URBAN EDGE ENVIRONMENTAL CONSULTING

NATURAL PROGRESSION

Land at Burleigh Lane, Crawley Down, West Sussex

Preliminary Ecological Appraisal Report

June 2025

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Preliminary Ecological Appraisal Report

Client:	Merrow Wood	
Report No.:	UE0604_BurleighLn_PEA_1_250616	
Author: Robin Searle BSc(Hons) ACIEEM	**Proofed:** Tim Lees BA (Hons) MSc MCIEEM	**Approved:** Nick Pincombe BA(Hons) MSc CEnv MIEMA MCIEEM
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CIEEM REGISTERED PRACTICE 2025-2026

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Abbreviations

CEZ	Construction Exclusion Zone
CHS	Conservation of Habitats and Species Regulations 2017 (as amended)
EPS	European Protected Species
GCN	Great crested newt
HPI	Habitat of Principal Importance
HSI	Habitat Suitability Index
LGS	Local Geological Site
LNR	Local Nature Reserve
LWS	Local Wildlife Site
NERC	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
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
UKHab	UK Habitat Classification
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 on land at Burleigh Lane, Crawley Down, West Sussex. The report was 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 Application Site.

0.2 Results

0.2.1 There are two non-statutory sites including a Country Park and Local Wildlife Site within 2km of the site. No sites of national importance are present within 2km; and none of international importance were found to be present within the 5km 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 four Priority Habitats: Traditional Orchards, Deciduous Woodland, Ancient Woodland and Ghyll Woodland.

0.2.2 The survey area lies at the southern edge of the village of Crawley Down in the Mid Sussex District of West Sussex. The survey area comprises c.2.35ha of land, currently dominated by grasslands with scrub, woodland, hedgerows and derelict buildings. The survey area is bounded to the north, east and west by mature hedgerow and residential properties, and to the south by mature hedgerow and agricultural land. The wider landscape is characterised by a patchwork of arable land and pasture with a network of drainage ditches, scattered ponds, hedgerows with trees and woodland blocks. A total of 23 ponds are present within 500m of the survey area.

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
Constraints:	
Designated sites	None of the statutory or non-statutory wildlife sites or areas of ancient woodland within the desk-study search zone are likely to be affected by the Proposed Development, considering the size and scale of the proposal and its distance from the designated sites; the closest designation is c.518m north east (Worth Way Country Park and Local Wildlife Site).

Feature	Detail
Priority Habitats	All hedgerows (H1, H2, H3, H4) within the survey area are Priority Habitats and provide habitats suitable for a range of protected species, including amphibians, nesting birds, invertebrates, bats, and reptiles. It is currently anticipated that the hedgerows will be retained and protected during construction.
Other habitats	Permanent losses of other neutral grassland, tall ruderals and scrub across the site, depending on the extent and layout of Proposed Development. These areas are of relatively low ecological value but provide habitats suitable for a number of protected species (e.g. amphibians, nesting birds, reptiles).
Great crested newt	Possible permanent loss of suitable terrestrial habitats (other neutral grassland, tall ruderal, scrub and brash/rubble piles). No impact on aquatic habitats.
Birds (nesting)	Possible permanent loss of nesting habitats (trees, scrub, buildings).
Bats (roosting)	Buildings B5, B9 and B10 were assessed as having low suitability to support roosting bats and will be removed by the Proposed Development. A number of trees within the survey area were of a size and age such that potential roost features may be present. It is expected that some trees will be removed to facilitate the Proposed Development.
Bats (foraging / commuting)	Direct and indirect effects on moderate suitability habitats (hedgerows, lines of trees, other neutral grassland, tall ruderal and dense scrub habitats) for foraging and commuting bats, including through increases in artificial light.
Invasive non-native plants	Invasive species rhododendron was recorded in the survey area.
Reptiles	Possible permanent losses of suitable habitats (other neutral grassland, tall ruderal, scrub, hedgerow bases, brash/rubble piles).
***Opportunities*:**	
Priority Habitats	The hedgerow and mixed scrub habitats within the survey area are of high intrinsic value and can provide a focus for ecological enhancement measures.
Habitat creation	Habitat creation and enhancement opportunities include Sustainable Urban Drainage creation with biodiversity-led design , hedgerow creation, 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 enhance the ecology of the survey area post-construction; these are summarised in Table 0.2. It is intended that these 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	Ground-level tree assessment for roosting bats, to establish the potential for trees on site to support roosting bats, preferably during winter or spring.
R2	Presence / absence surveys for roosting bats within buildings B4, B5 and B10, undertaken between May and August.
Precautionary measures	
R3	An application for Hedgerow Removal notice should be made to the Local Planning Authority if any section of H4 is due to be removed.
R4	Removal of nesting bird habitats (including vegetation and buildings) 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.
R5	Vegetation clearance works will be undertaken during the hedgehog active season (broadly April to October) and in accordance with a Precautionary Working Method Statement to reduce the risk of killing/injury to hedgehog.
R6	Removal of hedgehog hibernation habitats will be undertaken outside of the hibernation season, which runs from November to March, inclusive. It will therefore be carried out between April and October, but should be planned and implemented in accordance with the findings of the further ecological surveys recommended above.
Ecological protection measures	
R7	As far as possible Priority Habitats will be retained and protected during construction, and provide a focus for ecological enhancement measures.
R8	Construction works will avoid tree removal or disturbance to mixed scrub habitat.
R9	Standard site procedures to prevent impacts on trees will be adhered to during construction.
R10	A method statement will be prepared to ensure adequate control measures are adopted to prevent the spread of invasive during construction.
R11	Construction works (including demolition, ground works and vegetation clearance) will be carried out in accordance with a Construction Environmental Management Plan.
R12	The use of external lighting will be avoided or minimised to prevent impacts to nocturnal species. Lighting should not be directed towards retained trees, mixed scrub, lines of trees and hedgerows.
R13	To ensure amphibians, reptiles and other wildlife can escape from entrapment in drainage gullies, it is recommended that wildlife ladders are installed.
R14	Small access gaps will be provisioned at the base of new fence boundaries to enable continued dispersal of small mammals across the site.
R15	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.
Ecological enhancement	
R16	Green spaces will be sown with a native wildflower grassland seed mix.

#	Summary of recommendations
R17	Buffers of less intensively managed vegetation (e.g. coarse grasses and wildflowers) will be created within soft landscaped areas to maintain/enhance ecological connectivity
R18	Hedgerow creation and/or restoration will use a range of native fruit, seed, nut and nectar-bearing shrub species appropriate to the location.
R19	New wetland habitat will be created within the Proposed Development as part of the drainage strategy and to increase aquatic habitat availability
R20	The landscaping plans for the survey area will utilise plant species which encourage bats by providing additional food sources or roosting opportunities.
R21	The value of the survey area for birds will be enhanced by installing a range of artificial nest boxes in new buildings and on retained trees.
R22	The value of the survey area for bats will be enhanced by installing a range of artificial roost boxes onto new buildings and retained trees.
R23	The value of the survey area for hedgehog will be enhanced by installing hedgehog houses to quiet, sheltered locations with plenty of natural vegetative cover.

0.5 Conclusions

0.5.1 The majority of the survey area is of moderate ecological value. Constraints to the Proposed Development were identified including Priority Habitats and the potential presence of great crested newt, nesting birds, roosting bats, foraging and commuting bats, invasive plants and reptiles. Further ecological surveys and impact assessment have been undertaken and are reported separately, to determine the value of the site for these species and to formulate a suitable mitigation strategy.

1 Introduction

1.1 Purpose of this Report

1.1.1 This report presents a Preliminary Ecological Appraisal (PEA) for the site of a proposed residential development at Burleigh Lane, Crawley (Grid Reference: TQ 35046 37254). 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 Application Site.

1.1.2 As badgers *Meles meles* and their setts can suffer from persecution, all information relating to badger at the survey area is contained within a separate confidential report (UEEC, 2023a).

1.2 Objectives and Approach of the Study

1.2.1 The objectives of the PEA were to:

- Identify features present on or adjacent to the Application Site 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 Application Site for wildlife following construction.

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;
- An extended UK Habitat Classification (UKHab) survey identifying the main habitats on and adjacent to the Application Site, and the presence of, or potential for, protected and/or notable species; and
- A PEA of the effects of development proposals with respect to the nature conservation value of the site.

1.3 Survey Area

1.3.1 The Application Site boundary is expected to be the same as the survey area boundary.

1.3.2 The survey area lies at the southern edge of the village of Crawley Down in the Mid Sussex District of West Sussex. The survey area comprises c.2.64ha of land, currently dominated by grasslands with scrub, woodland, hedgerows and derelict buildings.

1.3.3 The survey area is bounded to the north, east and west by mature hedgerow and residential properties, and to the south by mature hedgerow and agricultural land. The extent of the Application Site and survey area are outlined on Figure 1.1.

1.3.4 The wider landscape is characterised by a patchwork of arable land and pasture with a network of drainage ditches, scattered ponds, hedgerows with trees and woodland blocks. A total of 23 ponds are present within 500m of the survey area.

1.4 Proposed Construction Activities

1.4.1 Planning consent is being sought for a residential development with vehicular and pedestrian access; car parking; open space and landscaping. The illustrative masterplan is shown in Figure 1.2.

1.5 Previous Ecological Assessment

1.5.1 Protected species surveys had previously been carried out within the survey area in 2023 and this report draws on the findings detailed within the Land at Burleigh Lane, Crawley Down Protected Species Report (UEEC, 2023).

Burleigh Lane, Crawley Down, West Sussex

Survey area

Figure 1.1: Survey area

0 150 300 N

Metres

Scale (at A4): 1:5,000 **Created by:** EM

Date: Mar 2025 **Reviewed by:** NP

Drawing number:

UE0604ECO-BurleighLane_250312:SiteLocation

URBAN EDGE ENVIRONMENTAL CONSULTING

Tel: 01273 686 766
Email: hello@ueec.co.uk
Web: www.ueec.co.uk

Figure 1.2: Proposed site layout

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 (survey area centroid plus 2km). This was extended to 5km for internationally designated sites.' where necessary. The desk study established the presence of designated sites of nature conservation interest, or records of protected/notable habitats/species within and surrounding the survey 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 PEA (compliant to British Standard BS42020:2013) is based on a survey of the site undertaken on 13 March 2025 by an experienced ecologist. Weather conditions were cool (c.1°C), with a light breeze (Beaufort Scale 2), 50% cloud cover and no precipitation.

2.2.2 Within the survey area every parcel of land was classified, recorded and mapped using standard colour codes, in accordance with the habitat types specified within the methodology for UKHab survey (UKHab Ltd, 2023). This allows rapid visual assessment of the extent and distribution of different habitat types. The UKHab System comprises a five-level Primary Habitat Hierarchy and a list of Secondary Codes. Each recorded habitat parcel is allocated a single Primary Habitat Code. Secondary Codes are associated with habitat parcels, where it is relevant to the whole parcel. UKHab guidance recommends that secondary codes are added to habitat parcels to:

- confirm the identity of habitat mosaic and complexes,
- add information about habitat origin and modifications; and
- add information on environmental context, management and land use in a consistent manner.

2.2.3 The divergence from this methodology is in relation to individual trees, whereby these features are recorded and mapped separately from the baseline habitat that they sit within; and hedgerows / line of trees which follow the classification methodology outlined within *The Statutory Biodiversity Metric User Guide* (Natural England, 2024).

2.2.4 No Minimum Mapping Unit (MMU) has been applied to the survey area and professional judgement has been used to define notable habitat parcels. Target notes were used to provide supplementary information on features which are of particular interest, significant to specific

construction proposals, too small to map or to provide additional details, for example relating to species composition and structure.

2.2.5 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* (Collins, J. (ed.), 2023). 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

2.2.6 The buffer zone for the desk study was set at 2km from the centre of the survey area (5km for international sites) – a distance within which any notable ecological features are likely to be affected by the Proposed Development would be identified.

2.2.7 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 Application Site and to place the survey area in its ecological context.

Evaluation criteria

2.2.8 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).

2.2.9 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 Hedgerow Regulations Survey

2.3.1 If a hedgerow is classified as important under the Hedgerow Regulations 1997, 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 black poplar *Populus nigra*, wild service tree *Sorbus torminalis*, small-leaved lime *Tilia cordata*, large-leaved lime *Tilia platyphyllos*;
- At least 5 woody species and at least 4 associated features; and
- If adjacent to a bridleway or footpath, at least 4 woody species and at least 2 features.

2.3.2 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 Regulations (HMSO, 1997).

2.4 Habitat Suitability Index

2.4.1 The Habitat Suitability Index (HSI; Oldham et al, 2000) is a tool used to assess ponds on the basis of their suitability to support breeding great crested newt *Triturus cristatus*. The HSI incorporates ten suitability indices which are considered to affect great crested newt distribution. These are:

- Location (in Britain);
- Pond area;
- Desiccation rate (years out of ten that pond dries);
- Water quality (subjective assessment);
- Percentage of pond shaded (% of pond margin shaded 1m from the bank);
- Number of waterfowl;
- Fish population (subjective assessment);
- Number of ponds within 1km;
- Terrestrial habitat quality; and
- Percentage macrophyte cover.

