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NATURAL PROGRESSION

Hookstead, Goldsmiths Avenue, Crowborough, East Sussex

Preliminary Ecological Appraisal

June 2016





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Preliminary Ecological Appraisal

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Abbreviations

GCN	Great crested newt
EPS	European Protected Species
HSI	Habitat Suitability Index
LNR	Local Nature Reserve
LWS	Local Wildlife Site
NERC	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
PEA	Preliminary Ecological Assessment
SAC	Special Area for Conservation
SNCI	Site of Nature Conservation Interest
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SxBRC	Sussex Biodiversity Record Centre
TN	Target Note
WCA	Wildlife & Countryside Act 1981 (as amended)

0 Executive Summary

0.1 Introduction

0.1.1 A Preliminary Ecological Appraisal was undertaken for the site of a proposed car parking extension at Hookstead, Goldsmiths Avenue, Crowborough, East Sussex (Grid Reference: 551200, 130930). The report was prepared to inform the design process for the development proposal, record the ecological baseline and identify key ecological features within and around the proposal site.

0.2 Results

0.2.1 There are records of a range of protected or notable species in the locality, including amphibians, birds, terrestrial mammals and terrestrial reptiles, together with three statutory sites designated for nature conservation within the 1km desk study zone:

- ▶ Ashdown Forest Site of Special Scientific Interest;
- ▶ Ashdown Forest Special Area of Conservation; and
- ▶ Ashdown Forest Special Protection Area.

0.2.2 The survey area is predominantly comprised of hard standing and buildings with two small sections of amenity grassland and bordered by an area of mixed semi-natural woodland. The wider area is characterised by extensive suburban residential development, gardens and tree-lined streets.

0.3 Evaluation

0.3.1 No impacts are predicted for the designated sites as a result of development proposals. There are no priority habitats within the survey area. Table 0.1 presents a summary of net loss and gains for the ecological interest within the survey area.

Table 0.1: Summary of net losses and gains

Feature	Description of loss/gain
Amenity grassland & mixed woodland	Small scale permanent losses of amenity grassland and mixed semi-natural woodland due to vegetation clearance and construction works. The majority of woodland within the site would be retained.
Birds (nesting)	Small scale permanent loss of nesting habitats (woodland and trees); however, the majority of woodland within the site would be retained. These losses would be offset by the enhancement recommendations for the site.

Feature	Description of loss/gain
Bats	<p><u>Uncertain</u>: Small scale permanent loss of potential roosting habitats of unknown significance as a result of tree felling or remedial works. It is currently unknown to what extent mature trees will be affected, but the majority of woodland within the site would be retained. No significant effects on foraging or commuting habitats are predicted.</p> <p>These losses would be offset by the enhancement recommendations for the site.</p>

0.4 Recommendations

- 0.4.1 Recommendations are made for further protected species surveys (depending on which trees are to be affected), together with recommendations for the protection of important ecological features to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction; these are summarised in Table 0.2.

Table 0.2: Summary of recommendations

Summary of recommendations	
Further ecological surveys	
R1	Presence / absence surveys for bats, undertaken between May and August/September, if any of the trees at Target Notes TN1, TN2 and TN3 require felling or remedial works.
Precautionary measures	
R2	Removal of nesting bird habitats should be undertaken outside of the bird breeding season, which runs from 1 March to 31 August. It should therefore be carried out between September and February.
Ecological protection measures	
R3	Habitat losses should be minimised to prevent fragmentation.
R4	Standard site procedures to prevent impacts on trees should be adhered to.
R5	At the end of each working day excavations should be covered over and open pipework should be capped to prevent impacts on mammals, amphibians and other fauna.
Ecological enhancement	
R6	A green wall could be incorporated into the existing buildings. This would provide a resource for invertebrates and as a result other species such as birds and bats.
R7	Swift <i>Apus apus</i> boxes could be installed on the existing main building and would provide additional nesting habitat for this declining species.
R8	Sparrow <i>Passer domesticus</i> terraces could be installed on the existing main building and would provide additional nesting habitat for this declining species.
R9	The overall biodiversity value of the site could be further enhanced through the installation of a range of bird and bat boxes on retained mature trees within the woodland at the site boundaries.

1 Introduction

1.1 Purpose of this Report

1.1.1 This report presents a Preliminary Ecological Appraisal for the site of a proposed car parking extension at Hookstead, Goldsmiths Avenue, Crowborough, East Sussex (Grid Reference: 551200, 130930). The report has been prepared to inform the design process for the development proposal, record the ecological baseline and identify key ecological features within and around the proposal site.

1.2 Objectives and Approach of the Study

1.2.1 The objectives of the Preliminary Ecological Appraisal were to

- ▶ Identify features present on the site or adjacent which are ecologically significant and which may act as constraints or opportunities to the proposed development;
- ▶ Consider the need for further ecological surveys which may be necessary; and
- ▶ Make preliminary recommendations for the protection of ecological features, to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction, with the aim of achieving an overall net gain for biodiversity.

1.2.2 The approach to establishing the ecological baseline found within this report has been achieved through:

- ▶ A desk study involving a review of statutory and non-statutory nature conservation sites, and records of habitats and species from the local area (1km radius from the centre of the proposed development site);
- ▶ An extended Phase 1 habitat survey identifying the main habitats on site and adjacent, and the presence of, or potential for, protected and/or notable species; and
- ▶ A Preliminary Ecological Appraisal of the effects of development proposals with respect to the nature conservation value of the site.

