12 | Standard site procedures to prevent impacts on trees will be adhered to during construction. |
| R13 | A method statement will be prepared to ensure adequate control measures are adopted to prevent the spread of invasive Himalayan balsam during construction. |
| R14 | The use of external lighting will be avoided or reduced to the minimum required for its intended purpose, during both construction and operation. Lighting will not be directed towards the boundary woodland, scrub or hedgerow. |
| R15 | Small access gaps will be provided at the base of new fence boundaries to enable continued dispersal of hedgehogs and other small mammals. |
| R16 | At the end of each working day excavations will be covered over and open pipework capped to prevent entrapment of mammals, amphibians and other fauna. |
| R17 | Destruction of fox dens or rabbit warrens will be done in accordance with the Mammals Act 1996 by a registered pest control company. |
| Biodiversity net gain | |

| # | Summary of recommendations |
|------------|--|
| R18 | The retained woodland will be enhanced through targeted management. |
| R19 | New green spaces will be sown with a native wildflower and grass seed mix. |
| R20 | Hedgerow creation as part of the landscaping plan for the site will use a range of native shrub species. |
| R21 | The site's landscaping plans will utilise plant species which encourage bats by providing additional food sources or roosting opportunities. |
| R22 | Habitat piles for amphibians, invertebrates and reptiles will be created within areas of retained hedgerow, woodland and scrub. |
| R23 | The value of the site for birds will be enhanced by installing a range of artificial nest boxes onto new buildings and retained trees. |
| R24 | The value of the site for bats will be enhanced by installing a range of artificial roost boxes onto new buildings and retained trees. |

6.5 Conclusions

- 6.5.1 The majority of land proposed for development is of low to moderate ecological value. Significant constraints to development were identified including priority habitats and the potential presence of breeding birds, roosting and foraging/commuting bats, hazel dormouse and reptiles. Further ecological surveys and impact assessment are required prior to submitting a planning application, to determine the value of these features, how they are being used by protected species and to formulate a suitable mitigation strategy. Precautionary and ecological protection measures are recommended on an interim basis to enable offences under the relevant legislation to be avoided.

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Appendix I: Phase 1 Habitats Map

Please see insert.

Rogers Farm, Ditchling Road, Haywards Heath, West Sussex

-  Broadleaved semi-natural woodland
-  Dense scrub
-  Semi-improved grassland
-  Bracken
-  Species-poor hedgerow
-  Broadleaved tree
-  Target note
-  Survey area





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Ordnance Survey 0100031673

Scale: 1:1,100 Created by: AD
Date: Jul2020 Reviewed by: NP
Drawing number:
UE0387ECO-Phase1_200731








Appendix II: Target Notes

| Target Note | Photo |
|--|--|
| 1. Wet woodland |  |
| 2. Stand of Himalayan balsam on woodland/grassland interface |  |
| 2. Wet woodland |  |

Appendix III: Pond Map

Please see insert.

