



Preliminary Ecological Appraisal and Preliminary Roost Assessment Survey

Hill House, Hill Road, Hindhead, Grayshott, Hampshire GU26 6HL

Clare Boag

Status	Issue	Name	Date
Draft	1	Joe Slade BSc (Hons), Consultant	22/08/19
Reviewed	1.1	Jo Gregory BA (Hons) MSc MRSB, Senior Consultant	23/08/19
Final	2	Joe Slade BSc (Hons), Consultant	25/08/19

Arbtech Consultant's Contact details:

Joe Slade BSc (Hons)

Consultant

Tel: 07872127684 Email: joeslade@arbtech.co.uk

Arbtech Consulting Ltd

<https://arbtech.co.uk>

Guidelines

This assessment has been designed to meet:

- Chartered Institute of Ecology and Environmental Management 'Guidelines for Preliminary Ecological Appraisal Second Edition, December 2017'; and
- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 193 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application, or support the recommendations for further surveys.

Executive summary

Arbtech Consulting Ltd was commissioned by Clare Boag to undertake a preliminary ecological appraisal (PEA) and preliminary roost assessment (PRA) at Hill House, Hill Road, Hindhead, Grayshott, Hampshire GU26 6HL. The survey was completed on 05/08/19. The aim of the survey was to complete an extended Phase 1 habitat survey of the survey area (all land that will be impacted by the proposals) and to consider the value and suitability of the structures for roosting bats.

The development proposals are for the extension of the existing building and landscaping works. A planning application being prepared for submission to East Hampshire District Council.

Recommendations - This is work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent.

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations
Notable habitats and plants	There are scattered mature trees located on the site boundary and there is deciduous woodland located adjacent to the south east of the site.	The trees will be retained.	The trees on site must be protected during construction in line with BS5837:2012.
Bats B1	There are numerous external roosting features on the building including gaps under raised roof tiles and raised hanging tiles on the dormer windows. The building has “high habitat value” (Collins, 2016), and presents an unacceptable risk of harm to bats if the development proceeds without further survey effort.	As the proposals include the extension of this building, any bat roosts could be destroyed. This could result in the death, injury or disturbance of bats.	Three bat emergence or re-entry surveys are required during the active bat season (May – September). Three surveyors are required to provide full coverage of buildings B1.
Bats B2	The building is assessed as having negligible habitat value to support roosting bats.	No foreseen impacts.	No further surveys.
Bats B3	The building is a confirmed feeding roost.	As the proposals include the demolition of this building, the roost will be destroyed. This could result in death, injury or disturbance of bats.	The bat roost inside the building has been characterised as a feeding roost. Further information about how the roost is used by bats can be obtained by installing a static bat detector inside the building during the survey period of B1.

Birds	Birds could nest in the scattered trees and hedgerows around the site boundary. There are climbing plants on B2 which are suitable for nesting birds.	Active nests could be destroyed during the development.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the building and vegetation by an ecologist must be undertaken immediately prior to the commencement of works. All active nests will need to be retained until the young have fledged.
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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd was commissioned by Clare Boag to undertake a preliminary ecological appraisal (PEA) and preliminary roost assessment (PRA) at Hill House, Hill Road, Hindhead, Grayshott, Hampshire GU26 6HL. The survey was completed on 05/08/19. The aim of the survey was to complete an extended Phase 1 habitat survey of the survey area (all land that will be impacted by the proposals) and to consider the value and suitability of the structures for roosting bats. The PRA is informed by the Bat Conservation Trust publication Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins, J. (Ed) 2016).

No previous reports have been produced for this site by Arbtech Consulting Ltd.

1.2 Site Context

The site is located at National Grid Reference SU 87233 35127 and comprises an area of approximately 0.2ha. The site consists of two buildings and rear garden areas, with trees and shrubs forming the site boundary.