1.3 Survey Area

1.3.1 The survey area lies in the west of Crowborough and comprises c.0.4ha of previously developed land including buildings, hard-standing, trees and incidental grassland. It is bounded to the east by the A26 Beacon Road, to the south by Goldsmiths Avenue, and to the west and north by adjacent residential properties. The wider area is characterised by extensive suburban residential development, gardens and tree-lined streets.

1.3.2 The extent of the survey area is outlined in red on Figure 1.1.

1.4 Proposed Construction Activities

- 1.4.1 Planning consent is being sought for the removal of certain trees to the north-east boundary (behind the bungalow) and the re-positioning of the car parking approximately 6m to the rear of the existing, with associated removal of low level shrubbery and re planting to be determined.



Figure 1.1: Survey area

2 Survey Methodology

2.1 Desk Study

2.1.1 A desk-based study was undertaken to examine published information and biological records from within the search area (site centroid plus 1km). The desk study established the presence of designated sites of nature conservation interest, or records of protected/notable habitats/species within the site and its surrounding area. This information was collected from the following sources:

- ▶ The 'MAGIC' (Multi-agency Geographic Information for the Countryside) website: www.magic.gov.uk; and
- ▶ Sussex Biodiversity Record Centre (SxBRC).

2.2 Preliminary Ecological Appraisal

2.2.1 The Preliminary Ecological Appraisal (compliant to British Standard BS42020:2013) is based on a survey of the site undertaken on 8 June 2016 by experienced ecologists. Weather conditions were warm (20°C) with a light northerly breeze, c.60% cloud cover and no rain.

2.2.2 Within the survey area every parcel of land was classified, recorded and mapped using standard colour codes, in accordance with a list of ninety habitat types specified within the methodology for Phase 1 habitat survey (Joint Nature Conservation Council, 2010). This allows rapid visual assessment of the extent and distribution of different habitat types. Target notes were used to provide supplementary information on features which are particularly interesting or significant to specific construction proposals, or too small to map, or to provide additional details, for example relating to species composition and structure.

2.2.3 This basic methodology was extended to provide more detail in relation to habitats with potential to support rare or protected fauna, as described by the Chartered Institute of Ecology and Environmental Management's *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2013). The assessment of habitat suitability for protected, rare or priority species is based on current good practice guidance such as that presented in the *Herpetofauna Workers' Manual* (Gent and Gibson, 2003) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collin (ed.), 2016).

Scope of the survey

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

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

Evaluation criteria

- 2.2.6 Important ecological features were evaluated where possible 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, 2016).
- 2.2.7 Value judgements are based on various characteristics that contribute to the importance of ecological features. These include site designations (such as Sites of Special Scientific Interest (SSSI), or for undesignated features, the extent, naturalness, conservation status (locally, nationally or internationally important), 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 Limitations

- 2.3.1 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.
- 2.3.2 Time of year when the survey was carried out and other variations will influence the results of the survey. Botanical species vary considerably in their flowering, seeding and fruiting periods, and surveys outside of these periods can confound accurate species identification. Where this is the case plants have been identified to lowest possible taxonomic group, normally genus. The possibility nonetheless exists for other species to be present on the site which were not recorded or otherwise indicated by the survey. Ornamental species are not included in botanical listings.
- 2.3.3 The survey reported herein was carried out in summer, during the flowering period for many botanical species, and the timing of the survey is not considered to be a significant limitation to meeting the objectives of the survey.
- 2.3.4 This report aims to provide general advice on the ecological constraints associated with development proposals for the site and includes recommendations for further survey if necessary. It is not intended that this report should be submitted with a planning application for development of the site unless there is no scope for ecological impacts. Where further ecological surveys are recommended, the results of further surveys should be used to inform a more detailed Ecological Impact Assessment of the effects of the proposed development, as well as to revise the development proposals and design ecological avoidance, mitigation and

enhancement measures. This is in line with the latest guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2013, 2015 and 2016).

2.3.5 See Appendix III for general Legal and Technical Limitations which apply to this document.

2.4 Personnel

2.4.1 The site survey was carried out by Nick Pincombe BA(Hons) MSc CEnv MIEMA MCIEEM, director of Urban Edge Environmental Consulting, who has over ten 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). Nick was assisted on site by Kathy Halsall BSc(Hons) MSc GradCIEEM.

2.5 Declaration of Compliance with Professional Code of Conduct

2.5.1 The information, advice and opinions provided in this report are true and were prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's [Code of Professional Conduct](#). We confirm that the opinions expressed are our true and professional bona fide opinions.

3 Results

3.1 Desk Study

Statutory and non-statutory site designations

3.1.1 There are three statutory sites designated for nature conservation within 1km of the survey area, but no non-statutory sites. The information provided by SxBRC regarding these sites is presented in Table 3.1, while Figure 3.1 shows their location in relation to the survey area.

Priority habitats

3.1.2 Priority habitats within the desk study search area are one stand of ancient woodland and one stand of ghyll woodland, the nearest being c.660m north-west.

Records of protected, rare and notable species

3.1.3 Biological records were obtained from SxBRC for the desk study search area (2km for bats, 1km for all other species) and are summarised in Table 3.2.