2.4.2 The results of the HSI calculation can then be compared to categorised HSI scores used by the National Amphibian and Reptile Recording Scheme (Oldham et al, 2000) to identify the probability of a pond supporting great crested newt, as detailed in Table 2.1.

Table 2.1: Habitat quality of a pond for great crested newt in relation to HSI score

Habitat Quality	HSI Score
Poor	Below 0.5
Below Average	0.5 – 0.59
Average	0.6 – 0.69
Good	0.7 – 0.79

Habitat Quality	HSI Score
Exceptional	Above 0.8

2.4.3 The HSI gives an indication of whether a pond is suitable for breeding great crested newts, however, it should be noted that a low score does not preclude the possibility that great crested newt are using the pond. A survey of ponds carried out to test the HSI (ARG UK, 2010) found that 20% of ponds which were scored as 'below average' still contained great crested newts, although this increased to an occupation rate of 93% for those ponds scored as 'excellent'. Another important consideration when using the HSI is that pond scores can vary at different times of year, for example, if emergent vegetation is not present (and therefore under recorded) at the time of the HSI assessment.

2.5 Daytime Bat Walkover

2.5.1 Buildings and trees within / adjacent to the survey area were subject to an external and where possible internal 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 structure / tree for roosting bats was classified with reference to Table 2.2 and Table 2.3.

Preliminary Roost Assessment

2.5.2 External building inspections from ground-level focused on access points and potential roosting features (PRF) such as lifted lead flashing, broken, lifted or missing roof or ridge tiles, cracks in the render or gaps between exterior cladding and weatherboards, soffits or fascias. The internal inspection included a search for live animals and other signs that give an indication of past or present occupancy. In the case of bats, typical indicators include droppings (which are characteristic and are often indicative of species), signs of fur oil staining, urine splashing, characteristic odours, and accumulations of discarded prey remains. It also assessed the overall suitability of the structure for roosting bats focusing particularly on the interior roof spaces and cellars (subject to safe access). 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.

Table 2.2: Potential suitability of structures for roosting bats (after Collins, J. (ed.), 2023)

Suitability	Roosting habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites 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 (i.e. unlikely to be suitable

Suitability	Roosting habitats
	for maternity and not a classic cool / stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure 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 (with respect to roost type only, such as maternity or hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure 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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool / stable hibernation site.
Confirmed roost	Bats or unequivocal evidence of bats found, i.e. bat droppings. Suitability categories are irrespective of the presence of a roost. Accordingly, if a roost is confirmed then the categorisation still stands and 'confirmed roost' should be added.

Suitability of Trees

2.5.3 The categorisation specified for buildings described above is not suitable for the classification of trees. As such, Table 2.3 provides assessment categories to inform the need for subsequent survey effort.

Table 2.3: Potential suitability of trees for roosting bats (after Collins, J. (ed.), 2023)

Suitability	Roosting habitats
None	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

2.6 Limitations

2.6.1 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.

2.6.2 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 within the survey area which were not recorded or otherwise indicated by the survey. Ornamental species are not included in botanical listings.

2.6.3 The survey reported herein was carried out in spring, prior to flowering for many botanical species. However, diagnostic vegetative characteristics are often still discernible and the timing of the survey is not considered to be a significant limitation to meeting the report objectives.

2.6.4 There were no difficulties in gaining access to habitats within the survey area and assess protected species suitability. Access to ponds within 250m were requested from local landowners, however the landowner at P1 did not respond, therefore P1 was not assessed as part of the HSI for great crested newt.

2.6.5 This report aims to provide general advice on the ecological constraints associated with development proposals for the survey area and includes recommendations for further survey where appropriate. Where impacts are likely or further ecological surveys are recommended, a more detailed Ecological Impact Assessment (EcIA) of the effects of the Proposed Development should be carried out based on the results of recommended surveys. The EcIA 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).

2.6.6 The details of this report will remain valid for a period of 18 months from the date of the survey (March 2025), after which the validity of this assessment should be reviewed to determine whether further updates are necessary (CIEEM, 2019). Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the Application Site boundary or the Proposed Development upon which this report was based.

2.6.7 See Appendix VIII for general Legal and Technical Limitations which apply to this document.

2.7 Personnel

2.7.1 The survey was carried out by Robin Searle BSc(Hons) ACIEEM, a Senior Ecologist with 11 years' professional consultancy experience in ecological field survey for a wide range of sites and development projects. Robin holds licences to survey for great crested newt (WML-CL08) and hazel dormouse (WML-CL10a). Robin was assisted on site by Zoe Benefer BSc (Hons) MSc Qualifying member of CIEEM. Zoe is an Assistant Ecologist with two seasons' survey experience and a license to survey for great crested newt (WML-CL09).

2.7.2 The report was extensively reviewed by Nick Pincombe BA(Hons) MSc CEnv MIEMA MCIEEM, Director of Urban Edge Environmental Consulting, who has over twenty 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 two non-statutory sites including a Country Park and Local Wildlife Site (LWS) within 2km of the site. No sites of international importance were found to be present within the 5km desk study search area. The information provided by SxBRC regarding these sites is presented in Table 3.1, while Figure 3.1 and Figure 3.2 show their locations in relation to the survey area.

Table 3.1: Nature conservation sites within the desk study search area

Site name	Location*	Description
Non-statutory sites		
Worth Way Country Park	c.518m north east	Worth Way Country Park consists of approximately 30ha of deciduous broadleaved woodland, acting as a wildlife corridor connecting Crawley Down and East Grinstead. The deciduous woodland has a canopy of mature ash *Fraxinus excelsior* and pedunculate oak *Quercus robur*, also with the occasional beech *Fagus sylvatica* and sycamore *Acer pseudoplatanus*. The understorey contains hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, field maple *Acer campestre* and holly *Ilex aquifolium*. The field layer vegetation is fairly species-rich, particularly in the areas of ancient woodland and includes bluebell *Hyacinthoides non-scripta*, wood anemone *Anemone nemorosa*, three-nerved sandwort *Moehringia trinervia*, wood speedwell *Veronica montana*, thin-spiked wood-sedge *Carex strigose* and wood melick *Melica uniflora*. Other habitats, including acid grassland, ponds and swamp, add further diversity to the LWS.
M17 – Worth Way LWS	c.518m north east	See description above.

* Approximate distance and bearing from the survey area

Priority Habitats

3.1.2 Priority Habitats include those listed on local Biodiversity Action Plans and Habitats of Principal Importance (HPI) listed under section 41 of the Natural Environment and Rural Communities Act 2006 (NERC). SxBRC and a search of the MAGIC database returned the following data on priority and other habitats within the desk study search area: Traditional Orchards, Deciduous Woodland, Ancient Woodland and Ghyll Woodland. None of these are shown as present within the survey area; see Figure 3.3.