1.3 Scope of the report

This report describes the baseline ecological conditions at the site; evaluates habitats within the survey area in the context of the wider environment; and describes the suitability of those habitats for notable or protected species. The PRA element of the survey the report provides a description of all features suitable for roosting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It identifies significant ecological impacts as a result of the development proposals; summarises the requirements for further surveys and mitigation measures, to inform subsequent mitigation proposals, achieve Planning or other statutory consent, and to comply with wildlife legislation.

To achieve this, the following steps were taken:

- The desk study area and field survey area (generally 50m from the site boundary or proposed footprint and including the 'zone of influence' of the scheme) have been identified
- A desk study has been carried out.
- Baseline information on the site and surrounding area has been recorded through an 'extended Phase 1 habitat survey', including a Phase 1 habitat survey (JNCC 2010) and recording further details in relation to notable or protected habitats and species.
- The ecological features present within the survey area have been evaluated where possible (CIEEM, December 2017).
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Likely impacts on features of value, as a result of the development proposals, have been identified.
- Recommendations for further survey and assessment have been made
- Recommendations for mitigation and enhancements of the developed site have been provided based on current information.

A survey plan is presented in Appendix 1, proposed plans in Appendix 2 (where available), desk study results in Appendix 3 and a summary of relevant legislation is presented in Appendix 4.

1.4 Project Description

The development proposals are for the extension of the existing building and landscaping works. A planning application being prepared for submission to East Hampshire District Council.

2.0 Methodology

2.1 Desk Study methodology

The desk study included a 2km radius review of statutory and non-statutory designated sites, biodiversity action plan (BAP) priority habitats and granted EPSML records for bats held on MAGIC database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

Existing bat records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release and has been analysed and summarised for presentation in this report.

2.2 Site Survey methodology

The survey was undertaken by Joe Slade (Natural England protected species licence numbers: [Bats] 2017-32515-CLS-CLS, [Great Crested Newts] 2016-26549-CLS-CLS) on 24/07/19.

The methodology for the Phase 1 habitat survey is based on the best practice publication Phase 1 Habitat Survey Methodology (JNCC, 2010). All land parcels are described and mapped according to JNCC Phase 1 habitat classification. Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management.

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species. The likelihood of the presence of protected species is ranked; the habitats on site are evaluated against their likelihood to provide suitable habitat for protected species.

The ecological value of the survey area has been assessed based on the Guidelines for Ecological Impact Assessment (CIEEM, 2018), and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species assemblages has been considered. The distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981 as amended 1996) were also noted throughout the survey area. The methodology for the PRA is informed by the Bat Conservation Trust publication Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins, J. (Ed) 2016). All features that will be impacted by the project proposals were assessed for their bat roosting or commuting habitat. The surveyor systematically surveyed all features suitable for-bats and signs of bat activity.

For any surveyed buildings:

A non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building(s) for potential access and egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope, torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

For any surveyed trees

A visual inspection from ground level using binoculars and where accessible an internal inspection of suitable roosting features using an endoscope, torch and ladders.

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls *Tyto alba*.

2.3 Suitability Assessment

The likelihood of occurrence of protected species is ranked according to the criteria listed in Table 1. The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Table 1: showing criteria considered when assessing the likelihood of occurrence of protected species

Present	Species are confirmed as present from the current survey or historical confirmed records.
High	Habitat and features of high quality for species or species assemblage. Species known to be present in wider landscape (desk study records). Good quality surrounding habitat and good connectivity.
Medium	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat and ecological conditions required by the species or assemblage. Within known national distribution of species and local records in desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance or poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features or conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor quality habitats and features. No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species or species assemblage.

For the PRA element of the survey all affected survey features on site were categorised according to the likelihood of bats being present, in line with best practice guidelines (Collins, J. (ed) 2016). The features that dictate the likelihood of roosting bats are summarised in Tables 2 and 3 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 2: Features of a building that are correlated with use by bats

Likelihood of bats being present	Feature of building and its context
Higher	Buildings or structures with features of particular significance for roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data).
Lower	A small number of possible roost sites or features, used sporadically by more widespread species. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.