Rogers Farm, Ditchling Road, Haywards Heath, West Sussex

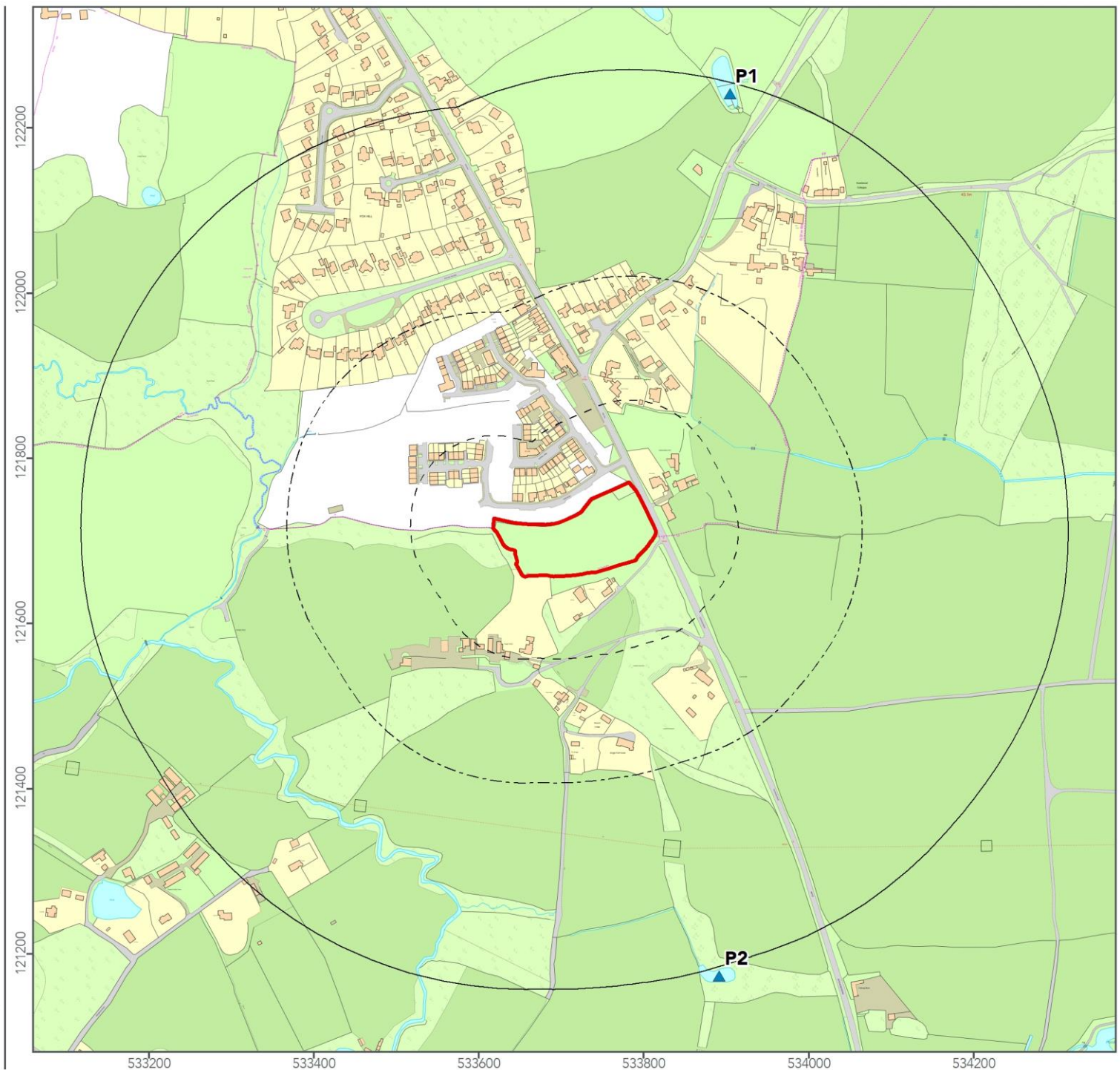
-  Survey area
-  100m buffer
-  250m buffer
-  500m buffer
-  Pond number



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Ordnance Survey 0100031673

Scale: 1:6,800
Date: Jul 2020
Drawing number: UE0387ECO-Ponds200731

Created by: AD
Reviewed by: NP



Appendix IV: Hedgerow Regulations Survey

Table VI.1: Hedgerow assessment

| | Hedgerow Number |
|--|-----------------|
| Feature | H1 |
| Adjacent to bridleway/path | No |
| <i>Populus nigra</i> , <i>Sorbus torminalis</i> , <i>Tilia cordata</i> , <i>Tilia platyphyllos</i> present | No |
| Average number of woody species within 30m sections | 3 |
| Associated bank or wall | No |
| Intact hedgerow | Yes |
| Trees present within hedge | No |
| Ditch | No |
| Connection points | 4 |
| Parallel hedge | No |
| Residential curtilage | No |
| IMPORTANT | No |

About Hedgerow Regulations assessment

If a hedgerow is classified as important under the Regulations, local planning authorities are able to prevent its removal. To be classified as important, the hedgerow should be over 30 years old and should comprise one of the following:

- ▶ At least 7 woody species/30m;
- ▶ At least 6 woody species/30m and at least 3 features such as; an associated ditch, bank or wall, standard trees, parallel hedge, or connections to woodland or pond;
- ▶ At least 6 woody species/30m and including any one of *Populus nigra*, *Sorbus torminalis*, *Tilia cordata*, *Tilia platyphyllos*;
- ▶ At least 5 woody species and at least 4 associated features;
- ▶ If adjacent to a bridleway or footpath, at least 4 woody species and at least 2 features.