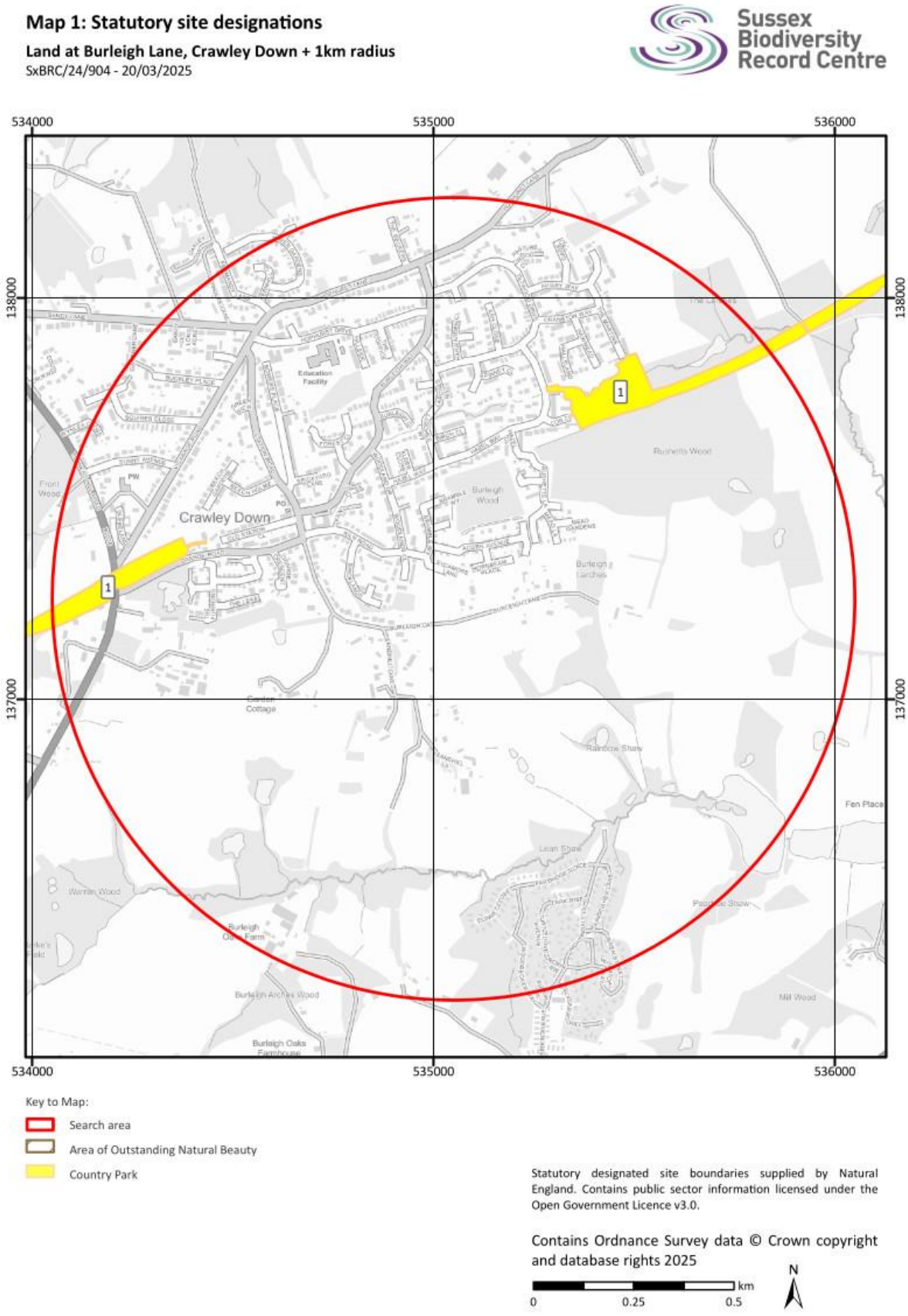

Figure 3.1: Country Parks within the desk study search area

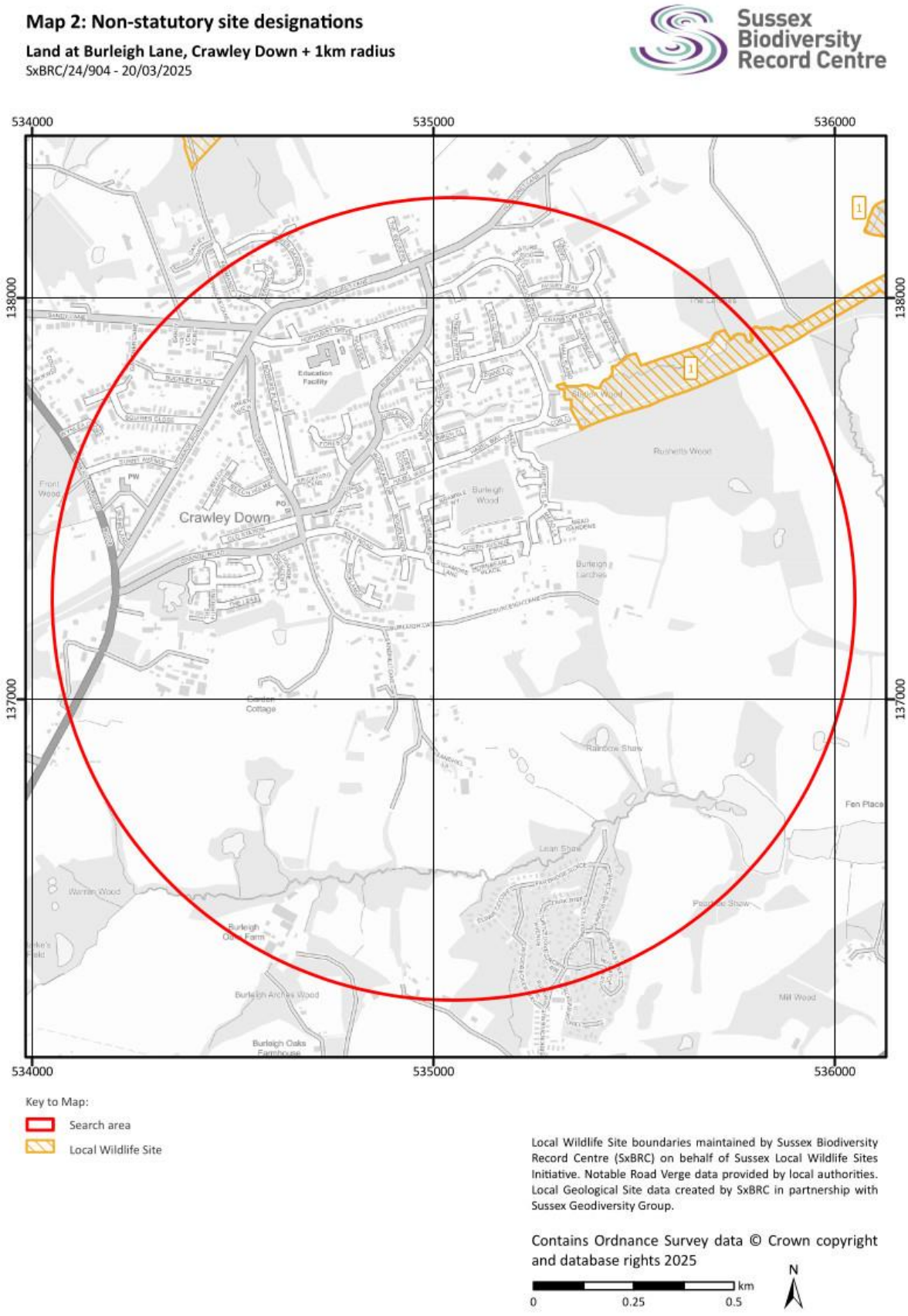

Figure 3.2: Local Wildlife Sites within the desk study search area

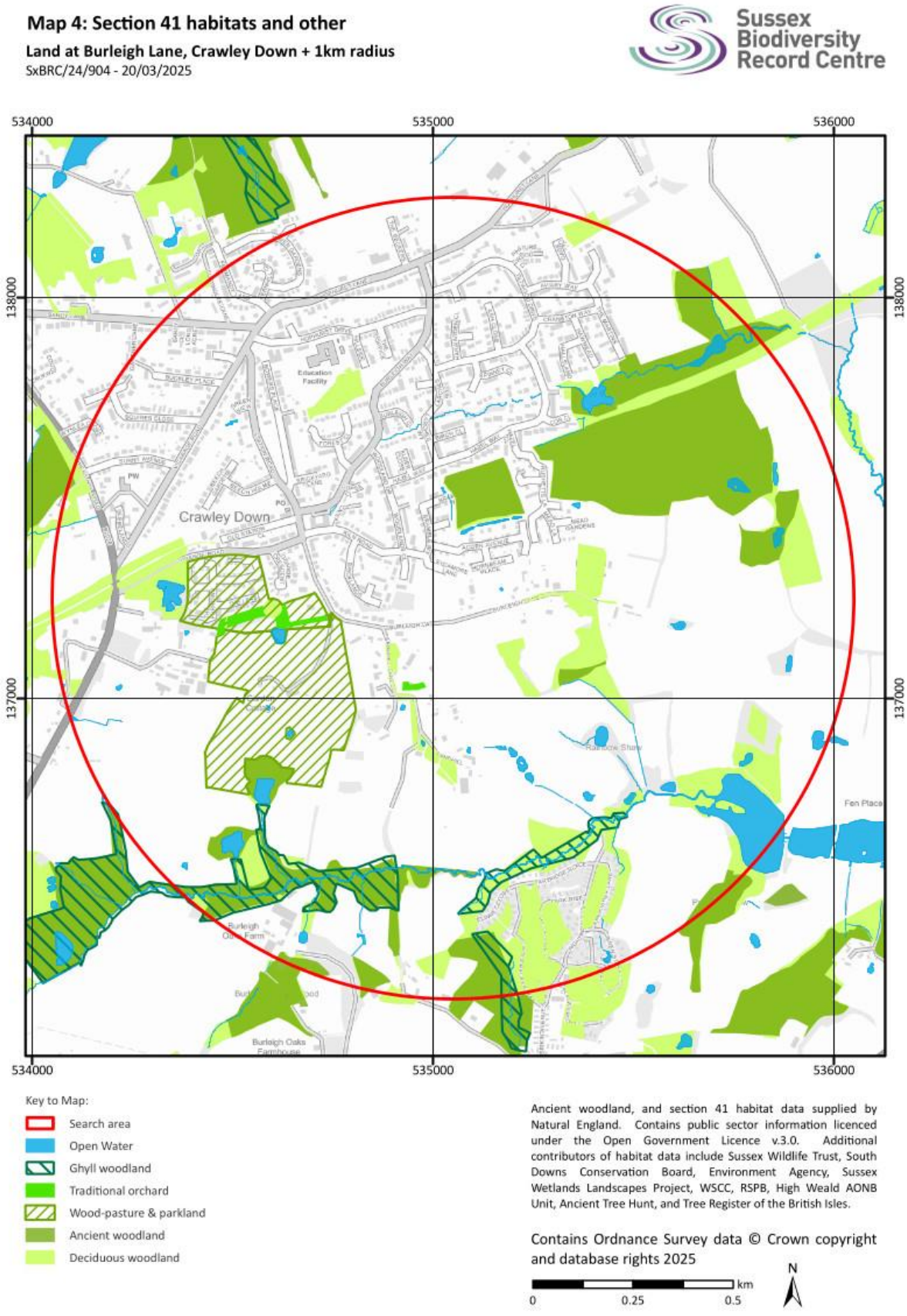

Figure 3.3: Priority Habitats within the desk study search area

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 3.2.

Table 3.2: Records of protected, rare & notable species within the desk study search area

Group	Species	Designation
Amphibians	Great crested newt	Habs.Dir.2&4, CHS Sch.2, WCA Sch.5 full, NERC s41
	Common toad *Bufo bufo*	WCA Sch.5 part, NERC s41
	Palmate newt *Lissotriton helveticus*, Smooth newt *Lissotriton vulgaris*, Common frog *Rana temporaria*	WCA Sch.5 part
Birds (note: species may appear more than once)	Kingfisher *Alcedo atthis*, Hen harrier *Circus cyaneus*, Little egret *Egretta garzetta*, Woodlark *Lullula arborea*, Red kite *Milvus milvus*, Common tern *Sterna hirundo, white stork Ciconia ciconia*	Birds Dir.1
	Kingfisher, Hen harrier, Woodlark, Hobby *Falco subbuteo*, Red kite, Firecrest *Regulus ignicapillus*, Green sandpiper *Tringa ochropus*, Redwing *Turdus iliacus*, Fieldfare *Turdus pilaris*, Barn owl *Tyto alba*	WCA Sch.1
	Lesser redpoll *Acanthis cabaret*, Skylark *Alauda arvensis*, Tree pipit *Anthus trivialis*, Hen harrier, Cuckoo *Cuculus canorus*, Yellowhammer *Emberiza citrinella*, Lesser spotted woodpecker *Dendrocopos minor*, Dunnock *Prunella modularis*, Herring gull *Larus argentatus*, Linnet *Linaria cannabina*, Grasshopper warbler *Locustella naevia*, Spotted flycatcher *Muscicapa striata*, Curlew *Numenius arquata*, House sparrow *Passer domesticus*, Tree sparrow *Passer montanus*, Marsh tit *Poecile palustris*, Bullfinch *Pyrrhula pyrrhula*, Turtle dove *Streptopelia turtur*, Starling *Sturnus vulgaris*, Song thrush *Turdus philomelos*, Lapwing *Vanellus vanellus*	NERC s41
	Skylark, Tree pipit, Hen harrier, Cuckoo, Lesser spotted woodpecker, Yellowhammer, Herring gull, Linnet, Grasshopper warbler, Spotted flycatcher, Curlew, , House sparrow, Tree sparrow, Marsh, Turtle dove, , Starling, , Fieldfare, , Mistle thrush *Turdus viscivorus*, Lapwing, Swift *Apus apus*, House Martin *Delichon urbicum*, Greenfinch *Chloris chloris*, Red kite	RL
	Greylag goose *Anser anser*, Shoveler *Anas clypeata*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Meadow pipit *Anthus pratensis*, Gadwall *Anas strepera*, Black-headed gull *Chroicocephalus ridibundus*, Stock dove *Columba oenas*, Kestrel *Falco tinnunculus*, Lesser black-backed gull *Larus fuscus*, Dunnock, Willow warbler *Phylloscopus trochilus*, Bullfinch, Common tern, Tawny owl *Strix aluco*, Green sandpiper, Wood pigeon *Columba palumbus*, Moorhen *Gallinula chloropus*, Rook *Corvus frugilegus*, Common whitethroat *Curruca communis*, Wren *Troglodytes troglodytes*, Grey wagtail *Motacilla cinerea*, sparrowhawk Accipiter nisus, greater black-backed larus marinus, Common gull Larus canus, redwing, song thrush	AL

Group	Species	Designation
Invertebrates	Purple emperor *Apatura iris*	WCA Sch.5 part
	White admiral *Limenitis camilla*, Minor shoulder-knot *Brachylomia viminalis*, Rustic *Hoplodrina blanda*, Dot moth *Melanchra persicariae*, White ermine *Spilosoma lubricipeda*, Buff ermine *Spilosoma lutea*.	NERC s41
Mammals (terrestrial)	Noctule *Nyctalus noctula*, Soprano pipistrelle *Pipistrellus pygmaeus*, Brown long-eared *Plecotus auritus*	Habs.Dir.4, CHS Sch.2, WCA Sch.5 full, NERC s41
	Serotine *Eptesicus serotinus*, Common pipistrelle *Pipistrellus pipistrellus*,	Habs.Dir.4, CHS Sch.2, WCA Sch.5 full
	Hedgehog *Erinaceus europaeus*	NERC s41
Plants	Bluebell	WCA Sch.8
	English sticky eyebright *Euphrasia officinalis subsp. anglica*, Zoned rosette *Podoscypha multizonata*	NERC s41
Reptiles (terrestrial)	Slow worm *Anguis fragilis*, Grass snake *Natrix helvetica*	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
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 5 (Stanbury *et al.*, 2021))

3.2 Habitats

3.2.1 The following UKHab habitats were identified within or adjacent to the survey area and are shown on the UKHab habitats plan at Appendix I. The habitats are described below broadly in the order of their extent, and Table 3.3 provides the area / length of each habitat type recorded within the survey area.

Table 3.3: Area / Lengths of habitat types recorded within the survey area

Habitat type*	Measurement
Area habitats	
Other neutral grassland	1.86ha
Buildings	0.09ha
Mixed scrub	0.09ha
Developed land; sealed surface	0.08ha
Bramble scrub	0.08ha
Other neutral grassland; 16 (tall ruderals)	0.07ha
Suburban mosaic of developed and natural surface	0.06ha
Bracken	0.02ha

Habitat type*	Measurement
Linear habitats	
Native hedgerow; 11 (hedgerow with trees)	406.76m
Coniferous woodland; 33 (line of trees)	138.94m
Ditch	76.32m

*secondary codes listed where relevant e.g. 10 – scattered scrub

Other neutral grassland

3.2.2 The majority of the site consisted of other neutral grassland, which covered the two fields to the west and east, and occurred in more open areas of the central part of the site. The grassland was predominantly managed to a short sward (c.10cm) but varied in places, and is likely to grow taller in the summer months. Species found within the sward were frequent fescues *Fescue* spp., creeping bent *Agrostis stolonifera*, Yorkshire fog *Holcus lanatus*, occasional cock's-foot *Dactylis glomerata*, crested dog's tail *Cynosurus cristatus* and sweet vernal grass *Anthoxanthum odoratum*. Wildflowers recorded as occasional in the sward include common sorrel *Rumex acetosa*, chickweed *Stellaria media*, red dead nettle *Lamium purpureum*, and rare occurrences of marsh thistle *Cirsium palustre* and ragwort *Senecio jacobaea*. Patches of cleared bramble *Rubus fruticosus* agg. scrub were present in the site corners and boundaries where shade tolerant wildflowers were recorded including lords and ladies *Arum maculatum*, English bluebell *Hyacinthoides non-scripta* and wild daffodil *Narcissus pseudonarcissus*.

3.2.3 Tall ruderals were scattered in the waste ground area in the central part of the site, dominated by common nettle *Urtica dioica*.

Other neutral grassland in western site extent featuring a brash pile (Target Note 2, Appendix I and II) in the left of the image. View looking west.

Other neutral grassland in the central part of the site, view looking north.

Buildings

3.2.4 There are ten buildings on-site ranging from dilapidated buildings from the central part of the site including timber and metal sheds, an asbestos barn and a caravan. A single brick built building comprising two sperate residential properties (No.9 and No.11) is present in the north-west corner of the site. A full description of the buildings is located within Table 3.4.