Table 3: Features of a tree that are correlated with use by bats

Likelihood of bats being present	Feature of tree and its context
Higher	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Lower	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.

2.4 Limitations – evaluation of the methodology

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

There were no specific limitations to the survey.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below; full details are included in Appendix 3.

3.2 Designated sites

Details of any statutory and non-statutory designated sites within a 1km radius of the survey site, including their reasons for notification, are provided in Table 4 below.

Table 4: Designated sites within 1km radius of the site

Designated Site Name	Distance from Site (approx.)	Reasons for Notification from Natural England
Statutory Sites		
Surrey Hills Area of Outstanding Natural Beauty (AONB)	250m south	The AONB's deciduous woodlands have considerable ecological importance as do the AONB's surviving stretches of chalk grassland and unimproved heath.
Non-statutory Sites		
None known		

3.3 Landscape

A review of the designated sites, aerial photographs (Figure 1), the MAGIC database and OS maps has been undertaken. Collated together, the site's local habitat is described below:

The site is in a residential area of Hampshire. The landscape is dominated by residential areas, woodland and large arable fields. There are areas of well-connected woodland and tree lines around the area, which could be used for foraging and commuting. One area of ancient woodland is located ~550m to the north west that could be an important local habitat for several protected species. Scattered small ponds and irrigation ditches around the area will provide abundant insect foraging for several protected species.

Priority habitats within 1km of the site are listed in Table 5.

Table 5: Priority Habitat Inventory within 1km (Magic.gov.uk):

Habitat	Closest distance from site
Deciduous Woodland	Adjacent to the south east
National Forest Inventory	Adjacent to the south
Ancient woodland	550m north west
Wood-pasture and Parkland	500m west