The Hedgerow Regulations do not apply to hedgerows which form the curtilage of residential properties or gardens. It should also be noted that hedgerows may qualify as important for historic or archaeological reasons and this report only assesses them according to the ecological criteria set out in the Hedgerow Regulations¹.

¹ A full list of criteria can be found at: <http://www.legislation.gov.uk/ukxi/1997/1160/schedule/1/made>

Appendix V: Plant Species which encourage Bats

Please see following pages which are drawn from Gunnell *et al.* (2012).

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| Plant Species | Common name | Native | Type | Benefit | Soil | Light | Extensive green roofs | Living walls | Rain Gardens | Hedges/trees | Beds/borders |
|--------------------------------|--------------------------|--------|------|---------|-------------------------|-----------------------|-----------------------|--------------|--------------|--------------|--------------|
| <i>Acer campestre</i> | Field maple | N | T/S | C | Any | Sun / shade | | | | Y | |
| <i>Acer platanoides</i> | Norway maple | | T | S | Well drained / alkaline | Sun / shade | | | | Y | |
| <i>Acer saccharum</i> | Sugar maple | | T | S | Any | Sun / shade | | | | Y | |
| <i>Achillea millefolium</i> | Yarrow | N | HP | C,F | Well drained | Sun | Y | | | | |
| <i>Ajuga reptans</i> | Bugle | N | HP | C,F | Any | Sun / shade | Y | | | | |
| <i>Anthyllis vulneraria</i> | Kidney vetch | N | HP | F | Well drained | Sun | Y | | | | |
| <i>Aubrieta deltoidea</i> | Aubrieta | | H | F | Well drained | Sun / shade | | Y | | | |
| <i>Betula pendula</i> | Silver birch | N | T | C | Sandy / Acid | Sun | | | | Y | |
| <i>Cardamine pratensis</i> | Cuckoo-flower | N | HP | F | Moist | Sun / shade | | | | | Y |
| <i>Carpinus betulus</i> | Hornbeam | N | T | C | Clay | Sun | | | | Y | |
| <i>Centaurea nigra</i> | Common knapweed | N | HP | C,F | Dry, not acid | Sun | Y | | | | Y |
| <i>Centranthus ruber</i> | Red valerian | | HP | F | Well drained / alkaline | Sun | Y | | | | Y |
| <i>Clematis vitalba</i> | Old man's beard | N | C | F | Well drained / alkaline | Sun | | | | Y | |
| <i>Corylus avellana</i> | Hazel | N | S | C | Any dry | Sun / shade | | Y | | Y | |
| <i>Crataegus monogyna</i> | Hawthorn | N | S | S,C | Any | Sun / shade | | | | Y | |
| <i>Daucus carota</i> | Wild carrot | N | Bi | S,C,F | Any | Sun | Y | | | | Y |
| <i>Dianthus spp.</i> | Pinks | N | A-Bi | F | Well drained | Sun | Y | Y | | | Y |