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

Site name	Location	Description
Ashdown Forest Site of Special Scientific Interest	c.695m north-west	Ashdown Forest is an extensive area of common land lying between East Grinstead and Crowborough. The soils are derived from the predominantly sandy Hastings Beds. It is one of the largest single continuous blocks of heath, semi-natural woodland and valley bog in south-east England, and it supports several uncommon plants, a rich invertebrate fauna, important populations of heath and woodland birds, dormouse <i>Muscardinus avellanarius</i> and great crested newt <i>Triturus cristatus</i> .
Ashdown Forest Special Area of Conservation	c.695m north-west	Qualifying features: <ul style="list-style-type: none"> - Northern Atlantic wet heaths with <i>Erica tetralix</i> - European dry heaths - Great crested newt
Ashdown Forest Special Protection Area	c.695m north-west	Qualifying features: <ul style="list-style-type: none"> - Breeding nightjar <i>Caprimulgus europaeus</i> - Breeding Dartford warbler <i>Sylvia undata</i>

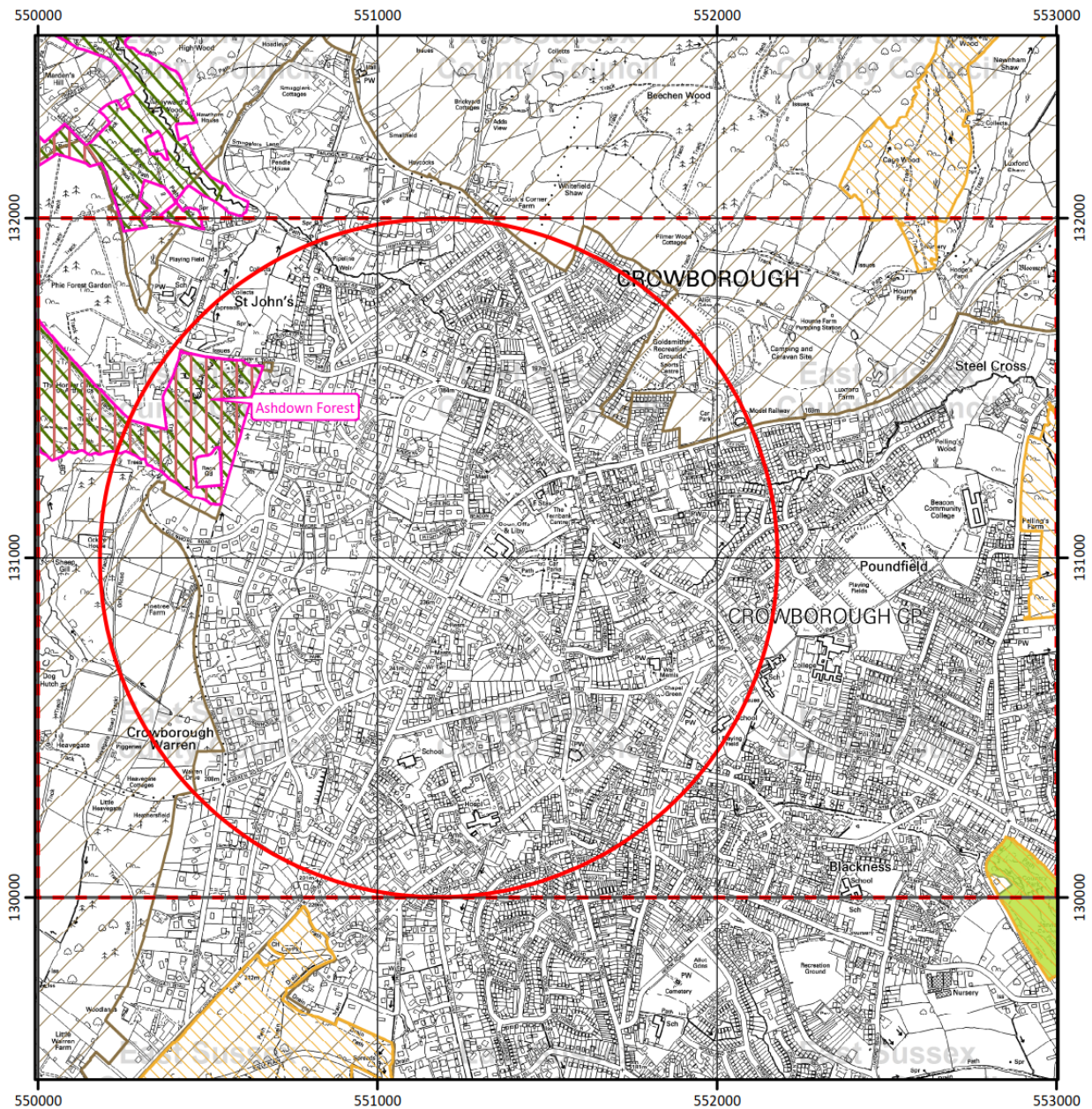
Designated Site Map (SxBRC/16/226)

Land at Goldsmiths Avenue, Crowborough + 1km radius

Prepared for Nick Pincombe (Urban Edge Environmental Consulting Ltd) - 24/06/2016

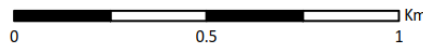


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Key to Map:

- Enquiry area
- Species search area
- Local Wildlife Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- Area of Outstanding Natural Beauty
- Local Nature Reserve
- Country Park



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RAMSAR, Special Area of Conservation (SAC), Special Protection Area (SPA), National Park, Area of Outstanding Natural Beauty (AONB), National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR) and Country Park data reproduced with permission of Natural England. Site of Nature Conservation Importance (SNCI) data provided by East and West Sussex County Councils, and Brighton & Hove City Council. Notable Road Verge data supplied by East and West Sussex County Councils. Local Geological Site (LGS) data created by SxBRC in partnership with Sussex Geodiversity Group. © Crown Copyright. All rights reserved 2016.