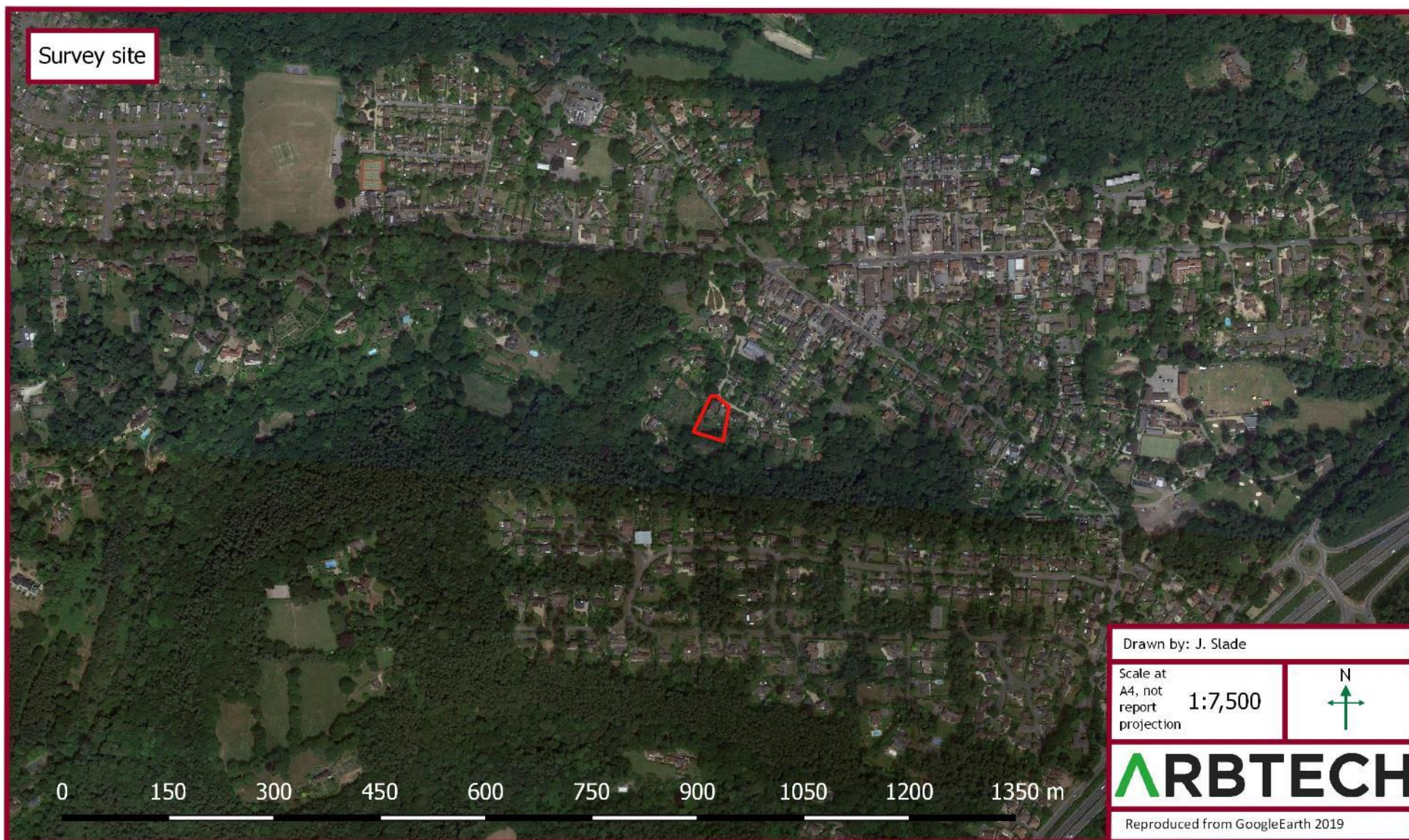


Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

Hampshire Biodiversity Information Centre (HBIC) will need to be commissioned to provide protected species records within a 2km radius of the site. These can be provided on request and will be analysed and summarised in Table 6.

Table 6: Historical records* within 2km of the site

Taxon Group	Common name	Scientific binomial	Record details
Awaiting records			

*Records from the past 10 years.

A search of the magic.gov.uk database for granted European protected species mitigation licences (EPSMLs) within a 1km radius of the site has been completed. Displaced protected species from licenced sites >1km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other suitable habitat in close proximity to the licenced site. The records show that two bat roosts have been recently destroyed involving brown long-eared, common pipistrelle and soprano pipistrelle bats. Displaced bats from the nearby roosts could have relocated to the noted external roosting features on the survey building.

Table 7: Granted EPSMLs within 1km of the site

Case reference of granted application	Approx. distance from site	Bat Species Effected	Licence Start Date:	Licence End Date:	Impacts allowed by licence
2017-28923-EPS-MIT	530m south	S-PIP	01/09/2017	30/09/2018	Destruction of a roost
EPSM2013-5994	930m west	BLE	22/10/2013	31/08/2016	Destruction of a roost

3.5 Field Survey Results

The site consists of a house and outbuilding and garden areas, with trees and shrubs forming the site boundary and is illustrated in the map in Appendix 1. The weather conditions recorded at the time of the survey are shown in Table 7.

Table 7: Environmental variables during the survey

Date: 05/08/2019	
Temperature	20°C
Humidity	55%
Cloud Cover	20%
Wind	1mph
Rain	None

3.6 Site feature descriptions and photos

Front garden, facing north east (pictured opposite).

J1.2 Amenity grassland

The garden areas consist of amenity grassland with scattered trees and introduced shrubs. The dominant species include perennial ryegrass *Lolium perenne*, false oat-grass *Arrhenatherum elatius* with dandelion *Taraxacum officinale*, white clover *Trifolium repens* and daisy *Bellis perennis* in places.