| <i>Digitalis purpurea</i> | Foxglove | N | Bi | C | Well drained | Shade / partial shade | | | | Y | Y |
| <i>Erica cineria</i> | Bell heather | N | S | F | Sandy | Full sun | | | | | Y |
| <i>Erysimum cheiri</i> | Wallflower | | Bi-P | F | Well drained | Sun | | Y | | | |
| <i>Eupatorium cannabinum</i> | Hemp agrinomy | N | H | F | Moist | Sun / shade | | | | | Y |
| <i>Fagus sylvatica</i> | Beech | N | T | C,R | Well drained / alkaline | Sun / shade | | | | Y | |
| <i>Foeniculum vulgare</i> | Fennel | | H | F | Well drained | Sun | | | | | Y |
| <i>Fraxinus excelsior</i> | Common ash | N | T | C,R | Any | Sun / shade | | | | Y | |
| <i>Hebe spp.</i> | Hebe species | | S | F | Well drained | Sun / shade | | | | Y | Y |
| <i>Hedera helix</i> | Ivy | N | C | F,C | Any | Sun / shade | | Y | | Y | Y |
| <i>Hesperis matronalis</i> | Sweet rocket | | H | F | Well drained / dry | Sun / shade | | | | | Y |
| <i>Hyacinoides non-scripta</i> | Bluebell | N | B | F | Loam | Shade / partial shade | | Y | | Y | Y |
| <i>Ilex aquifolium</i> | Holly | N | T | C | Any | Sun / shade | | | | Y | |
| <i>Jasminum officinale</i> | Common jasmine | | C | F | Well drained | Sun | | Y | | | Y |
| <i>Lavandula spp.</i> | Lavander species | | S | F | Well drained / sandy | Sun | | Y | | | Y |
| <i>Linaria vulgaris</i> | Toadflax | N | HP | C | Well drained / alkaline | Sun | Y | | | | Y |
| <i>Lonicera periclymenum</i> | Honeysuckle | N | C | F | Well drained | Sun | | Y | | Y | |
| <i>Lotus corniculatus</i> | Bird's foot trefoil | N | HP | F | Well drained / dry | Sun | Y | | | | Y |
| <i>Lunaria annua</i> | Honesty | | Bi | F | Any | Sun / partial shade | Y | | | | |
| <i>Malus spp.</i> | Apple | | T | C | Any | Sun | | | | Y | |
| <i>Matthiola longipetala</i> | Night-scented stock | | A | F | Well drained/ moist | Sun | | | Y | | |
| <i>Myosotis spp.</i> | forget-me-not | N | A | F | Any | Sun | Y | Y | | | |
| <i>Nicotiana glauca</i> | Ornamental tobacco | | A | F | Well drained/ moist | Sun / partial shade | | | Y | | |
| <i>Oenothera spp.</i> | Evening primrose species | | Bi | F | Well drained/ dry | Sun | Y | | | | |
| <i>Origanum vulgare</i> | Marjoram | N | HP | F | Well drained/ dry | Sun | Y | Y | | | |
| <i>Populus alba</i> | White poplar | N | T | C | Clay loam | Sun | | | | Y | |
| <i>Primula veris</i> | Cowslip | N | HP | F | Well drained/moist | Sun / partial shade | Y | | | | |
| <i>Primula vulgaris</i> | Primrose | N | HP | F | Moist | Partil shade | Y | Y | | Y | |
| <i>Prunus avium</i> | Wild cherry | N | T | C | Any | Sun | | | | Y | |