Mixed scrub

3.2.5 Areas of mixed scrub and scattered trees are present in the north and encroaching into the grassland from the boundary hedgerows. Species recorded include holm oak *Quercus ilex*, hornbeam *Carpinus betulus*, ash *Fraxinus excelsior* hazel *Corylus avellana*, willow *Salix* sp., and Apple *Malus* sp.

Developed land; sealed surface

3.2.6 The waste ground area in the central part of the site was underlined by a concrete surface, which was in poor condition, and covered in patches by bramble scrub and tall ruderal habitat.

Bramble scrub

3.2.7 Bramble scrub was present in several areas of the site, including the waste ground area in the central part of the site, alongside the ditch running north/south in the centre of the site; and along the north-eastern site boundary.

Suburban mosaic of developed land; sealed surface

3.2.8 Areas of soft and hard landscaping were present surrounding the properties in the north-western corner of the site, comprising a mixture of tarmac, patio garden space and shortly mown modified grassland, and small ornamental trees and shrubs.

Bracken

3.2.9 A patch of recently cleared bracken *Pteridium aquilinum* was present along the southern boundary of the site.

Ditch

3.2.10 A partially wet and dry ditch ran north/south through the central part of the site. Only a small section of the southern half was wet and the remaining section further north was dried up and choked by vegetation. The wet section in the southern extent featured very shallow flowing water 5-10cm deep. The banksides were covered by tall ruderals including common nettle *Urtica dioica* and docks *Rumex* spp., to the south and bramble scrub dominated the northern section. The ditch was c.0.5m wide, with moderately steep banks (c.45°). The wet section spanned c.25m, and dry section a further c.80m.


Wet ditch in southern site extent, view looking south


Dried up ditch in northern site extent, view looking north

Rural trees

3.2.11 A total of 19 individual rural trees (outside of hedgerows) were recorded across the survey area. These occurred within the central area of the site and in the open areas of grassland, and include the following size classes:

- A total of two large and mature hybrid black poplar *Populus x canadensis* trees were recorded (60cm-90cm Diameter at breast height (DBH)) included.
- A total of three medium trees (30cm-60cm Diameter at breast height (DBH)) included semi-mature / mature specimens of ash, beech and hybrid black poplar.
- A total of 14 small specimens (7m-30cm DBH) were recorded and included young / semi-mature / mature pendunculate oak, ash, wild cherry, goat willow, apple and hybrid black poplar.

Hedgerows

3.2.12 A total of four hedgerows were recorded within the survey area. These were located at the survey area boundaries. Hedgerows are described below and full results of the Hedgerows Regulations survey carried out concurrently with this assessment is provided in Appendix V.

3.2.13 H1 was a predominantly native hedgerow with trees lining the northern site boundary to the west. Species recorded include mature pedunculate oak and sycamore, and younger specimens of hazel, silver birch and hawthorn. c10m high, c.3m wide and 65m long.

3.2.14 H2 was a native hedgerow with trees lining the northern site boundary to the east. Species recorded include mature silver birch, wild cherry and younger specimens of goat willow and blackthorn. c10m high, c.3m wide and 70m long.

3.2.15 H3 was a species-rich native hedgerow with trees which was present along western site boundary. The majority of mature trees were off-site, however a few trees and shrubs encroached into the site boundary, as well as the RPA of the off-site trees (ACD Environmental, 2025). Species recorded include pedunculate oak and wild cherry, with a shrub layer of willow, sycamore, ash,

hazel, hawthorn and wild cherry and Schedule 9 invasive plant species rhododendron *Rhododendron ponticum*. c15m high, 3m wide and 140m long.

3.2.16 H4 was a species-rich native hedgerow with trees lining the southern site boundary. A c.15m gap was present in the far western extent which comprised an area of bracken. Species recorded include mature pedunculate oak, willow, sycamore, beech, hornbeam and yew; and younger shrubs of cherry, hazel and holly. c.15m high, 5m wide, and 206m long. H4 was classified as Important under the Hedgerows Regulations 1997.

Western extent of H4, view looking south, showing gap, where bracken dominates in the middle of the photo.

Eastern extent of H4, view looking south-east

Schedule 9 invasive plant species rhododendron along H3 (Target Note 1, Appendix I and II).

H1 (western extent), view looking north


Line of Norway spruce trees to the left, and the line of Austrian pine trees in eastern boundary to the right.


H3 in the far background, view looking west.

Line of trees

3.2.17 Three distinct line of trees were found at the site:

3.2.18 A line of mature Norway spruce *Picea abies* trees ran north/south centrally through the site. The line was dominated by Norway spruce, with two pedunculate oak trees scattered amongst them. c.20m high, 3m wide and 85m long.

3.2.19 A line of mature Austrian pine trees was present along the eastern site boundary. c.18m high, 3m wide and 40m long. Further south of this was an additional line of trees consisting of Austrian pine and Leyland cypress *Cupressus x leylandii*.


Line of Leyland cypress and Austrian pine trees along eastern site boundary (southern extent)


Line of Norway spruce in background, behind the area of waste ground and dilapidated buildings in the centre.

Daytime Bat Walkover

Preliminary Roost Assessment

3.2.20 Table 3.4 provides a full assessment of the suitability of buildings on site for roosting bats.

Table 3.4: Preliminary Roost Assessment of buildings within the survey area

Preliminary Roost Assessment of buildings
B1: Timber shed
External description
Remains of former single skinned timber shed, comprising piles of timber
Internal description
n/a
Evidence of bats
n/a
Potential roost features (PRF)
n/a
Overall suitability for roosting bats
Negligible
B2: Timber shed
External description
Dilapidated single skinned timber shed with a flat plastic corrugated roof. The eastern side had completely collapsed in but the western side retained its structure.
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up materials were visible across the whole interior from the outside and no roof void was present.
Evidence of bats
None.
Potential roost features (PRF)
None.
Overall suitability for roosting bats
Negligible
B3: Timber shed
External description
Dilapidated single skinned timber shed with a flat asbestos corrugated roof. The shed was starting to collapse but still retained its structure.
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up materials were visible across the whole interior from the outside and no roof void was present.
Evidence of bats
None.

Preliminary Roost Assessment of buildings
Potential roost features (PRF)
None.
Overall suitability for roosting bats
Negligible
B4: Timber shed
External description
Collapsed single skinned timber shed with a pitched roof.
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up materials were visible across the whole interior from the outside and no roof void was present.
Evidence of bats
None.
Potential roost features (PRF)
None.
Overall suitability for roosting bats
Negligible
B5: Asbestos barn
External description
Large, single skinned asbestos barn with pitched roof. The barn was dis-used and had maintained its structure.
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up materials were visible across the whole interior from the outside and no roof void was present.
Evidence of bats
None.
Potential roost features (PRF)
There were gaps between lead flashing and asbestos roof on the northern gable end which provides suitable roosting features for bats. A patch of ivy was growing on the northern gable end which may obscure PRF's and/or provide temporary roosting features for individual bats.
Overall suitability for roosting bats
Low
B6: Static caravan
External description
Old static caravan with broken windows and in a state of disrepair.

Preliminary Roost Assessment of buildings
Internal description
The caravan was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up caravan materials were visible across the whole interior from the outside and no roof void was present.
Evidence of bats
None.
Potential roost features (PRF)
None
Overall suitability for roosting bats
Negligible
B7: Timber and metal barn
External description
Large, single skinned barn comprising a mixture of timber and corrugated metal with flat roof. The barn was disused but had maintained its structure.
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure and the interior was not visible from the outside.
Evidence of bats
None.
Potential roost features (PRF)
None
Overall suitability for roosting bats
Negligible.
B8: Metal corrugated barn
External description
Single skinned open style barn
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up materials were visible across the whole interior from the outside and no roof void was present.
Evidence of bats
None.
Potential roost features (PRF)
None.
Overall suitability for roosting bats
Negligible

Preliminary Roost Assessment of buildings
B9: Timber barn
External description
Timber barn with pitched roof and internal roof void area.
Internal description
The barn was inaccessible due to health and safety reasons surrounding the stability of the structure. However broken up materials were visible across the whole interior from the outside.
Evidence of bats
None.
Potential roost features (PRF)
The southern façade featured gaps in the timber cladding which provides a small space for roosting bats. The barn was open at the eaves, providing ingress for bats into the internal roof void. The internal roof void was not inspected due to health and safety reasons regarding the stability of the building.
Overall suitability for roosting bats
Low
B10 Residential properties 9 & 11 Woodland Close
External description
Brick-built residential property, split into two homes (Nos. 9 and 11). The brickwork was in good condition and the windows were all UPVC and tightly fitted. The roof was pitched with clay tiles in fairly good condition, with several loose in places, or featuring cracks. Hanging tiles featured on the southern gable end and on the front and rear building facades; these were all in good condition. The soffits were made from plastic and were all well sealed. No. 11 featured two levels of roofing due to an extension at the front of the property.
Internal description
No. 9 roof void was partially converted into a useable space with furnishing including carpet flooring. The side sections above the eaves were retained as empty roof void space. The roof was lined with felt sarking which was tightly sealed and in good condition. Cobwebs were present throughout the void space. Mouse droppings were found in the floor of the void. No. 11 roof void was a large space, separated by an internal brick wall. Cobwebs were spread throughout and mouse droppings were found on the floor of the space.
Evidence of bats
None.
Potential roost features (PRF)
No.9 ▸ Several loose roof tiles which could be used by individual roosting bats. These were present close to the skylight on the east aspect, including a raised ridge slightly further south of this. ▸ The southern gable end featured gaps at the intersection between the hanging tiles and soffit area which was suitable for roosting bats. No. 11 ▸ Featured several lifted tiles all in a row along the bottom row of tiles (both levels on front/western aspect of the property).

Preliminary Roost Assessment of buildings
▸ The internal roof void featured sections of loose felt where bats may find ingress, if these corresponded with gaps on the tile surface. ▸ A crack was present within the breeze block within the internal void, however this was unlikely to be used unless bats could find ingress into the space.
Overall suitability for roosting bats
Low


Building B1


Building B2


Building B3


Building B4


Building B5


Building B5


Building B5 Interior


Building B6


Building B7

Building B7 (north)

Building B7 (south)


Building B8

Building B9 (north) looking west

Building B9 (south) looking west

Building B9 (south) looking north-west

Building B10 overview, looking east at No.11.

Building B10 PRF – Loose tiles along a ridge to the left of the ventilation pipe.

Building B10 PRF – western aspect raised roof tiles.

Building B10 PRF – Small cracks in roof tiles adjacent to skylight.

Building B10 roof void of No.11

Building B10 roof void of No. 9 in the empty space above eaves.

Building B10 PRF for roosting bats in roof void at No. 11 Woodland Close.

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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 VII for a review of the legislation and planning context.

4.2 Designated Sites

4.2.1 None of the statutory or non-statutory wildlife sites or areas of ancient woodland within the desk-study search zone are likely to be affected by the Proposed Development, considering the size and scale of the proposal and its distance from the designated sites; the closest designation is c.518m north east (Worth Way Country Park and LWS).

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 2.2.8. 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	Rationale
Native hedgerow; hedgerow with trees	Local	The hedgerows within the survey area all classify as Priority Habitat and have additional intrinsic ecological value due to the mature trees they contain. The hedgerows are likely to have importance at the local scale for wildlife dispersal.
Other neutral grassland	Negligible	Common and widespread habitat; which nonetheless has value for its potential to support protected and notable species.
Other neutral grassland; tall forbs	Negligible	Common and widespread habitat with limited value to wildlife.
Buildings	Negligible	Artificial habitat with no value to wildlife.
Developed land; sealed surface	Negligible	Artificial habitat with no value to wildlife.
Suburban mosaic of developed and natural surface	Negligible	Artificial habitat of limited wildlife value.

Habitat	Evaluation	Rationale
Mixed scrub	Negligible	Common and widespread habitat of limited wildlife value.
Bramble scrub	Negligible	Common and widespread habitat of limited wildlife value.
Bracken	Negligible	Common and widespread habitat of limited wildlife value.
Coniferous woodland; line of trees	Negligible	Non-native and planted habitat of limited wildlife value.
Tree	Negligible	Common and widespread habitat which may have intrinsic ecological value
Ditch	Negligible	Common and widespread habitat of limited wildlife value

Priority Habitats

4.3.2 Priority Habitats present within the survey area or at its boundaries include all native hedgerows (H1,H2, H3,and H4).

4.3.3 All the hedgerows on site (H1-H4) were native and two (H3 and H4) were species-rich, and supported six woody species per 30m section. Hedgerow Priority 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 that 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). All hedgerows within the survey area broadly fall into this classification.

4.3.4 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*.

4.3.5 However, although detailed proposals for the site are not yet finalised, it is currently anticipated the hedgerows will be retained and protected during construction.