J2.1.1 Species poor intact hedge

Species poor hedges form part of the western, southern and eastern site boundary. The hedgerows are holly *Ilex aquifolium*, cherry laurel *Prunus laurocerasus* and rhododendron *Rhododendron* sp.



Western garden area, facing south (pictured opposite).

A1.3 Scattered trees

Scattered trees are present on site boundaries. Tree species include oak *Quercus robur*, apple *Malus domestica*, horse chestnut *Aesculus hippocastanum* and holly.

J1.4 Introduced shrub

Areas of ornamental planting are present in the gardens and around the boundary. Species include spurge *Euphorbia* sp., *Hydrangea* sp., lavender *Lavandula* sp. and box shrubs *Buxus* sp.



Rear garden area, facing south (pictured opposite).

A2.2 Scattered scrub

Patches of bramble *Rubus fruticosus* scrub are located adjacent to areas of amenity grass and scattered trees.



Rear garden area, facing east (pictured opposite).

J3.6 Hardstanding

Areas of hardstanding surround the building including areas of paving.



J3.6 Buildings

B1 Exterior

B1 – northern elevation (pictured opposite).

B1 is a detached two storey brick built building with a pitched roof clad in ceramic roof tiles. There are hipped and gabled sections of roof as well as dormer windows in places which results in a complex roof structure with numerous gaps that crevice dwelling bats such as soprano pipistrelle bats could roost in. The roof is generally in poor condition and there are numerous raised roof tiles that are suitable bat roost sites.



B1 – eastern and southern elevations (pictured opposite).

The doors and windows are timber framed and are in good condition with no gaps around them in which bats could roost.

The building is rendered white at first floor level. There are no gaps in the render or brickwork that bats could roost in.



B1 – northern elevation (pictured opposite).

There are mock Tudor sections at first floor level on the northern and western elevations. No gaps are present around the timbers on these sections.

The red circles (pictured opposite) indicate areas of raised roof tiles that are suitable for crevice dwelling bats. There are hanging tiles on the side of the dormer window that are raised creating suitable bat roost sites (see red arrow).



B1 – western elevation (pictured opposite).

The roof extends below the eaves and there are timber beams that protrude from the eaves. No gaps are present around the eaves that bats could roost in or use to enter the building.



B1 – south western corner (pictured opposite).

This photo shows a gap in the mortar and a section of rotten timber that crevice dwelling bats could roost in (see red arrows).



B1 – eastern elevation (pictured opposite).

The red circles indicate areas of raised roof tiles that crevice dwelling bats could roost under.



B1 – eastern elevation (pictured opposite).

The red arrow indicates a gap in the roof that crevice dwelling bats could roost in.



B1 Interior

B1 – loft space 1 (pictured opposite).

There are three loft spaces within the roof space of the building.

Loft space 1 is located within a pitched and gabled roof section on the southern side of the building. The roof structure is built from modern timber beams that provide suitable roosting perches for void dwelling bats, such as brown long-eared bats. The loft space is lined with timber sarking which is in very good condition. There is a brick gable end on the southern elevation which has a small window in it. The gable end is in good condition with no gaps around the sides of the brickwork that bats could use to enter the loft space. Due to the presence of a window in the gable end there is a significant amount of daylight entering the loft space. Void dwelling bats are less likely to roost in the loft space because there are few dark areas.



B1 – loft space 1 (pictured opposite).

There are numerous stored items on the floor of the loft space which made it easier to search for evidence of bat activity because when present, bat droppings can accumulate on top of the stored items.

Internal conditions: temperature 17°C, humidity 50%.

Approximate internal dimensions: 5m long x 5m wide x 2m high (floor to ridge height).



B1 – loft space 2 (pictured opposite).

Loft space 2 is situated in the central pitched roof. The loft space is built from modern timber beams. The roof is lined with timber sarking which is in very good condition. The floor of the loft space is covered in mineral wool insulation.

Internal conditions: temperature 18°C, humidity 50%.

Approximate internal dimensions: 9m long x 3m wide x 1.5m high (floor to ridge height).