| Plant Species | Common name | Native | Type | Benefit | Soil | Light | Extensive green roofs | Living walls | Rain Gardens | Hedges/trees | Beds/borders |
|--------------------------------|--------------------|--------|-------|---------|------------------------|-----------------------|-----------------------|--------------|--------------|--------------|--------------|
| <i>Prunus domestica</i> | Plum | | T | C | Well drained/ moist | Sun | | | | Y | |
| <i>Prunus spinosa</i> | Blackthorn | N | S | C | Any | Sun / partial shade | | | | Y | |
| <i>Quercus petraea</i> | Sessile oak | N | T | C,R | Sandy loam | Sun / shade | | | | Y | |
| <i>Quercus robur</i> | Common oak | N | T | C,R | Clay loam | Sun / shade | | | | Y | |
| <i>Rosa canina</i> | Dog rose | N | S | C | Any | Sun | | | Y | Y | |
| <i>Salix</i> spp. | Willow species | N | S | S,C | Moist | Sun / shade | | | Y | Y | |
| <i>Sambucus nigra</i> | Elder | N | T | C | Clay loam | Sun | | | | Y | |
| <i>Saponaria officinalis</i> | Soapwort | N | HP | F | Any | Sun | | | | | |
| <i>Saxifraga oppositifolia</i> | Saxifrage | N | HP | C | Well drained | Sun | Y | Y | | | |
| <i>Scabiosa columbaria</i> | Small scabious | N | HP | F | Well drained/ alkaline | Sun | Y | | | | |
| <i>Sedum spectabile</i> | Ice plant | | HP | F | Well drained/ dry | Sun | Y | | | | |
| <i>Silene dioecia</i> | Red campion | N | HP | F | Any | Shade / partial shade | | Y | Y | Y | |
| <i>Sorbus aucuparia</i> | Rowan | N | T | C | Well drained | Sun | | | | Y | |
| <i>Stachys lanata</i> | Lamb's ears | | HP | F | Well drained/dry | Sun | Y | | | | |
| <i>Symphotrichum</i> spp. | Michaelmas daisies | | HP | F | Any | Sun | | | | | |
| <i>Tegetes patula</i> | French marigold | | A | F | Well drained/moist | Sun | | | | | |
| <i>Thymus serpyllum</i> | Creeping thyme | N | HP/S | F | Well drained/dry | Sun | Y | Y | | | |
| <i>Tilia x europaea</i> | Common lime | | Type | C | Any | Sun / shade | | | | Y | |
| <i>Trifolium</i> spp. | Clover species | N | HP | F | Any | Sun | Y | | | | |
| <i>Valeriana</i> spp. | Valerian species | N | HP | F | Moist | Sun / partial shade | | | Y | | |
| <i>Verbascum</i> spp. | Mulleins | N | Bi,HP | C | Well drained | Sun | Y | | | | |
| <i>Verbena bonariensis</i> | Verbena | | HP | F | Well drained/moist | Sun | | | | | |
| <i>Viburnum lantana</i> | Wayfaring tree | N | S | C | Any | Sun / shade | | | | Y | |
| <i>Viburnum opulus</i> | Guelder rose | N | S | C | Moist | Sun / shade | | | Y | Y | |
| <i>Viola tricolor</i> | Pansy | N | A | F | Well drained/moist | | Y | Y | | | |

The table above is derived from the BCT publication Landscape and Urban Design for Bats and Biodiversity (Gunnell et al., 2012) and lists suggested plant species that can provide benefit for bats either by providing a food source for insects or roost potential. The plants listed are predominately native to Britain. The small group of non-native plants is included for their documented value for wildlife. This list has been checked against Natural England's list of invasive non-native plants.

| | | | | | | | | |
|--------------------------|----------|--------------------|--|--------------------------------|--|--|--|--|
| HP: Herbaceous perennial | T: Tree | A: Annual | Benefit: | | | | | |
| Bi: Biennial | S: Shrub | B: Bulb | C: Moth caterpillar food plant | F: Flowers attract adult moths | | | | |
| BiP: Biennial perennial | H: Herb | C: Creeper/climber | S: Sap sucking insects (e.g. whiteflies) | R: Good roost potential | | | | |

Appendix VI: Legislation and Planning Context

Legislation

General

The main legislative instruments for ecological protection in England and Wales are the Wildlife and Countryside Act 1981 (WCA; as amended), Countryside and Rights of Way Act 2000 (CROW; as amended), Natural Environment and Rural Communities Act 2006 (NERC) and the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations; as amended). The Environment Bill (reintroduced to parliament in 2020) is expected to make significant changes to the legislative provisions when enacted.

WCA 1981 consolidated and amended pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Habitats Regulations, offering protection to a wider range of species than the latter. The Act also provided for the designation and protection of nationally important conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSI). Schedules of the act list protected species of flora and fauna, as well as invasive species, and detail the possible offences that apply to these species.