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

selfheal *Prunella vulgaris*, wild strawberry *Fragaria vesca*, dog's mercury *Mercurialis perennis* and ivy *Hedera helix*. The areas of grassland are likely to be too small and isolated to support amphibians or reptiles.

Buildings, hard-standing and introduced shrub

3.2.3 The survey area was dominated by two buildings, the three-winged sheltered housing accommodation and the separate bungalow, all of which are of modern construction. Changes to the buildings are not proposed and so they did not attract the attention of the surveyor, however, neither appeared particularly suitable for roosting bats or nesting birds. The buildings were surrounded by an extensive area of hard-standing which provides access and parking. A small section of introduced shrub (ornamental border) was adjacent to the north wing of the main building, and this area provides some limited potential for nesting birds.



Amenity grassland (in distance)



Amenity grassland adjacent to parking



Main building



Bungalow

Mixed semi-natural woodland

3.2.4 The south, east and north boundaries of the survey area were formed of mixed semi-natural woodland, dominated by rhododendron *Rhododendron ponticum*. Other species included mature and early-mature beech *Fagus sylvatica*, common lime *Tilia x europaea*, Scot's pine *Pinus sylvestris*, yew *Taxus baccata*, Leyland cypress *Cupressocyparis leylandii*, sycamore *Acer pseudoplatanus*, holly *Ilex aquifolium*, elder *Sambucus nigra*, silver birch *Betula pendula* and

hawthorn *Crataegus monogyna*, with occasional gorse *Ulex europaeus*, sapling oak *Quercus robur* and bramble *Rubus fruticosus* in the understorey.

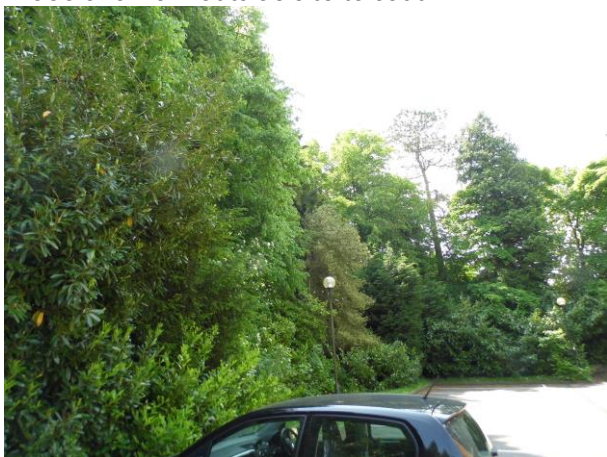
- 3.2.5 The woodland provides potential foraging and commuting habitat for bats, while seven trees were identified with low to moderate suitability for roosting bats, including a yew and two Scot's pine in the north-eastern corner (Target Note (TN) 1), three limes in the eastern boundary (TN2) and a Scot's pine at the south-eastern corner (TN3). The woodland also provides nesting habitat for a range of common bird species such as woodpigeon *Columba palumbus*, chaffinch *Fringilla coelebs*, wren *Troglodytes troglodytes* and firecrest *Regulus ignicapillus* all of which were noted during the survey.



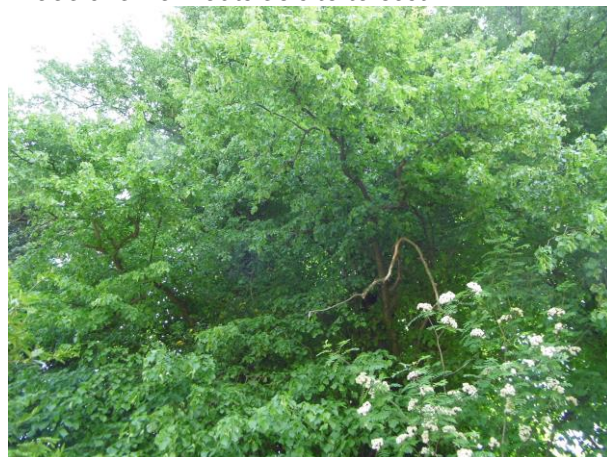
Woodland from outside site to south



Woodland from outside site to east



Woodland at eastern boundary



Limes with ivy coverage (TN2)

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 II for a review of the legislation and planning context.

4.2 Designated Sites

- 4.2.1 It is not considered that the proposed development will result in negative impacts to any of the three statutory site designations within 1km of the survey area.

4.3 Habitats

- 4.3.1 There are no priority habitats within the survey area.

4.4 Species

Amphibians (excluding great crested newt)

- 4.4.1 No amphibian records (other than great crested newt) were returned by the desk study data search. Habitats suitable for amphibians within the survey area are limited to small sections of sub-optimal grassland which could be used for foraging, and woodland which could be used for shelter or hibernation. However, there are no known waterbodies within 500m of the survey area. Amphibians are not considered to present a constraint to the development proposals. Further surveys are not required.