B1 – loft space 3 (pictured opposite).

Loft space 3 is located on the eastern side of the building. The loft space is identical in build to the other loft spaces. There is a skylight window on the eastern side of the pitched roof which allows a significant amount of daylight into the loft spaces and reduces the likelihood of void dwelling bats roosting in the loft space.

Internal conditions: temperature 18°C, humidity 51%.

Approximate internal dimensions: 3m long x 2m wide x 2m high (floor to ridge height).



B2 Exterior

B2 – northern elevation (pictured opposite).

B2 is a detached two storey brick built building with a sloped roof. The roof is lined with bitumen felt which is in good condition. The building has timber fascia boards around the top of the building which are in good condition.

There are large metal garage doors located on the northern elevation of the building.



B2 – south elevation (pictured opposite).

The roof overhangs the building on the southern elevation and there are gaps below the roof that bats and birds could use to enter the building (see red arrows).

The windows and doors are timber framed and are in good condition with no gaps around the sides that bats could roost in.



B2 – south elevation (pictured opposite).

There is a *Clematis* sp. plant growing on the eastern elevation of the building and a *Wisteria* sp. plant which could be used by nesting birds.



B2 Interior

B2 – interior (pictured opposite).

The roof structure is built from modern timber beams which provide suitable roosting opportunities for void dwelling bats. The roof is lined with timber sheets which are in good condition. There are numerous stored items on the floor of the garage which made it easier to search for evidence of bat activity because when present, bat droppings can accumulate on top of the stored items. There are windows located on the southern and western elevations which allow a significant amount of daylight to enter the building. In addition, the garage doors are left open. There are few dark areas inside the building that void dwelling bats could roost in. As such, the building is unlikely to be suitable for void dwelling bats.

Internal conditions: temperature 17°C, humidity 51%.

Approximate internal dimensions: 11m long x 9m wide x 2.5m high (floor to ceiling height).

**B3 Exterior**

B3 – southern elevation (pictured opposite).

B3 is built into the earth and is located below the patio area to the south of B1 and B2. The single wall on the southern elevation is brick built and is rendered. There is a single gap in the rendered wall which was too shallow for bats to roost in. The patio area above the building overhangs on the southern elevation and there are timber posts that support the structure.



B3 Interior

B3 – interior (pictured opposite).

The roof structure is built from metal beams. The open doors and windows allow a significant amount of daylight to enter the building, as well as wind ingress. There are few dark areas inside the building that void dwelling bats could roost in and the internal conditions are unlikely to be stable enough for void dwelling bats. As such, the building is unlikely to be suitable as a day roost for void dwelling bats.

Internal conditions: temperature 17°C, humidity 55%.

Approximate internal dimensions: 10m long x 3m wide x 2.5m high (floor to ceiling height).

**3.7 Protected species evidence**

There were approximately 10 bat droppings located inside B3. The bat droppings were attached to the eastern wall and some were on top of bricks that were on the floor. The size, shape and colour of the bat droppings indicates that they were deposited within the last twelve months by a serotine bat *Eptesicus serotinus*.

The bat droppings have been circled for clarity (pictured opposite). A sample of the bat droppings was collected for DNA analysis.



In addition to the bat droppings inside the building, there were numerous moth wings situated adjacent to the bat droppings which indicates that the building is used as a feeding roost by a single serotine bat.



4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

Likelihood of the presence of protected species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat. The likelihood of occupancy of protected species is ranked according to the criteria listed in Table 1.

Where this report supports a planning application, the ecological interest of the study area (including the survey area) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It is clearly stated where a preliminary value can be given and where further information is required.

Likelihood of the presence of bats

There are three possible outcomes of the PRA element of the survey, each with specific recommendations. These are outlined below:

Confirmed bat roost

Best practice survey guidelines (Collins, 2016) recommends additional surveys for confirmed roosts. Three further surveys are required to characterise the bat roost present including species, roost type and access points to inform a European protected species mitigation licence (EPSML) application with Natural England. Surveys must be completed during the active bat season (May – September). At least two of the surveys should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey (Collins, J. 2016).