The CROW Act 2000 amended and strengthened existing wildlife legislation detailed in the WCA. It placed a duty on government departments & the National Assembly for Wales to have regard for biodiversity, provided increased powers for the protection and maintenance of SSSI, and created a right of access to parts of the countryside. The Act contained lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The NERC Act 2006 consolidated and replaced aspects of earlier legislation. Section 40 of the Act places a duty upon all local authorities and public bodies in England and Wales to have regard to the purpose of conserving biodiversity in exercising all of their functions, including by restoring or enhancing habitats and species populations. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity (otherwise known as priority habitats/species as listed in the now superseded UK Biodiversity Action Plan). These lists supersede Section 74 of the CROW Act 2000. These species and habitats are a material consideration in the planning process.

The Habitats Regulations 2017 consolidate and update the Conservation of Habitats and Species Regulations 2010 and all its various amendments. The Regulations are the principal means by which Council Directive 92/43/EEC (The Habitats Directive) is transposed into English and Welsh law, and place a duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC) by the European Union member states.

The Habitats Regulations also place a duty upon the government to maintain a register of European protected sites designated as a result of Council Directive 2009/147/EC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA) and, in conjunction with SACs, form a network of sites known

as Natura 2000. The Habitats Directive introduces for the first time for protected areas, the precautionary principle; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest.

The Habitats Regulations also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively (European Protected Species (EPS)). Schedule 2 includes species such as otter and great crested newt for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade in these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations. Under the Habitats Regulations disturbance includes any activity which is likely to: impair the ability of a EPS to survive, breed, reproduce, or rear/nurture its young; impair the ability of a EPS to migrate or hibernate; or significantly affect the local distribution or abundance of the species.

When enacted, the Environment Bill is expected, among other things, to: establish an Office for Environmental Protection; require all new development requiring planning permission to achieve a net gain for biodiversity (expected to be at least 10%); amend the NERC Act duty to conserve biodiversity by explicitly adding a duty to enhance; and require local authorities to produce local nature recovery strategies.

Badgers (Meles meles)

Badgers are listed under Schedule 6 of the Wildlife and Countryside Act which grants them partial protection. This protection is extended by the Protection of Badgers Act 1992 (Badger Act) which makes it an offence to take, injure or kill a badger, interfere with a sett, sell or possess a live badger, or mark or ring a badger without a licence. Under the Act disturbance is illegal without a licence. Natural England has published guidelines to be adopted when determining whether an activity is 'disturbing' i.e. a licence is required when, for example, using heavy machinery (generally tracked vehicles) within 30m of any entrance to an active sett. Licences are not normally issued during the badger breeding season (December – June inclusive).

Bats (Chiroptera)

Bats and their roosts are fully protected by protected by the WCA and the Habitats Regulations, and seven species of bats are species of principal importance. The legislation makes it an offence, *inter alia*, to:

- ▶ Intentionally kill, injure or take a bat.
- ▶ Possess or control a live or dead bat, any part of a bat, or anything derived from a bat.
- ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.
- ▶ Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.
- ▶ Make a false statement in order to obtain a licence for bat work.

Birds

Birds are protected by the Wildlife and Countryside Act, 1981 (as amended). This legislation makes it an offence to intentionally kill, injure or take away any wild bird. It is also an offence to take, damage or destroy the nest of any wild bird while it is in use or being built or to take or destroy the egg of any wild bird. In addition, certain species are listed on Schedule 1 of the WCA (such as kingfisher *Alcedo atthis*). This makes it an additional offence to intentionally or recklessly disturb the adults while they are in and around their nest or intentionally or recklessly

disturb their dependent young. Such species are considered to be in greater need of legal protection or of high nature conservation priority.

Birds of Conservation Concern ("BoCC4) are included on Red and Amber lists (Eaton *et al.*, 2015). Birds on the Red list are those of highest conservation priority due significant and sustained population decreases and/or range contractions (e.g. house sparrow *Passer domesticus* and starling *Sturnus vulgaris*). Birds on the Amber list are the next most critical group and include species whose population/range have shown moderate declines, or which have recovered to some extent from historical decline, such as dunnoek *Prunella modularis*.