Great crested newt

- 4.4.2 SxBRC returned seven records of great crested newt *Triturus cristatus* during the desk study. The closest and most recent of these was from c.1.4km north-east (outside of the search area) in 2013. There were no waterbodies within the survey area and no waterbodies within 500m were identified from the Ordnance Survey maps during the desk study stage which could potentially provide breeding habitat for great crested newts.
- 4.4.3 Terrestrial habitats suitable for great crested newt within the survey area are limited to small sections of sub-optimal grassland which could be used for foraging, and woodland which could be used for shelter or hibernation. In conclusion great crested newts are not considered to present a constraint to development of the site and no further surveys for this species are required.

Birds (nesting)

- 4.4.4 SxBRC returned 210 records of notable bird species within 1km of the survey area. The wooded areas at the site boundaries are highly likely to provide nesting habitat for a range of common bird species, such as woodpigeon, chaffinch, wren and firecrest, all of which were observed during the survey. Additionally, it is possible that any of the buildings could be used by species such as house sparrow *Passer domesticus* (a Red-listed bird of conservation concern (Eaton *et al.*, 2015)). Precautionary measures for nesting birds are recommended at section 0.

Mammals (terrestrial)

Badger

- 4.4.5 SxBRC does not supply badger *Meles meles* records, however, no setts were observed within 30m of the survey area. Habitats suitable for sett creation within the survey area are limited to a small area of woodland which is isolated from potential foraging habitats and is subject to high levels of disturbance from the adjacent road. Furthermore, no signs of badger activity were noted within or around the survey area, such as badger paths, footprints, latrines, badger hairs caught at fence lines, scratching posts or evidence of foraging (snuffle holes). It is unlikely that an active sett exists within 30m of the proposed construction area and further surveys are not considered necessary.

Bats

- 4.4.6 SxBRC returned 194 records of bats within 2km of the survey area. The closest of these was a grounded common pipistrelle *Pipistrellus pipistrellus* located c.30m north-west in 2010, while the most recent was also a common pipistrelle from c.1km south-west in 2015. The buildings within the survey area are not proposed for demolition or significant alteration, and the majority of the trees were of insufficient maturity to harbour significant splits, fissures or rot holes which could support roosting bats.
- 4.4.7 However, seven trees were identified which each had low to moderate suitability for roosting bats; a yew and two Scot's pine in the north-eastern corner (TN1), three limes in the eastern boundary (TN2) and a Scot's pine at the south-eastern corner (TN3). Potential roost features (PRF; see images below) included heavy ivy coverage (which could either be masking PRFs beneath or itself be used for roosting), significant aerial deadwood, and an elongated tight fork in the stem of the yew with included bark.
- 4.4.8 It is currently not known whether these trees will require felling or remedial works in order to facilitate the proposals for the site, but their possible use by roosting bats should be further investigated if such works are necessary. Further surveys for roosting bats – if required – are recommended at section 5.2.
- 4.4.9 The survey area is dominated by hard standing and buildings. Although the wooded areas at its boundaries could be used by foraging and commuting bats, the proposals for the site are of such a small scale that further bat activity surveys are not considered necessary.



Scot's pine with ivy coverage (TN3)



Yew with forked stem inclusions (TN1)

Dormouse

- 4.4.10 SxBRC returned 42 records of dormouse *Muscardinus avellanarius* during the desk study. The closest of these was from c.690m south-west in 2002, while the most recent was from c.1.7km north-east (outside of the search area) in 2011. The woodland within the survey area has some limited suitability for dormice but does not contain a sufficient diversity of food plants to provide a year-round foraging resource and is somewhat isolated from other areas of suitable habitats such as ancient woodland and hedgerows. Dormouse is not considered to present a constraint to development of the site and no further surveys for this species are required.

Water vole and otter

- 4.4.11 The desk study data search did not return any records for otter *Lutra lutra* or water vole *Arvicola amphibius* within 1km of the survey area. Habitats within and close to the survey area were not suitable for either species. They are unlikely to present a constraint to development proposals and further surveys are not required.

Plants

- 4.4.12 The desk study data search did not return any records of protected or notable botanical species within 1km of the survey area. No rare or protected species of flora were recorded within the survey area and it is considered unlikely that these are present. Further botanical surveys are not required.

Reptiles (terrestrial)

- 4.4.13 SxBRC returned 11 records of widespread reptile species during the desk study, including slow worm *Anguis fragilis*, common lizard *Zootoca vivipara*, grass snake *Natrix natrix* and adder *Vipera berus*. The closest of these was of an adder located c.810m north-west in 2000, while the most recent was of a grass snake located c.1.8km north-east (outside of the search area) in 2010.
- 4.4.14 Habitats potentially suitable for reptiles within the survey area are limited to woodland which could be used for shelter or hibernation and two small sections of amenity grassland. Neither section of grassland was suitable for reptiles, being too small in area, with a short sward height of c.10-15cm and uniform in structure as a result of regular mowing, and shaded by the adjacent woodland. Together these habitats are considered too small, fragmented and isolated to support a population of reptiles. Widespread reptiles are not considered to present a constraint to the development proposals and no further surveys for this group are required.

Other protected, rare or notable species

- 4.4.15 The desk study data search did not return any records of protected/notable invertebrates or other species within 1km of the survey area, and their presence within the site is considered unlikely.

Invasive plants and injurious weeds

- 4.4.16 No invasive plant species (i.e. species listed on Schedule 9 of the Wildlife and Countryside Act) were located during this survey. 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*).

5 Recommendations

5.1 Introduction

5.1.1 With regard to the objectives of this Preliminary Ecological Appraisal, recommendations are made below for the protection of important ecological features, and/or to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction, with the aim of achieving an overall net gain for biodiversity. It is intended that these 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.