Low, moderate or high likelihood of a bat roost present

Best practice survey guidelines (Collins, 2016) recommends additional surveys for features assessed as having low to high suitability for roosting bats. One, two or three further surveys are required to confirm presence or likely-absence of a bat roost, based on a low, medium or high roost likelihood evaluation. Surveys must be completed during the active bat season (May – September). If more than one survey is recommended, at least one of them should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey (Collins, J. 2016). If two or one further survey is recommended these surveys must be completed during the optimal survey period (mid-May to August). For low and moderate roost likelihood evaluation the survey effort recommended at this stage is iterative and if bats roosts are confirmed in the building, a further survey will be required to provide sufficient information to inform an EPSML application to Natural England.

Negligible likelihood of a bat roost present

Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. However, if bats are found during any stage of the development, work should stop immediately and a suitably qualified ecologist should be contacted for further advice.

Appropriate justification for this assessment is provided in Section 2.3 of this report.

4.2 Evaluation

Taking the desk study and site survey results into account, the following conclusions for ecological factors has been reached.

Table 7: Evaluation of site

Ecological Factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018)
Designated sites	The site is not subject to any designation. However, the Magic database shows that the Surrey Hills AONB is located within 1km of the site.	The proposed development is not of a sufficient scale to have an impact on any nearby designated sites.	No further surveys.	Not applicable.
Notable habitats and plants	There are scattered mature trees located on the site boundary which are habitats of value to various species including birds and invertebrates. The mature trees will be retained. None of the trees have features that are suitable for bat roosting. There is deciduous woodland located adjacent to the south east of the site.	The trees will be retained.	The trees on site must be protected during construction in line with BS5837:2012.	New trees could be planted and should comprise native species that are sourced locally so that they complement the existing habitat. A wildflower meadow area should be incorporated into the landscaping of the developed site.
Invasive or non-native species	No invasive and non-native species recorded on site.	N/A	No further surveys.	N/A
Bats B1	The building has high habitat value to support roosting bats. There are numerous external roosting features on the building including gaps under raised roof tiles and raised hanging tiles on the dormer windows. These suitable roosting features could be used by crevice dwelling bats such as common pipistrelles. The MAGIC database search revealed granted European protected species mitigation licences for the destruction of bat roosts in close proximity to the site, one of which involved the destruction of a crevice dwelling bat roost located approximately 530m south of the development site. Displaced bats from this roost could have relocated to the noted external features on the survey building. These findings, taken together with the desk study support the conclusion that	As the proposals include the extension of this building, any bat roosts could be destroyed. This could result in the death, injury or disturbance of bats.	Three bat emergence or re-entry surveys are required during the active bat season (May – September) to confirm a presence or likely-absence of bat roosts in this building. At least two of the surveys should be completed during the optimal survey period mid-May to August inclusive. Sub-optimal: early May and September. One of these surveys must be a dawn re-entry survey. Three surveyors are required to provide full coverage of buildings B1.	To be confirmed following further surveys.

	the building has high habitat value (Collins, 2016), and presents an unacceptable risk of harm to bats if the development proceeds without further survey effort.			
Bats B2	The building is assessed as having negligible habitat value to support roosting bats. There are no suitable external roosting features that crevice dwelling bats could roost in. Although void dwelling bats could enter the building through gaps in the wall on the southern elevation, the internal conditions are not considered suitable for void dwelling bats due to the amount of daylight that enters the building.	No foreseen impacts.	No further surveys. In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licenced ecologist contacted for further advice.	To be confirmed following further surveys on B1.
Bats B3	The building is a confirmed feeding roost. Approximately 10 bat droppings were situated within the building as well as feeding remains. The size, shape and colour of the droppings indicates that they were deposited within the last 12 months by a serotine bat. There are few dark areas inside the building that void dwelling bats could roost in and the internal conditions are unlikely to be stable enough for void dwelling bats. As such, the building is unlikely to be suitable as a day roost for void dwelling bats. In addition, there are no suitable external roosting features that crevice dwelling bats could roost in.	As the proposals include the demolition of this building, the roost will be destroyed. This could result in death, injury or disturbance of bats.	The bat roost inside the building has been characterised as a feeding roost. Further information about how the roost is used by bats can be obtained by installing a static bat detector inside the building during the survey period of B1.	To be confirmed following further surveys.