Other habitats

4.3.6 The Proposed Development would result in permanent losses of other neutral grassland, buildings, developed land; sealed surface, tall ruderals, scrub and scattered trees across the site, depending on the extent and layout of proposals. These areas are of relatively low ecological value and of negligible importance, but provide habitats suitable for a number of protected species (e.g. amphibians, nesting birds, reptiles).

4.4 Species

Amphibians (excluding great crested newt)

4.4.1 The survey area contains good quality terrestrial habitats for amphibians, being dominated by other neutral grassland with coarse grasses which is suitable for foraging. Boundary hedgerows, scrub and the brash pile (TN2) provide shelter, dispersal and hibernation habitat. The dilapidated

timber shed buildings provide additional shelter and hibernation habitats. However, the grassland is largely sub-optimal due to its uniform structure and short sward height, and habitats of better suitability are widely available in the surrounding area. Common amphibians are not considered to present a constraint to the Proposed Development.

Great crested newt

4.4.2 SxBRC returned 20 records of great crested newt from within the desk-study search zone, ranging from 2017 to 2024. The most recent record was located c.829m north-east of the survey area.

4.4.3 The survey area contains good quality terrestrial habitats for great crested newt, dominated by other neutral grassland with coarse grasses. The majority of grassland is uniform in structure however some variation exists around the edges and variable sward height and structure which is suitable for foraging. Boundary hedgerows, scrub and the brash pile (TN2) provide shelter, dispersal and hibernation habitat. The dilapidated timber shed buildings provide additional shelter and hibernation habitats. The survey area is linked to further areas of suitable terrestrial habitat which continue off site, particularly to the south and east where there is extensive open countryside.

4.4.4 There are nine ponds located within 250m of the site which provide potential breeding habitat for great crested newt. Urban Edge Environmental Consulting (UEEC) carried out eDNA testing in 2023 of the nine ponds within 250m of the survey area boundary that were potentially suitable for great rested newt. Ponds P21 and P22 returned a positive result for GCN eDNA, located c125m south of the survey area. As HSI surveys were not carried out previously, they were undertaken as part of this assessment and are shown in Appendix IV. Ponds are described below.

Pond 2

4.4.5 An extension of P4, 105m north of the site boundary with very similar pond conditions, high macrophyte cover with low water levels and a large amount of frogspawn was present. Similar habitats present meaning limited connectivity.

Pond 3

4.4.6 Pond 3 was dried up at the time of survey.

Pond 4

4.4.7 P4 lies 145m north-east of the site and is connected to P2 and P3 as they all form part of a separated, long ditch running to the north past the housing development north of the site, adjacent to a deciduous broadleaved woodland. This part of the ditch is very shallow, and consists of very dense, dead reedbeds. There is regularly mown grassland to the north adjacent to the woodland, which may act as a barrier to dispersal.

Pond 5

4.4.8 A relatively dry, clearly polluted poor quality ditch 205m north of the site. The ditch was surrounded by houses to the west and woodland to the east, with poor habitat in the pond's

immediate vicinity, offering few opportunities for foraging and shelter. However, there was fairly sufficient macrophyte cover and frogspawn and juvenile newts were observed in the ditch on the survey.

Pond 7

4.4.9 P7 lies 260m north-east of the survey area between an area of broadleaved deciduous woodland and a newly developed housing estate. It is an artificially created pond as a result of the recently built development.. It has few submerged plants, and therefore likely a low invertebrate diversity. A few habitats surround the pond offering opportunities for foraging and shelter, but do not completely surround the pond. In addition, the next closest pond is separated from P7 by urban development.

Pond 21

4.4.10 An artificial pond in the back of a residential garden 105m south west of the site boundary. A good quality pond with good macrophyte cover with potentially moderate invertebrate diversity. However, the surrounding garden is heavily mown, and the surrounding area presents limited connectivity to other nearby ponds (apart from P 22). Small numbers of crucian carp have also been introduced.

Pond 22

4.4.11 Very similar to pond 21. It lies 112m south west and was artificially created. Almost entirely covered by duckweed, the pond has limited connectivity and light levels (100% shade). However, surveyors were informed fish were absent from the pond.

Pond 23

4.4.12 A shallow pond/swale feature, likely created post development as part of the Sustainable Urban Drainage (SUD) plan, located 160m NE of the site boundary. It is likely to dry up annually, and was clearly polluted, with no plants, only containing a few pollution-tolerant invertebrates. The surrounding habitat was poor and offered limited opportunities for foraging and shelter.

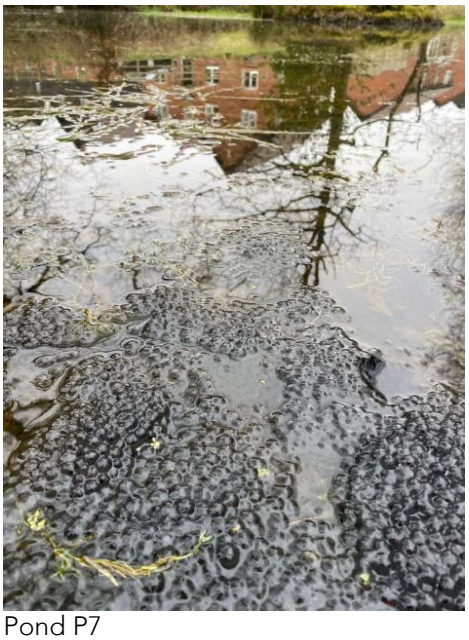

Pond P23


Pond P2


Pond P4


Pond P5


Pond P7


Pond P7


Pond P21


Pond P22

4.4.13 It is not considered necessary to update the eDNA surveys, as it is unlikely to capture any additional useful information, as presence is already confirmed. The HSI survey identified an additional pond (Pond 23 located c.100m north-east of the site, however it was very small in size (12m^2), only recently formed as part of the new development, and was classified as Poor suitability, therefore unlikely to support great crested newt at this stage. The existing surveys provide a good level of confidence that great crested newt is present within 250m of the site and the site could be important terrestrial habitat for this species.

4.4.14 Without mitigation, the Proposed Development is likely to lead to the following impacts on great crested newt and their habitats as a result of vegetation removal, site clearance, creation of access tracks and materials storage compounds, vehicle movements, groundworks and construction of buildings and hardstanding. Any GCN present during the proposed works would be at risk of killing, injury and disturbance, which would constitute an offence under the Wildlife &

Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2017 (as amended) (CHS).

4.4.15 Recommendations made within the Protected Species Report by Urban Edge (2023) should be followed in respect of the District Level Licensing Scheme.

Birds (nesting)

4.4.16 SxBRC returned records of 62 notable bird species from within the desk-study search zone during a date range of 1981 to 2023. The boundary hedgerow, trees and scrub within the survey area are suitable for nesting birds such as wren *Troglodytes troglodytes*, dunnock *Prunella modularis* (an Amber-listed bird of conservation concern (BoCC5); Stanbury *et al.*, 2021), robin *Erithacus rubecula* and chaffinch *Fringilla coelebs*, while the buildings provide some limited suitability for species such as house sparrow *Passer domesticus* (BoCC5 Red-listed). Precautionary measures for nesting birds are recommended at section 5.3.

Invertebrates

4.4.17 SxBRC returned records of 10 species of protected invertebrate from within the desk-study search zone, during a date range of 2012 to 2022, principally of Lepidoptera (moths and butterflies).

4.4.18 Hedgerow and scrub habitats, tall areas of other neutral grassland and tall ruderal are likely to provide moderate value for a common and widespread range of invertebrates. Any deadwood within the site also provides potential habitat for saproxylic species such as stag beetle *Lucanus cervus*, however these habitats will be retained on site post-development. On balance invertebrates are not considered to present a constraint to the Proposed Development and no further surveys for this group are required.

Mammals (terrestrial)

Bats

4.4.19 SxBRC returned 435 records of nine species of bat from within 2km of the survey area, during a date range of 1983 to 2017, including serotine, Daubenton's bat, whiskered, Natterer's bat, Leisler's bat, noctule, common pipistrelle, soprano pipistrelle and brown long-eared. Most of these records were of bats in flight but included eight roost sites, the closest to the survey area being located c.220m south in 2003.

4.4.20 The Preliminary Roost Assessment concluded that buildings B5, B9 and B10 were of low suitability for roosting bats, and their possible use by roosting bats cannot be ruled out. Significant alteration or demolition of these buildings could result in destruction of a bat roost or present a risk of killing, injury or disturbance if bats are present during the works. Further surveys for bats roosting in buildings are recommended at section 5.2.

4.4.21 The scattered trees within the main body of the survey area and within the boundary hedgerow and scrub habitats displayed a variety of features suitable for roosting bats. However, this was based on a UKHab walkover survey rather than a comprehensive search for potential bat roosting

features. As tree removal is required to facilitate the Proposed Development, a detailed ground-level tree assessment for bats is recommended at section 5.2.

4.4.22 The short-sward neutral grassland habitat which dominates the survey area is unlikely to host an abundant invertebrate fauna due to the lack of diversity in forb and flowering plant species and is considered to be of low suitability as foraging habitat for bats. The boundary hedgerows and lines of trees may serve as navigation routes or foraging features for bats and are of moderate suitability but it is anticipated that the majority of these will be retained and protected during the works. However, the majority of the grassland resource within the survey area would be lost under the Proposed Development and it is possible that the boundary hedgerows will experience an increase in artificial lighting following development, which may render them less suitable for foraging/commuting in future.

4.4.23 Activity surveys carried out in 2023 by UEEC found the site was predominately used by a high proportion of common and widespread bat species with variable levels of activity recorded and is considered to be of Local Importance for its bat population. It is unlikely that the suitability and use of the site has changed for foraging and commuting bats, therefore no further surveys are required and suitable mitigation outlined in the PSR (UEEC, 2023b) should be followed.

Hazel dormouse

4.4.24 No records of hazel dormouse *Muscardinus avellanarius* were returned by the SxBRC within the search area.

4.4.25 The hedgerow and scrub habitats within the survey area are dense and largely intact, providing potential habitat for dormouse. Food plants are present (including hazel, hawthorn, oak, and bramble) providing a good year-round source of food. These habitats are well connected via mature hedgerows to larger woodland blocks within the wider landscape. The woodland habitats are due to be retained and protected during construction, however, dense scrub habitats within the survey area would be removed and thus there is a risk of habitat loss, killing, injury or disturbance to dormice during the works.

4.4.26 Nest tube surveys carried out in 2023 by UEEC recorded no evidence of hazel dormouse during the survey period and provide a good level of confidence that hazel dormouse is likely to be absent from the site. It is unlikely that dormice would have colonised the site since the previous survey work due to their low dispersal rates and absence of records within 2km of the site. Therefore no further surveys are required.

Water vole and otter

4.4.27 No records of water vole *Arvicola amphibius* or otter *Lutra lutra* were returned by the SxBRC within the search area.

4.4.28 The on-site ditch did not hold sufficient water levels to support water vole or otter and there are no other riparian habitats running through or adjacent to the survey area, that are suitable to support these species. The nearest stretch of riparian habitat is a stream, running east to west c.500m south of the survey area. Water vole are unlikely to venture this distance from the river bank, and in any event the habitats with the survey area are unsuitable for both species due to

the short, frequently managed grassland sward and absence of cover features. Neither species is considered to present a constraint to Proposed Development and further surveys are not required.

Plants, native

4.4.29 SxBRC returned records of 27 protected plant species from within the desk-study search zone during a date range of 1971 to 2018.

4.4.30 Bluebell was recorded in low numbers around the site hedgerows and lines of trees. No other rare or protected species of flora were recorded within the site, but recent scrub clearance of the site may have resulted in botanical species being under recorded. Given the low numbers recorded, it is not considered that the proposals will affect the bluebell population in the local area. However, it is recommended that a buffer of vegetation is located along the hedgerow boundaries to continue accommodating this species on site post-development. Botanical species are not considered to present a constraint to the development proposals and no further surveys for this group are required.

Plants – invasive non-native species and injurious weeds

4.4.31 A few stands of rhododendron *Rhododendron ponticum,* an invasive non-native species listed on Schedule 9 of the Wildlife and Countryside Act, were noted on the western, and southern boundary at TN1. This will require treatment and removal prior to the Proposed Development, and recommendations with respect to this are given at section 5.4. No other schedule 9 plants were recorded.

4.4.32 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)

4.4.33 SxBRC returned ten records of terrestrial reptile species from within the desk-study search area, during a date range of 1993 to 2011. Three of the four widespread species have been recorded in the vicinity; slow worm, grass snake and adder. The closest record to the site was a grass snake located c.500m west in 2011.

4.4.34 The survey area contains good quality habitats for reptiles, dominated by a mosaic of neutral grassland, scrub, woodland and is surrounded by hedgerow and lines of trees which provide shelter, foraging and dispersal opportunities. Rubbish and rubble piles associated with the derelict buildings may provide additional shelter and hibernation habitat. In addition, the site benefits from good connectivity to further extensive areas of good quality reptile habitat in the local landscape, including grassland, woodland, scrub and mature hedgerow to the east and south. Additional suitable habitat is present to the north-east, but this is somewhat isolated from the survey area by residential properties. Taken together, the habitats within the survey area provide the necessary lifecycle requirements of common reptile species such as grass snake, slow worm and common lizard.