5.2 Protected Species Surveys

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

Table 5.1: Recommendations for further ecological surveys

#	Recommendations for further ecological survey
R1	Presence / absence surveys for bats, undertaken between May and August/September, if any of the trees at Target Notes TN1, TN2 and TN3 require felling or remedial works.

Bats

5.2.2 It is currently not known whether the trees at Target Notes TN1, TN2 and TN3 will require felling or remedial works in order to facilitate the proposals for the site, but their possible use by roosting bats should be investigated by further presence/absence surveys if such works are necessary. These surveys should follow current guidelines (Collins, 2016), comprising dusk emergence and/or dawn re-entry surveys, and can be carried out between May and September (May to August is the optimal period). Surveys should begin at least quarter of an hour before dusk and continue for up to 2 hours after sunset, or begin 1.5 to 2 hours before dawn and continue until at least 15mins after sunrise. Alternatively each tree could be subject to a PRF inspection by a suitably licenced tree-climber. The level of survey effort required is dependent on each feature's suitability for roosting bats, as follows:

- ▶ High roost suitability: At least three surveys visits in total, including at least one dusk emergence and at least one separate dawn re-entry survey;
- ▶ Moderate roost suitability: At least one dusk emergence and a separate dawn re-entry survey; or
- ▶ Low roost suitability: At least one dusk emergence or dawn re-entry survey.

- 5.2.3 The seven trees at TN1, TN2 and TN3 were each considered to be of low to moderate suitability. The need for further surveys of trees will be reconsidered once plans for the site are further progressed such that it is known whether felling or tree works will be required.

5.3 Precautionary Measures

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

Table 5.2: Recommended precautionary measures

#	Recommended precautionary measures
R2	<p>Suitable bird nesting habitat occurs around the site in woodland and buildings. Negative impacts on breeding birds should be avoided by undertaking vegetation clearance and demolition works which would result in removal of potential nesting habitats outside of the bird breeding season, which runs from 1 March to 31 August. Removal of nesting bird habitats should therefore be carried out between September and February.</p> <p>Any construction works undertaken within the bird breeding season where suitable bird breeding habitat exists will require a site check for nesting birds by a suitably qualified ecologist. This should 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 should be supervised by a suitably qualified ecologist.</p>

5.4 Ecological Protection Measures

- 5.4.1 The following protection measures should be carried out as part of the proposed scheme.

Table 5.3: Recommended ecological protection measures

#	Recommended ecological protection measures
R3	<p>Removal of existing trees/shrubs should be kept to a minimum by fine-tuning the scheme design. The connectivity of hedgerows/treelines and between areas of woodland and scrub should be maintained wherever possible to prevent fragmentation.</p>
R4	<p>British Standard BS 5837:2012 and/or National Joint Utilities Group Guidelines (NJUG, 1995) should be followed at all times during construction when working in close proximity to trees or shrubs which are to be retained. According to NJUG Guidelines the root protection zone or precautionary area is 4x the circumference of the trunk (circumference is measured around the trunk at a height of 1.5m above ground level). The distance is measured from the centre of the trunk to the nearest part of any excavation or other work. If a separate tree survey is carried out for the proposed development, works should be undertaken in accordance with the recommendations therein.</p>
R5	<p>All excavations left overnight should either be covered over, or provided with a ramp to enable easy escape of small mammals, amphibians and other fauna, and inspected each morning prior to recommencement. Open pipework greater than 150mm outside diameter should be blanked off at the end of each working day.</p>

5.5 Ecological Enhancement

5.5.1 Due to the small size of the area that will be affected by the works to extend the car park, the biodiversity enhancements recommended below are aimed at improving existing habitats for species already likely to use them.

Table 5.4: Recommendations for ecological enhancement

#	Recommendations for ecological enhancement
R6	A green wall could be incorporated into the existing buildings. This would provide a resource for invertebrates and as a result other species such as birds and bats. Species should be native and/or wildlife attracting such as honeysuckle <i>Lonicera periclymenem</i> , clematis <i>Clematis vitalba</i> , jasmine <i>Jasminum sp.</i> and ivy <i>Hedera helix</i> .
R7	Swift <i>Apus apus</i> boxes could be installed on the existing main building and would provide additional nesting habitat for this declining Amber-listed species. Integral swift boxes can be placed within the wall or alternatively they can be attached to exterior walls. Swift boxes should be placed at least 5m above the ground and out of direct sunlight, ideally on the north or north-west aspect of the building and facing clear, uncluttered airspace.
R8	Sparrow <i>Passer domesticus</i> terraces could be installed on the existing main building and would provide additional nesting habitat for this declining Red-listed species. The boxes should be placed at least 2m high, out of direct sunlight and close to but not restricted by vegetation.
R9	<p>The overall biodiversity value of the site could be further enhanced through the installation of a range of bird and bat boxes on retained mature trees within the woodland at the site boundaries. For instance:</p> <ul style="list-style-type: none"> ▪ Birds: nest boxes with entrance holes suitable for tit species, and open-fronted boxes suitable for spotted flycatcher <i>Muscicapa striata</i> or song thrush <i>Turdus philomelos</i>, and treecreeper <i>Certhia familiaris</i> boxes. A combination of four Schwegler 2H and 1B boxes are suggested and are suitable for a variety of bird species likely to be present in the area. Bird boxes should be erected above 3m and close to, but not restricted by, vegetation. It is recommended that bird boxes are positioned facing between north and east to avoid strong sunlight and that they are tilted slightly forward to minimise the effects of driving rain. ▪ Bats: A combination of four Schwegler 2F and 1FF roost boxes are suggested and are suited to various species' requirements. Roost boxes should ideally be located south-facing (between south-east and south-west), close to vegetation and greater than 5m above ground level.