Dormouse (*Muscardinus avellanarius*)

Dormouse is fully protected by the WCA and the Habitats Regulations. The legislation makes it an offence, *inter alia*:

- ▶ Intentionally kill, injure or take a dormouse.
- ▶ Possess or control a live or dead dormouse, any part of, or anything derived from a dormouse.
- ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a dormouse uses for shelter or protection.
- ▶ Intentionally or recklessly disturb a dormouse while it is occupying a structure or place that it uses for shelter or protection.

Great crested newt (*Triturus cristatus*; GCN) (and natterjack toad *Bufo calamita*)

GCN is fully protected by the WCA and the Habitats Regulations. The legislation makes it an offence, *inter alia*, to:

- ▶ Intentionally kill, injure or take a GCN (including its eggs).
- ▶ Possess or control a live or dead GCN, any part of, or anything derived from a GCN.
- ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a GCN uses for shelter or protection.
- ▶ Intentionally or recklessly disturb a GCN while it is occupying a structure or place that it uses for shelter or protection.

Otter (*Lutra lutra*)

Otter is fully protected by the WCA and the Habitats Regulations. The legislation makes it an offence, *inter alia*, to:

- ▶ Intentionally kill, injure or take an otter.
- ▶ Possess or control a live or dead otter, any part of, or anything derived from an otter.
- ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that an otter uses for shelter or protection.
- ▶ Intentionally or recklessly disturb an otter while it is occupying a structure or place that it uses for shelter or protection.

Reptiles

The four common species (slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*) are partially protected under the WCA. They are protected, *inter alia*, against intentional killing and injuring. The handling and translocation of these reptiles does not require a licence.

Smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are fully protected by the WCA and the Habitats Regulations. The legislation makes it an offence, *inter alia*, to:

- ▶ Intentionally kill, injure or take a smooth snake or sand lizard.
- ▶ Possess or control a live or dead smooth snake or sand lizard, any part of, or anything derived from a smooth snake or sand lizard.
- ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a smooth snake or sand lizard uses for shelter or protection.
- ▶ Intentionally or recklessly disturb a smooth snake or sand lizard while it is occupying a structure or place that it uses for shelter or protection.

Water vole (*Arvicola amphibious*)

Water vole is fully protected by the WCA. The legislation makes it an offence, *inter alia*, to:

- ▶ Intentionally kill, injure or take a water vole.
- ▶ Possess or control a live or dead water vole, any part of, or anything derived from a water vole.
- ▶ Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a water vole uses for shelter or protection.
- ▶ Intentionally or recklessly disturb a water vole while it is occupying a structure or place that it uses for shelter or protection.

Weeds Act 1959 / Ragwort Control Act 2003

This legislation provides for orders to be made for control where notifiable weed species such as ragwort are said to be a problem. The act does not make it illegal to have ragwort (or other weed species) on your land, make it illegal to allow ragwort to spread, or force landowners automatically to control it. However, if DEFRA is satisfied that there are injurious weeds to which this Act applies growing upon any land it may serve upon the occupier of the land a notice in writing requiring them, within the time specified in the notice, to take such action as may be necessary to prevent the weeds from spreading.

Planning context

National Planning Policy Framework (Section 15: Conserving and enhancing the natural environment)

The National Planning Policy Framework (NPPF), published in February 2019, outlines the Government's commitment to the conservation of wildlife and natural features. It is concerned with:

- ▶ Protecting and enhancing valued landscapes, sites of biodiversity or geological conservation value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- ▶ Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- ▶ Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- ▶ Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current & future pressures;

- ▶ Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- ▶ Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The NPPF requires that local plans should “distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value...; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries”.

To protect and enhance biodiversity and geodiversity, the NPPF states that planning policies should:

- ▶ Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- ▶ Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should aim to protect and enhance biodiversity by applying the following principles:

- ▶ if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- ▶ development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- ▶ development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- ▶ development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

The following wildlife sites should be given the same protection as habitats sites:

- ▶ potential Special Protection Areas and possible Special Areas of Conservation;
- ▶ listed or proposed Ramsar sites; and
- ▶ sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development 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. The policies within the NPPF (and additional guidance contained within Circular 06/2005) are a material planning consideration.