4.4.35 Presence/ likely absence surveys carried out in 2023 by UEEC using Visual Encounter Surveys and Artificial Refuge Surveys (including natural / pre-existing refuges) recorded a single adult grass snake toward the centre of the northern boundary at the northern end of the derelict buildings. The peak count of one adult grass snake indicates that the survey area supports a low population of this species. It is unlikely that additional reptile species would have colonised the site since the last survey as reptiles have relatively low dispersal rates and there has not been any significant changes to the suitability of habitats on site. No further survey works is required and recommendations for mitigation are provided in section 5.4.

Other protected, rare or notable species

4.4.36 SxBRC returned seven records of hedgehog from within the desk-study search zone during a date range of 2005 to 2018. The closest to the site was located c.670m north-west in 2012. The survey area contains habitats suitable for this species, including grassland, hedgerow and scrub. Hedgehog is listed as a species of principal importance under the NERC and is undergoing a significant population decline. Works within suitable habitat should be undertaken in accordance with a Precautionary Working Method Statement to reduce the risk of killing/injury to reptiles, as recommended at section 5.3. Measures should be taken to continue accommodating this species within the survey area post-development (see section 5.4).

5 Recommendations and Conclusions

5.1 Introduction

5.1.1 With regard to the objectives of this PEA, recommendations are made below for further botanical and/or 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 survey area for wildlife following construction. It is intended that these 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 Botanical or 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	Ground-level tree assessment for roosting bats, to establish the potential for trees on site to support roosting bats, preferably during winter or spring.
R2	Presence / absence surveys for roosting bats within buildings B4, B5 and B10, undertaken between May and August.

Roosting bats

5.2.2 A ground-level tree assessment following current guidelines (Collins, J. (ed.), 2023) is required to establish the potential for trees on site to support roosting bats, if felling or arboricultural works to facilitate development works are required within these habitats. The objective is to classify each tree as of negligible, PRF-I or PRF-M suitability for roosting bats, to inform the need for further tree-climbing or presence/absence surveys.

5.2.3 The location of each tree potentially suitable for roosting bats within the survey area should be recorded, along with the following standard data: species, life stage, diameter at breast height, form and condition, types roost feature present, their aspect, stem orientation and approximate height above ground level. Ground-level tree assessment is best carried out during winter or early spring (after the leaves have fallen and before re-growth) in order to gain adequate view of potential roost features.

5.2.4 The Proposed Development will require the demolition or alteration of all buildings on site, including B5, B9 and B10 which had low potential to support roosting bats. These works 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, J. (ed.), 2023), comprising dusk emergence surveys with night vision aids 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. The level of survey effort required is dependent on each feature's suitability for roosting bats, as follows:

- Confirmed roost / High suitability: Three separate dusk emergence surveys.
- Moderate suitability: Two separate dusk emergence surveys.
- Low suitability: One dusk emergence survey.

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
R3	It is understood that all hedgerows will be retained as part of the Proposed Development, however as H4 was classified as Important, if any section of this hedgerow requires removal at a later date, a Hedgerow Removal notice would need to be issued to the Local Planning Authority and suitable compensation for the loss provided.
R4	Removal of nesting bird habitats (including vegetation and buildings) 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. 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.
R5	Vegetation clearance works in the small areas of long grass, dense scrub and piles of old timber will be undertaken in accordance with a Precautionary Working Method Statement to reduce the risk of killing/injury to hedgehog. The Method Statement will specify reasonable avoidance measures including and timing restrictions (works to be carried out during the hedgehog active season, broadly April to October) and progressive reduction of vegetation height to displace any hedgehog present will be carried out. Where possible, rotational clearance should be employed, with scrubby patches left to provide nesting habitat. If rotational clearance is not possible, temporary piles of dead wood and brash piles can be created in undisturbed areas

#	Recommended precautionary measures
	on site for nesting. Areas of high traffic (vehicle movements), should be blocked off to prevent hedgehog access, whilst maintaining connectivity throughout the rest of the survey area.
R6	Removal of hedgehog hibernation habitats (TN2, Appendix I and II) will be undertaken outside of the hibernation season, which runs from November to March, inclusive. It will therefore be carried out between April and October, 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 hedgehog hibernation season.

5.4 Ecological Protection Measures

5.4.1 The following protection measures (Table 5.3) will be carried out as part of the Proposed Development 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
R7	The hedgerow Priority Habitats within the survey area are of intrinsic ecological value and provide habitats suitable for a range of protected species, including amphibians, nesting birds, invertebrates, bats and reptiles. This will include a buffer zone to retain ground flora, including English bluebell. These features will be retained and protected during construction, and will also provide a focus for ecological enhancement measures
R8	The area of mixed scrub and trees in the north of the survey area offers good semi-natural habitat within the survey area. Construction works avoid tree removal or disturbance to this section of scrub. The Proposed Development area has been adjusted to minimise any losses of this habitat. As a result, the majority of the construction zone will be largely sited on what is currently short-sward grassland and waste ground habitats of bramble scrub and tall ruderals.
R9	British Standard BS 5837:2012 will be followed at all times during construction when working in close proximity to trees or shrub which are to be retained. According to BS 5837:2012 the root protection area is 12x diameter of the trunk (diameter is measured around the trunk at a height of 1.5m above ground level), which will constitute the construction exclusion zone (CEZ). 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 approved arboricultural method statement.
R10	Rhododendron is present within the survey area. This species is highly invasive and it is inadvisable to have it present in or bordering woodland. A method statement will be prepared to ensure adequate control measures are adopted during construction to prevent it spreading from the site. Control measures can comprise a variety of options including: a cut stump application whereby herbicide is injected to the surface of a stump on the same day as cutting; foliar regrowth herbicide application; hand pulling of any seedlings; overall foliar herbicide application of small shrubs (below 1.3 m in height); or manual cutting.
R11	Construction works (including demolition, ground works and vegetation clearance) will be carried out in accordance with a Construction Environmental Management Plan (CEMP: Biodiversity). The CEMP will specify: potentially damaging construction activities; "biodiversity protection zones"; measures to avoid or reduce impacts during construction (including

#	Recommended ecological protection measures
	protective fences, exclusion barriers, pollution control and methodological or seasonal restrictions); location and timing of sensitive works; periods during which ecological supervision is required; and the role & responsibilities of an Ecological Clerk of Works (ECoW).
R12	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 hedgerows or retained trees and scrub.
R13	To ensure amphibians, reptiles and other wildlife can escape from entrapment in drainage gullies, it is recommended that wildlife ladders are installed. Ladders are usually constructed from a mesh material, allowing a stable footing for animals to escape. Examples include the ACO wildlife gully ladder[1].
R14	To enable continued dispersal of hedgehogs (which require large territory sizes) and other small mammals across the site and within the local area following the Proposed 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.
R15	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.

5.5 Recommendations for Ecological Enhancement

5.5.1 The following ecological enhancements (Table 5.4) should be considered to improve the value of the survey area for biodiversity after construction but should be reviewed and specified further following the completion of recommended protected species surveys.

Table 5.4: Preliminary recommendations for ecological enhancement

#	Preliminary recommendations for ecological enhancement
R16	New lawn spaces will be sown with a native wildflower grassland seed mix (e.g. wildflower meadow, flowering lawn) to increase plant species richness.
R17	Buffers of less intensively managed vegetation (e.g. coarse grasses and wildflowers, including the use of tussock-forming grass species such as cock's foot, Yorkshire fog, tufted hair-grass *Deschampsia cespitosa* and false oat-grass *Arrhenatherum elatius*) will be created within soft landscaped areas within the Proposed Development, towards the survey area boundaries and alongside hedgerows. This will help to maintain/enhance ecological connectivity through the survey area for reptiles, amphibians and small mammals, and provide forage for invertebrates.

[1] https://www.aco.co.uk/products/wildlife-gully-ladder#:~:text=ACO's%20new%20Wildlife%20Gully%20Ladder,often%20fall%20into%20road%20gullies.

#	Preliminary recommendations for ecological enhancement
R18	Hedgerow creation and/or restoration as part of the landscaping plan for the survey area will use a range of native shrub species. 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 *Corylus avellana*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, field maple *Acer campestre*, dogwood *Cornus sanguinea*, privet *Ligustrum vulgare*, spindle *Euonymus europaeus* and honeysuckle *Lonicera periclymenum*). If an evergreen hedge is required for landscape screening, suitable native species include holly *Ilex aquifolium*, yew *Taxus baccata*, although both can be rather slow growing. Beech *Fagus sylvatica* and hornbeam *Carpinus betulus* are also widely used as hedging plants and, although not evergreen, these will keep their brown leaves through winter if trimmed in late summer.
R19	New Sustainable Urban Drainage Systems (SUDS) features will be created within the Proposed Development as part of the drainage strategy and to increase habitat availability for species such as grass snake, amphibians and invertebrates such as dragonflies. Newly created wetland habitats will be profiled to incorporate a variety of depths, with shallow sloping sides providing access points for wildlife, and planted with appropriate native vegetation. Plants suitable for damp margins include; amphibious bistort *Persicaria amphibian*, marsh marigold *Caltha palustris*, reed canary grass *Phalaris arundinacea*, brooklime *Veronica beccabunga*, wild angelica *Angelica sylvestris*, purple loosestrife *Lythrum salicaria*, greater bird's-foot trefoil *Lotus uliginosus*, and gypsywort *Lycopus europaeus*. Aquatic vegetation includes; water crowfoot *Ranunculus aquatilis*, lesser spearwort *R. flammula*, water mint *Mentha aquatic*, water forget-me-not *Myosotis scorpioides* and branched bur-weed *Sparganium erectum*, all of which can be used by newts for egg laying. Drainage engineers and landscape architects will be involved in specifying the mix of species as their suitability is dependent on how frequently wetland areas will be inundated.
R20	The landscaping plans for the survey area will utilise plant species which encourage bats. The table at Appendix VI lists species of plants that can provide benefit for bats either by providing 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.
R21	The value of the survey area 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: ▪ New buildings: nest boxes can be installed under the eaves for birds that utilise buildings for nesting, e.g. house sparrow *Passer domesticus* and swift *Apus apus* (compliant to British Standard BS 42021:2022). 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 *Muscicapa striata* or song thrush *Turdus philomelos*, and treecreeper *Certhia familiaris* boxes.
R22	The value of the survey area for bats will be enhanced by installing a range of artificial roost boxes. 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: ▪ 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

#	Preliminary recommendations for ecological enhancement
	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 *Pipistrellus spp*. or serotines *Eptesicus serotinus*. 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 *Nyctalus spp*. and brown long eared bats *Plecotus auritus*: 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 on buildings should ideally be located south-facing (between south-east and south-west) and above 4m from ground level. On trees, bat boxes should ideally be located on three aspects of each tree (facing north, south-east and south-west) and at ≥5m from ground level. In both cases they 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. Installation of bat boxes will also offset any removal of PRF-I trees.
R23	The value of the survey area for hedgehog will be enhanced by installing hedgehog houses. Ready-made hedgehog homes can be purchased, but placement is key if hedgehogs are encouraged to use these resources. Hedgehog houses should be placed in a quiet, shady, sheltered, dry spots (for example, against a wall, fence or hedge), with plenty of natural cover from vegetation. Entrances should not face north or north-east to ensure any occupants are protected against cold winter winds. An entrance tunnel or dividing walls inside will help prevent access by predators. Hedgehog houses placed in public areas may be at risk of vandalism unless placed in very discrete locations and covered with natural materials, such as beneath a brash or log pile. An alternative cost effective and natural technique for a site is discrete log piles, appropriately located and which provide suitably sized openings at the base and a void inside that acts as a chamber.

5.6 Conclusions

5.6.1 The majority of the survey area is of moderate ecological value. Constraints to the Proposed Development were identified including Priority Habitats and the potential presence of great crested newt, nesting birds, roosting bats, foraging and commuting bats, invasive plants and reptiles. Further ecological surveys and impact assessment have been undertaken and are reported separately, to determine the value of the site for these species and to formulate a suitable mitigation strategy.