6 Conclusions

6.1 Summary

6.1.1 A Preliminary Ecological Appraisal was undertaken for the site of a proposed car parking extension at Hookstead, Goldsmiths Avenue, Crowborough, East Sussex. The report was prepared to inform the design process for the development proposal, record the ecological baseline and identify key ecological features within and around the proposal site.

6.2 Results

6.2.1 There are records of a range of protected or notable species in the locality, including amphibians, birds, terrestrial mammals and terrestrial reptiles, together with three statutory sites designated for nature conservation within the 1km desk study zone.

6.2.2 The survey area is predominantly comprised of hard standing and buildings with two small sections of amenity grassland and bordered by an area of mixed semi-natural woodland. The wider area is characterised by extensive suburban residential development, gardens and tree-lined streets.

6.3 Evaluation

6.3.1 No impacts are predicted for the designated sites as a result of development proposals. There are no priority habitats within the survey area. Table 6.1 presents a summary of net loss and gains for the ecological interest within the survey area.

Table 6.1: Summary of net losses and gains

Feature	Description of loss/gain
Amenity grassland & mixed woodland	Small scale permanent losses of amenity grassland and mixed semi-natural woodland due to vegetation clearance and construction works. The majority of woodland within the site would be retained.
Birds (nesting)	Small scale permanent loss of nesting habitats (woodland and trees); however, the majority of woodland within the site would be retained. These losses would be offset by the enhancement recommendations for the site.
Bats	<u>Uncertain</u> : Small scale permanent loss of potential roosting habitats of unknown significance as a result of tree felling or remedial works. It is currently unknown to what extent mature trees will be affected, but the majority of woodland within the site would be retained. No significant effects on foraging or commuting habitats are predicted. These losses would be offset by the enhancement recommendations for the site.

6.4 Recommendations

6.4.1 Recommendations are made for further protected species surveys (depending on which trees are to be affected), together with recommendations for the protection of important ecological features to avoid or mitigate ecological impacts, and to enhance the ecology of the site post-construction; these are summarised in Table 6.2.

Table 6.2: Summary of recommendations

Summary of recommendations	
Further ecological surveys	
R1	Presence / absence surveys for bats, undertaken between May and August/September, if any of the trees at Target Notes TN1, TN2 and TN3 require felling or remedial works.
Precautionary measures	
R2	Removal of nesting bird habitats should be undertaken outside of the bird breeding season, which runs from 1 March to 31 August. It should therefore be carried out between September and February.
Ecological protection measures	
R3	Habitat losses should be minimised to prevent fragmentation.
R4	Standard site procedures to prevent impacts on trees should be adhered to.
R5	At the end of each working day excavations should be covered over and open pipework should be capped to prevent impacts on mammals, amphibians and other fauna.
Ecological enhancement	
R6	A green wall could be incorporated into the existing buildings. This would provide a resource for invertebrates and as a result other species such as birds and bats.
R7	Swift boxes could be installed on the existing main building and would provide additional nesting habitat for this declining species.
R8	Sparrow terraces could be installed on the existing main building and would provide additional nesting habitat for this declining species.
R9	The overall biodiversity value of the site could be further enhanced through the installation of a range of bird and bat boxes on retained mature trees within the woodland at the site boundaries.

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
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Appendix I: Phase 1 Habitats Map

Please see insert.

Hookstead, Crowborough

-  Hard-standing
-  Mixed semi-natural woodland
-  Amenity grassland
-  Introduced shrub
-  Buildings
-  Targets
-  Survey area