UK/Local Biodiversity Action Plan Designations and Birds of Conservation Concern and Red Data Book Listings

Note that BAP designations and status as RSPB Birds of Conservation Concern or Red Data Book species does not offer any further legal protection, but planning authorities are required to prevent these species from being adversely affected by development in accordance with National Planning Policy and the CROW and NERC Acts. The United Kingdom Biodiversity Action Plan (UKBAP), first published in 1994 and updated in 2007, was a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UKBAP contained a list of priority habitats and species of conservation concern in the UK, and outlined biodiversity initiatives designed to enhance their conservation status.

However, as a result of devolution, and new country-level and international drivers and requirements, much of the work previously carried out by the UK BAP is now focussed at a country-level rather than a UK-level, and the UK BAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in July 2012. The UK lists of priority habitats and species nonetheless remain an important reference source and were used to draw up statutory lists of priority habitats and species in England, Northern Ireland, Scotland and Wales. The priority habitats and species correlate with those listed on Section 41 and 42 of the NERC Act.

The UKBAP required that conservation of biodiversity be addressed at a County level through the production of Local BAPs. These are targeted towards species of conservation concern characteristic of each area. In addition, a number of local authorities and large organisations have produced their own BAPs. Where they exist, Local BAP targets with regard to species and habitats are a material consideration in the planning process.

Local Planning Policy

The following policies of the Mid-Sussex District Plan 2014 – 31 (March 2018) are of relevance.

DP37: Trees, Woodland and Hedgerows – for the protection of trees, woodland and hedgerows, with particular emphasis on Ancient Woodland and aged and veteran trees.

DP38: Biodiversity – for the protection and enhancement of biodiversity, with particular emphasis on the hierarchy of designated sites, priority habitats as well as opportunities for habitat restoration and creation and the development of ecological networks.

Appendix VII: Legal and Technical Limitations

- This report has been prepared by Urban Edge Environmental Consulting Ltd (UEEC Ltd) with all reasonable skill, care and diligence within the terms of the contract made with the Client to undertake this work, and taking into account the information made available by the Client. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us.
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- The advice provided in this report does not constitute legal advice. As such, the services of lawyers may also be considered to be warranted.
- Unless otherwise stated in this report, the assessments made assume that the sites and facilities that have been considered in this report will continue to be used for their current planned purpose without significant change.
- All work carried out in preparing this report has utilised and is based upon UEEC Ltd's current professional knowledge and understanding of current relevant UK standards and codes, technology and legislation. Changes in this legislation and guidance may occur at any time in the future and may cause any conclusions to become inappropriate or incorrect. UEEC Ltd does not accept responsibility for advising the Client or other interested parties of the facts or implications of any such changes;
- Where this report presents or relies upon the findings of ecological field surveys (including habitat, botanical or protected/notable species surveys), its conclusions should not be relied upon for longer than a maximum period of two years from the date of the original field surveys. Ecological change (e.g. colonisation of a site by a protected species) can occur rapidly and this limitation is not intended to imply that a likely absence of, for instance, a protected species will persist for any period of time;
- This report has been prepared using factual information contained in maps and documents prepared by others. No responsibility can be accepted by UEEC Ltd for the accuracy of such information;
- Every effort has been made to accurately represent the location of mapped features, however, the precise locations of features should not be relied upon;
- Populations of animals and plants are often transient in nature and a single survey visit can only provide a general indication of species present on site. Time of year when the survey was carried out, weather conditions and other variables will influence the results of an ecological survey (e.g. it is possible that some flowering plant species which flower at other times of the year were not observed). Every effort has been made to accurately note indicators of presence of protected, rare and notable species within and adjacent to the site but the possibility nonetheless exists for other species to be present which were not recorded or otherwise indicated by the survey;
- Any works undertaken as a consequence of the recommendations provided within this report should be subjected to the necessary health & safety checks and full risk assessments.

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