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Appendix I: UKHab Habitats Plan

Burleigh Lane, Crawley Down, West Sussex

- Survey area
- Bracken
- Other neutral grassland
- Other neutral grassland; tall forbs
- Bramble scrub
- Mixed scrub
- Developed land, sealed surface
- Developed land, sealed surface; building
- Suburban mosaic of developed and natural surface
- Native hedgerow with trees
- Line of trees
- Ditch
- Tree
- Target note

0 30 60

Metres

N

Scale (at A4): 1:1,300 **Created by:** EM

Date: Apr 2025 **Reviewed by:** NP

Drawing number:

UE0604ECO-BurleighLane_250423:PreDevHabitats

URBAN EDGE ENVIRONMENTAL CONSULTING

Tel: 01273 686 766
Email: hello@ueec.co.uk
Web: www.ueec.co.uk

Appendix II: Target Notes

Target Note	Photo
1. Schedule 9 (WCA, 1981) invasive plant species - *Rhododendron ponticum*	
2. Brash pile in far left of image suitable for hibernating hedgehog, reptiles and amphibians	
3. Schedule 8 (WCA, 1981) plant species- English bluebell	n/a

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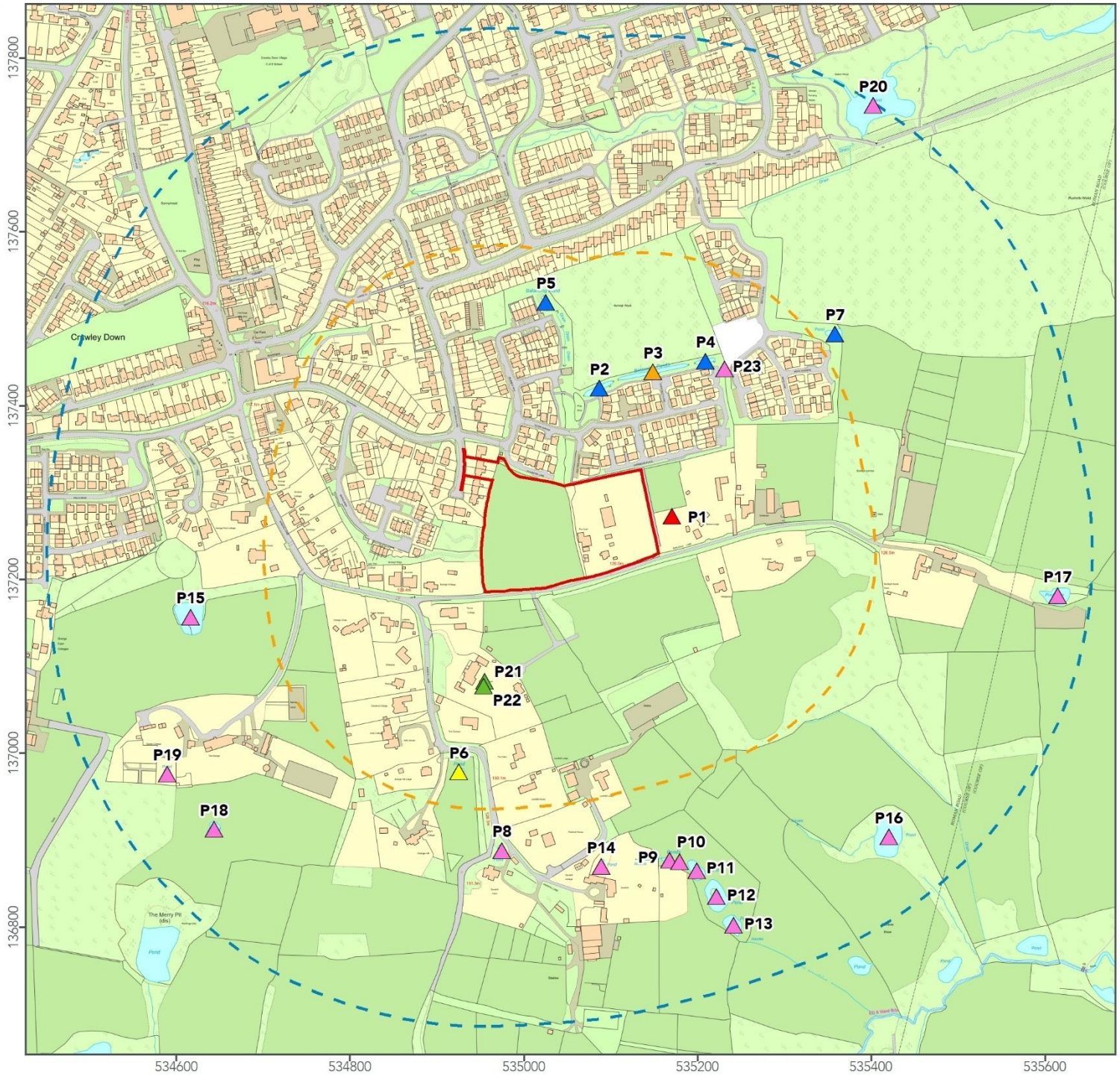
Appendix III: Pond Plan

Burleigh Lane, Crawley Down, West Sussex

- Survey area
- 250m buffer
- 500m buffer
- Dry
- Negative for GCN eDNA
- No access
- No pond present
- Positive for GCN eDNA
- Scoped out



0 175 350

Metres

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Scale (at A4): 1:6,500 **Created by:** EM

Date: May 2025 **Reviewed by:** NP

Drawing number:
UE0604ECO-BurleighLane_PSR_250516

URBAN EDGE ENVIRONMENTAL CONSULTING
Tel: 01273 686 766
Email: hello@ueec.co.uk
Web: www.ueec.co.uk

Appendix IV: Habitat Suitability Indices

HSI results for all accessible waterbodies potentially suitable for GCN within 250m of the site are shown below.

Variable	Field score	SI value	Field score	SI value	Field score	SI value
	Pond 2		***Pond 4***		***Pond 5***	
Location	A	1	A	1	A	1
Pond area (m2)	84	0.2	50	0.1	50	0.1
Pond permanence	Rarely	1	Annually	0.1	Sometimes	0.5
Water quality	Poor	0.33	Poor	0.33	Poor	0.33
% shaded 1m from bank	5	1	20	1	0	1
Fowl	Absent	1	Absent	1	Absent	1
Fish	Absent	1	Absent	1	Absent	1
Pond density (per km^2)	10+	1	10+	1	10+	1
Terrestrial habitat	Poor	0.33	Good	1	Poor	0.33
Macrophyte cover %	75	1	75	1	60	0.9
HSI value		0.68		0.56		0.59
Suitability		Average		Below average		Below average

Variable	Field score	SI value	Field score	SI value	Field score	SI value
	Pond 7		***Pond 21***		***Pond 22***	
Location	A	1	A	1	A	1
Pond area (m2)	400	0.8	9	0.01	20	0.05
Pond permanence	Never	0.9	Never	0.9	Never	0.9
Water quality	Poor	0.33	Moderate	0.67	Poor	0.33
% shaded 1m from bank	50	1	50	1	100	0.2
Fowl	Minor	0.67	Absent	1	Absent	1
Fish	Absent	1	Minor	0.33	Possible	0.67
Pond density (per km^2)	10+	1	10+	1	10+	1
Terrestrial habitat	Moderate	0.67	Poor	0.33	Poor	0.33
Macrophyte cover %	20	0.5	80	1	0	0.3
HSI value		0.75		0.48		0.43
Suitability		Good		Poor		Poor

Variable	Field score	SI value
	Pond 23	
Location	A	1
Pond area (m2)	12	0.01
Pond permanence	Annually	0.1
Water quality	Poor	0.33
% shaded 1m from bank	50%	1
Fowl	Absent	1
Fish	Absent	1
Pond density (per km^2)	10+	1
Terrestrial habitat	Poor	0.33
Macrophyte cover %	0	0.3
HSI value		0.36
Suitability		Poor

Appendix V: Hedgerow Regulations Survey

	Hedgerow Number			
Feature	**H1**	**H2**	**H3**	**H4**
Adjacent to bridleway/path	No	No	No	Yes
***Populus nigra, Sorbus torminalis, Tilia cordata, Tilia platyphyllos* present**	No	No	No	No
Average number of woody species within 30m sections	4	4	6	6
Associated bank or wall	No	No	No	No
Intact hedgerow	Yes	Yes	Yes	No
Trees present within hedge	Yes	Yes	Yes	Yes
Number of woodland species within 1m	1	1	2	2
Ditch	No	No	No	No
Connection points	One	One	One	Four
Parallel hedge	No	No	No	Yes
IMPORTANT	No	No	No	**Yes**

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Appendix VI: Plant Species Which Encourage Bats

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

Plant Species	Common name	Native	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain Gardens	Hedges/ trees	Beds/ borders
Acer campestre	Field maple	N	T/S	C	Any	Sun / shade				Y	
Acer platanoides	Norway maple		T	S	Well drained / alkaline	Sun / shade				Y	
Acer saccharum	Sugar maple		T	S	Any	Sun / shade				Y	
Achillea millefolium	Yarrow	N	HP	C,F	Well drained	Sun	Y				
Ajuga reptans	Bugle	N	HP	C,F	Any	Sun / shade	Y				
Anthyllis vulneraria	Kidney vetch	N	HP	F	Well drained	Sun	Y				
Aubrieta deltoidea	Aubrieta		H	F	Well drained	Sun / shade		Y			
Betula pendula	Silver birch	N	T	C	Sandy / Acid	Sun				Y	
Cardamine pratensis	Cuckoo-flower	N	HP	F	Moist	Sun / shade					Y
Carpinus betulus	Hornbeam	N	T	C	Clay	Sun				Y	
Centaurea nigra	Common knapweed	N	HP	C,F	Dry, not acid	Sun	Y				Y
Centranthus ruber	Red valerian		HP	F	Well drained / alkaline	Sun	Y				Y
Clematis vitalba	Old man's beard	N	C	F	Well drained / alkaline	Sun				Y	
Corylus avellana	Hazel	N	S	C	Any dry	Sun / shade		Y		Y	
Crataegus monogyna	Hawthorn	N	S	S,C	Any	Sun / shade				Y	
Daucus carota	Wild carrot	N	Bi	S,C,F	Any	Sun	Y				Y
Dianthus spp.	Pinks	N	A-Bi	F	Well drained	Sun	Y	Y			Y
Digitalis purpurea	Foxglove	N	Bi	C	Well drained	Shade / partial shade				Y	Y
Erica cinerea	Bell heather	N	S	F	Sandy	Full sun					Y
Erysimum cheiri	Wallflower		Bi-P	F	Well drained	Sun		Y			
Eupatorium cannabinum	Hemp agrimony	N	H	F	Moist	Sun / shade					Y
Fagus sylvatica	Beech	N	T	C,R	Well drained / alkaline	Sun / shade				Y	
Foeniculum vulgare	Fennel		H	F	Well drained	Sun					Y
Fraxinus excelsior	Common ash	N	T	C,R	Any	Sun / shade				Y	
Hebe spp.	Hebe species		S	F	Well drained	Sun / shade				Y	Y
Hedera helix	Ivy	N	C	F,C	Any	Sun / shade		Y		Y	Y
Hesperis matrionalis	Sweet rocket		H	F	Well drained / dry	Sun / shade					Y
Hyacinthoides non-scripta	Bluebell	N	B	F	Loam	Shade / partial shade		Y		Y	Y

Plant Species	Common name	Native	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain Gardens	Hedges/ trees	Beds/ borders
Ilex aquifolium	Holly	N	T	C	Any	Sun / shade				Y	
Jasminum officinale	Common jasmine		C	F	Well drained	Sun		Y			Y
Lavandula spp.	Lavender species		S	F	Well drained / sandy	Sun		Y			Y
Linaria vulgaris	Toadflax	N	HP	C	Well drained / alkaline	Sun	Y				Y
Lonicera periclymenum	Honeysuckle	N	C	F	Well drained	Sun		Y		Y	
Lotus corniculatus	Bird's foot trefoil	N	HP	F	Well drained / dry	Sun	Y				Y
Lunaria annua	Honesty		Bi	F	Any	Sun / partial shade	Y				
Malus spp.	Apple		T	C	Any	Sun				Y	
Matthiola longipetala	Night-scented stock		A	F	Well drained/ moist	Sun			Y		
Myosotis spp.	forget-me-not	N	A	F	Any	Sun	Y	Y			
Nicotiania alata	Ornamental tobacco		A	F	Well drained/ moist	Sun / partial shade			Y		
Oenothera spp.	Evening primrose species		Bi	F	Well drained/ dry	Sun	Y				
Origanum vulgare	Marjoram	N	HP	F	Well drained/ dry	Sun	Y	Y			
Populus alba	White poplar	N	T	C	Clay loam	Sun				Y	
Primula veris	Cowslip	N	HP	F	Well drained/moist	Sun / partial shade	Y				
Primula vulgaris	Primrose	N	HP	F	Moist	Partial shade	Y	Y		Y	
Prunus avium	Wild cherry	N	T	C	Any	Sun				Y	
Prunus domestica	Plum		T	C	Well drained/ moist	Sun				Y	
Prunus spinosa	Blackthorn	N	S	C	Any	Sun / partial shade				Y	
Quercus petraea	Sessile oak	N	T	C,R	Sandy loam	Sun / shade				Y	
Quercus robur	Common oak	N	T	C,R	Clay loam	Sun / shade				Y	
Rosa canina	Dog rose	N	S	C	Any	Sun			Y	Y	
Salix spp.	Willow species	N	S	S,C	Moist	Sun / shade			Y	Y	
Sambucus nigra	Elder	N	T	C	Clay loam	Sun				Y	
Saponaria officinalis	Soapwort	N	HP	F	Any	Sun					
Saxifraga oppositifolia	Saxifrage	N	HP	C	Well drained	Sun	Y	Y			
Scabiosa columbaria	Small scabious	N	HP	F	Well drained/ alkaline	Sun	Y				
Sedum spectabile	Ice plant		HP	F	Well drained/ dry	Sun	Y				
Silene dioica	Red campion	N	HP	F	Any	Shade / partial shade		Y	Y	Y	