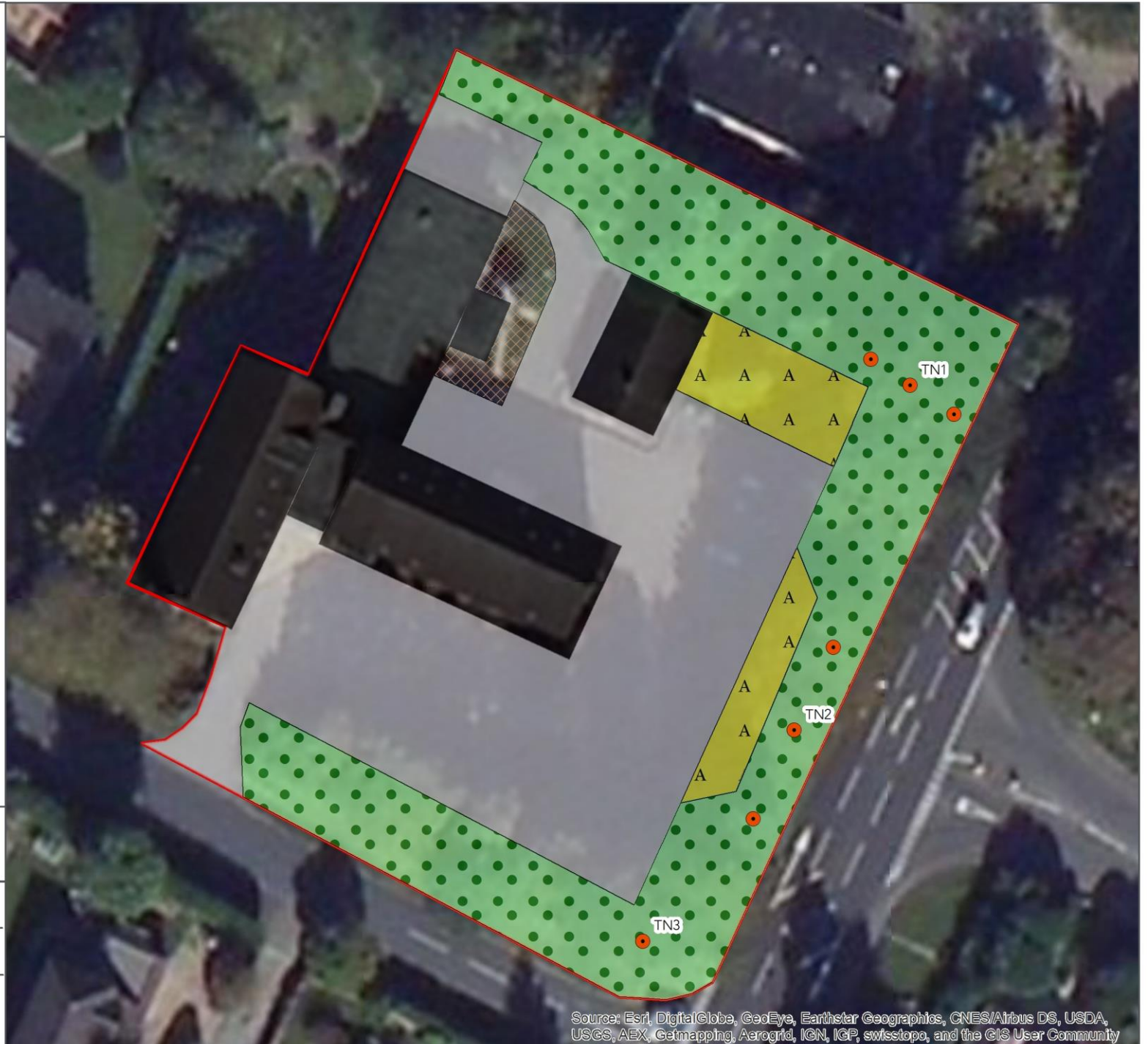


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Drawing number
UE-0200 ECO- Hookstead
Phase1_160616



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Appendix II: Legislation and Planning Context

Legislation

General

The main legislative instruments for ecological protection in England and Wales are the Wildlife and Countryside Act 1981 (WCA; as amended), Countryside and Rights of Way Act 2000 (CRoW; as amended), Natural Environment and Rural Communities Act 2006 (NERC) and the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations; as amended).

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

The CROW Act 2000 amended and strengthened existing wildlife legislation detailed in the WCA. It placed a duty on government departments and 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 promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. 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 2010 consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 and all its various amendments. The Regulations are the principal means by which Council Directive 92/43/EEC (The Habitats Directive) is transposed into English and Welsh law, and place a duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC) by the European Union member states.

The Habitats Regulations also place a duty upon the government to maintain a register of European protected sites designated as a result of Council Directive 2009/147/EC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA) and, in conjunction with SACs, form a network of sites known as Natura 2000. The Habitats Directive introduces for the first time for protected areas, the precautionary principle; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest.

The Habitats Regulations 2010 also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively. 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.

Badgers (*Meles meles*)

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

Bats (*Chiroptera*)

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

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

Birds

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

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

Dormouse (*Muscardinus avellanarius*)

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

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

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

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

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

Otter (*Lutra lutra*)

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

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

Reptiles

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

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

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

Water vole (*Arvicola amphibious*)

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

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

Weeds Act 1959 / Ragwort Control Act 2003

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

Planning context

National Planning Policy Framework (Section 11: Conserving and enhancing the natural environment)

The National Planning Policy Framework (NPPF), published in March 2012, outlines the Government's commitment to the conservation of wildlife and natural features. It is concerned with:

- ▶ *Protecting and enhancing valued landscapes, geological conservation interests and soils;*
- ▶ *Recognising the wider benefits of ecosystem services;*
- ▶ *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current & future pressures;*
- ▶ *Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*
- ▶ *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

The NPPF requires that local planning authorities set criteria based policies against which proposals for development on or affecting protected wildlife or geodiversity sites or landscape areas can be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.

To minimise impacts on biodiversity and geodiversity, the NPPF states that planning policies should:

- ▶ *plan for biodiversity at a landscape-scale across local authority boundaries;*
- ▶ *identify and map components of the local 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 local partnerships for habitat restoration or creation;*
- ▶ *promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;*
- ▶ *aim to prevent harm to geological conservation interests; and*
- ▶ *where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.*

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

- ▶ *if significant harm 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;*
- ▶ *proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have 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 proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- ▶ *opportunities to incorporate biodiversity in and around developments should be encouraged;*
- ▶ *planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and*
- ▶ *the following wildlife sites should be given the same protection as European sites:*
 - *potential Special Protection Areas and possible Special Areas of Conservation;*
 - *listed or proposed Ramsar sites; 26 and*
 - *sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

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. Local BAP targets with regard to species and habitats are a material consideration in the planning process.

Appendix III: 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.



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