Plant Species	Common name	Native	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain Gardens	Hedges/ trees	Beds/ borders
Sorbus aucuparia	Rowan	N	T	C	Well drained	Sun				Y	
Stachys lanata	Lamb's ears		HP	F	Well drained/dry	Sun	Y				
Symphotrichum spp.	Michaelmas daisies		HP	F	Any	Sun					
Tegetes patula	French marigold		A	F	Well drained/moist	Sun					
Thymus serpyllum	Creeping thyme	N	HP/S	F	Well drained/dry	Sun	Y	Y			
Tilia x europaea	Common lime		Type	C	Any	Sun / shade				Y	
Trifolium spp.	Clover species	N	HP	F	Any	Sun	Y				
Veleriana spp.	Valerian species	N	HP	F	Moist	Sun / partial shade			Y		
Verbascum spp	Mulleins	N	Bi,HP	C	Well drained	Sun	Y				
Verbena bonariensis	Verbena		HP	F	Well drained/moist	Sun					
Viburnum lantana	Wayfaring tree	N	S	C	Any	Sun / shade				Y	
Viburnum opulus	Guelder rose	N	S	C	Moist	Sun / shade			Y	Y	
Viola tricolor	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
Bi: Biennial
BiP: Biennial perennial

T: Tree
S: Shrub
H: Herb

A: Annual
B: Bulb
C: Creeper/climber

Benefit:
C: Moth caterpillar food plant
S: Sap sucking insects (e.g. whiteflies)

F: Flowers attract adult moths
R: Good roost potential

Appendix VII: 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; as amended); the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations; as amended); and the Environment Act 2021.

WCA 1981 consolidated and amended pre-existing national wildlife legislation in order to implement the Bern Convention and the European Union Wild Birds Directive (Council Directive 2009/147/EC). 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 are the principal means by the European Union Habitats Directive (Council Directive 92/43/EEC) was 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 in Europe are designated as Sites of Community Importance by the European Commission, and subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. Since the UK's departure from the European Union the European Commission no longer has a role in designating SACs in the UK. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 establish a single stage designation process, where the appropriate authority is the decision maker. The selection and designation of SACs is based on the criteria set out in Annex III of the Habitats Directive insofar as it applies to the UK, and having regard to the advice of the appropriate nature conservation body.

The 2019 Amendment Regulations have created a new national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes existing SACs, existing Special

Protection Areas (SPA) originally designated as a result of Council Directive 2009/147/EC on the Conservation of Wild Birds, and any new SACs and SPAs designated under the 2019 Regulations. SACs and SPAs in the UK therefore no longer form part of the EU's Natura 2000 ecological network.

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.

The Environment Act 2021, among other things: established an Office for Environmental Protection; introduced a mandatory requirement for all new development requiring planning permission to achieve a net gain for biodiversity of at least 10% (although implementation of this is transitionary); amended the NERC Act duty to conserve biodiversity by explicitly adding a duty to enhance; and requires local authorities to produce local nature recovery strategies.

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.

Wild birds

Wild 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 (BoCC5) are included on Red and Amber lists (Stanbury *et al.*, 2021). 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 dunnock *Prunella modularis.*

Badger (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.

Under the Habitats Regulations disturbance includes any activity which is likely to:

- Impair the ability of a bat to survive, breed, reproduce, or rear/nurture its young.
- Impair the ability of a bat to migrate or hibernate.
- Significantly affect the local distribution or abundance of the species.

Eurasian beaver (Castor fiber)

From October 2022 Eurasian beavers are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to:

- Deliberately disturb a beaver – this includes any action likely to impair their ability to survive, breed or rear their young.
- Deliberately injure, capture or kill a beaver.
- Damage or destroy the breeding site or resting place of a beaver.

It is also an offence to:

- Possess, control or transport a beaver.
- Sell or exchange a beaver.
- Offer a beaver for sale or exchange.

This applies whether the beaver is alive or dead and includes beaver parts and derivatives.

The Wildlife and Countryside Act 1981 (as amended) prohibits the release of beavers into the wild except with a licence. It also makes it an offence to use any trap or snare for the purpose of killing, taking or restraining beavers. It is also an offence to set a trap or snare in place to cause injury to a beaver.

Some management activities near or in a site of special scientific interest may need permission from Natural England under this legislation.

Beavers are protected from unnecessary suffering and cruel treatment under the Animal Welfare Act 2006 and the Wild Mammals (Protection) Act 1996.

Hazel 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.

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.

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.

Reptiles

The four common species (slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix helvetica*) 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.

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 December 2024, 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;
- 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 scape 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 improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

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 relating to wildlife and biodiversity are contained within the adopted Mid Sussex District Plan 2014-31.

DP12: Protection and Enhancement of Countryside Strategic Objectives:

The countryside will be protected in recognition of its intrinsic character and beauty. Development will be permitted in the countryside, defined as the area outside of built-up area boundaries on the Policies Map, provided it maintains or where possible enhances the quality of the rural and landscape character of the District, and:

- *it is necessary for the purposes of agriculture; or*
- *it is supported by a specific policy reference either elsewhere in the Plan, a Development Plan Document or relevant Neighbourhood Plan.*

Agricultural land of Grade 3a and above will be protected from non-agricultural development proposals. Where significant development of agricultural land is demonstrated to be necessary, detailed field surveys should be undertaken and proposals should seek to use areas of poorer quality land in preference to that of higher quality. The Mid Sussex Landscape Character Assessment, the West Sussex County Council Strategy for the West Sussex Landscape, the Capacity of Mid Sussex District to Accommodate Development Study and other available landscape evidence (including that gathered to support Neighbourhood Plans) will be used to assess the impact of development proposals on the quality of rural and landscape character. Built-up area boundaries are subject to review by Neighbourhood Plans or through a Site Allocations Development Plan Document, produced by the District Council. Economically viable mineral reserves within the district will be safeguarded.

DP16: High Weald Area of Outstanding Natural Beauty Strategic Objectives:

Development within the High Weald Area of Outstanding Natural Beauty (AONB), as shown on the Policies Maps, will only be permitted where it conserves or enhances natural beauty and has regard to the High Weald AONB Management Plan, in particular;

- *the identified landscape features or components of natural beauty and to their setting;*
- *the traditional interaction of people with nature, and appropriate land management;*
- *the conservation of wildlife and cultural heritage.*
- *character and local distinctiveness, settlement pattern, sense of place and setting of the AONB; and Small scale proposals which support the economy and social well-being of the AONB that are compatible with the conservation and enhancement of natural beauty will be supported. Development on land that contributes to the setting of the AONB will only be permitted where it does not detract from the visual qualities and essential characteristics of the AONB, and in particular should not adversely affect the views into and out of the AONB by virtue of its location or design.*

DP17: Ashdown Forest Special Protection Area (SPA) and Special Area of Conservation (SAC) Strategic Objectives:

In order to prevent adverse effects on the Ashdown Forest SPA and SAC, new development likely to have a significant effect, either alone or in combination with other development, will be required to demonstrate that adequate measures are put in place to avoid or mitigate any potential adverse effects. Within a 400 metres buffer zone around Ashdown Forest, mitigation measures are unlikely to be capable of protecting the integrity of the SPA and, therefore, residential development will not be permitted. Within a 7km zone of influence around the Ashdown Forest SPA, residential development leading to a net increase in dwellings will be required to contribute to mitigation through:

1) The provision of Suitable Alternative Natural Greenspace (SANG) to the minimum level of 8Ha per 1,000 net increase in population; or a financial contribution to SANGs elsewhere; or the provision of bespoke mitigation; and

2) A financial contribution to the Ashdown Forest Strategic Access Management and Monitoring (SAMM) Strategy. Large schemes proposed adjacent or close to the boundary of the 7km zone of influence may require mitigation for the SPA. Such proposals for development will be dealt with on a case-by-case basis. Where bespoke mitigation is provided, these measures will need to be in place before occupation of development and must be managed and maintained in perpetuity. The effectiveness of such mitigation will need to be demonstrated prior to approval of the development. Bespoke mitigation will need to be discussed and agreed by the District Council as the competent authority following advice from Natural England.

DP37: Trees, Woodland and Hedgerows Strategic Objectives:

The District Council will support the protection and enhancement of trees, woodland and hedgerows, and encourage new planting. In particular, ancient woodland and aged or veteran trees will be protected. Development that will damage or lead to the loss of trees, woodland or hedgerows that contribute, either individually or as part of a group, to the visual amenity value or character of an area, and/ or that have landscape, historic or wildlife importance, will not normally be permitted. Proposals for new trees, woodland and hedgerows should be of suitable species, usually native, and where required for visual, noise or light screening purposes, trees, woodland and hedgerows should be of a size and species that will achieve this purpose. Trees, woodland and hedgerows will be protected and enhanced by ensuring development:

- *incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and*
- *prevents damage to root systems and takes account of expected future growth; and*

- *where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and*
- *has appropriate protection measures throughout the development process; and*
- *takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance on-site green infrastructure and increase resilience to the effects of climate change; and*
- *does not sever ecological corridors created by these assets. Proposals for works to trees will be considered taking into account:*
- *the condition and health of the trees; and*
- *the contribution of the trees to the character and visual amenity of the local area; and*
- *the amenity and nature conservation value of the trees; and*
- *the extent and impact of the works; and*
- *any replanting proposals.*

The felling of protected trees will only be permitted if there is no appropriate alternative. Where a protected tree or group of trees is felled, a replacement tree or group of trees, on a minimum of a 1:1 basis and of an appropriate size and type, will normally be required. The replanting should take place as close to the felled tree or trees as possible having regard to the proximity of adjacent properties. Development should be positioned as far as possible from ancient woodland with a minimum buffer of 15 metres maintained between ancient woodland and the development.

DP38: Biodiversity

Biodiversity will be protected and enhanced by ensuring development:

- *Contributes and takes opportunities to improve, enhance, manage and restore biodiversity and green infrastructure, so that there is a net gain in biodiversity, including through creating new designated sites and locally relevant habitats, and incorporating biodiversity features within developments; and*
- *Protects existing biodiversity, so that there is no net loss of biodiversity. Appropriate measures should be taken to avoid and reduce disturbance to sensitive habitats and species. Unavoidable damage to biodiversity must be offset through ecological enhancements and mitigation measures (or compensation measures in exceptional circumstances); and*
- *Minimises habitat and species fragmentation and maximises opportunities to enhance and restore ecological corridors to connect natural habitats and increase coherence and resilience; and*
- *Promotes the restoration, management and expansion of priority habitats in the District; and*
- *Avoids damage to, protects and enhances the special characteristics of internationally designated Special Protection Areas, Special Areas of Conservation; nationally designated Sites of SpecialScientific Interest, Areas of Outstanding Natural Beauty; and locally designated Sites of Nature Conservation Importance, Local Nature Reserves and Ancient Woodland or to other areas identified as being of nature conservation or geological interest, including wildlife corridors, aged or veteran trees, Biodiversity Opportunity Areas, and Nature Improvement Areas. Designated sites will be given protection and appropriate weight according to their importance and the contribution they make to wider ecological networks. Valued soils will be protected and enhanced, including the best and most versatile agricultural land, and development should not contribute to unacceptable levels of soil pollution. Geodiversity will be protected by ensuring development prevents harm to geological conservation interests, and where possible, enhances such interests. Geological conservation interests include Regionally Important Geological and Geomorphological Sites.*

Appendix VIII: 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.
- UEEC Ltd disclaims any responsibility to the Client and others in respect of any matters outside the scope of this contract. This report is confidential to the Client and is not to be disclosed to third parties. If disclosed to third parties, UEEC Ltd accepts no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any third party relies upon the contents of this report at their own risk and the report is not to be relied upon by any party, other than the Client without the prior and express written agreement of UEEC Ltd.
- 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.

Urban Edge Environmental Consulting Ltd

Donkey Row Barn | Brighton Road | Hassocks | BN6 9BS

T: 01273 68 67 66 | E: enquiries@ueec.co.uk

www.ueec.co.uk | LinkedIn | IEMA

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Donkey Row Barn | Brighton Road | Hassocks | BN6 9BS

T: 01273 68 67 66 | E: enquiries@ueec.co.uk

www.ueec.co.uk |

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IEMA CORPORATE PARTNER