Birds	Birds could nest in the scattered trees and hedgerows around the site boundary. There are climbing plants on B2 which are suitable for nesting birds.	Active nests could be destroyed during the development.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the building and vegetation by an ecologist must be undertaken immediately prior to the commencement of works. All active nests will need to be retained until the young have fledged.	Install three Schwegler bird boxes on retained trees or buildings on site e.g. Schwegler No 17 swift nest box Schwegler 1SP Sparrow Terrace Schwegler 1B nest boxes Nest boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole. Sparrow Terraces and swift nest boxes should be positioned at the eaves of the new buildings and can be incorporated into the fabric of the buildings during construction.
Reptiles	There is limited suitable reptile habitat on site in the form of boundary vegetation. Because the habitats on site are actively maintained it is highly unlikely that reptiles are present on site.	The proposed development will have no impacts on common reptiles.	No further surveys. If a reptile is found during the development all work must immediately cease and an ecologist contacted for advice.	Waste materials created during the development e.g. log piles, brush, rocks etc. Can be used to create hibernacula and refugia for common reptiles. These should be positioned on the site boundary below hedgerows.
Amphibians	There is one pond located approximately 430m from the development area which could not be assessed because it is on private land. Should the pond support great crested newts (GCN), the habitat between the development site and the ponds is fragmented by a road and residential areas which form a barrier to dispersal. Therefore, it is highly unlikely that GCN will be present on site at any time of year.	No foreseen impacts.	No further surveys.	Not applicable due to major barriers separating survey site from suitable amphibian habitat in the wider landscape.

<p>Other Terrestrial Mammals</p>	<p>Badgers No evidence of badger activity on site. Badgers could forage nearby and commute across the site.</p>	<p>Badgers No impacts on any badger setts however precautionary approach to work should be implemented.</p>	<p>Badgers No further surveys. However, the following recommendations are given in order to mitigate against potential harm to badgers during the development works.</p> <ul style="list-style-type: none"> • Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. • Security lighting to be directed away from the undergrowth. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. 	<p>Badgers Planting fruit trees on the developed site will provide additional foraging resources for badgers.</p>
	<p>Water Vole No suitable habitat.</p>	<p>Water Vole The proposed development will have no impact on water voles.</p>	<p>Water Vole No further surveys.</p>	<p>Water Vole N/A.</p>
	<p>Otter No suitable habitat.</p>	<p>Otter The proposed development will have no impact on otters.</p>	<p>Otter No further surveys.</p>	<p>Otter N/A.</p>
	<p>Hedgehogs The site provides suitable habitat for hedgehogs in the form of garden areas. No suitable hedgehog habitat will be lost.</p>	<p>Hedgehogs No foreseen impacts.</p>	<p>Hedgehogs No further surveys. However, the following recommendations are given in order to mitigate against potential harm to hedgehogs during the development works.</p> <ul style="list-style-type: none"> • Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. • Security lighting to be directed away from the undergrowth. • Any chemicals or pollutants used or created by the development should be stored and 	<p>Hedgehogs Gaps should be created in any new boundary fences to provide commuting routes through the developed site for hedgehogs. Hedgehog houses should be incorporated into the developed site positioned beneath the hedgerow in shady areas of the garden.</p>

			disposed of correctly according to COSHH regulations.	
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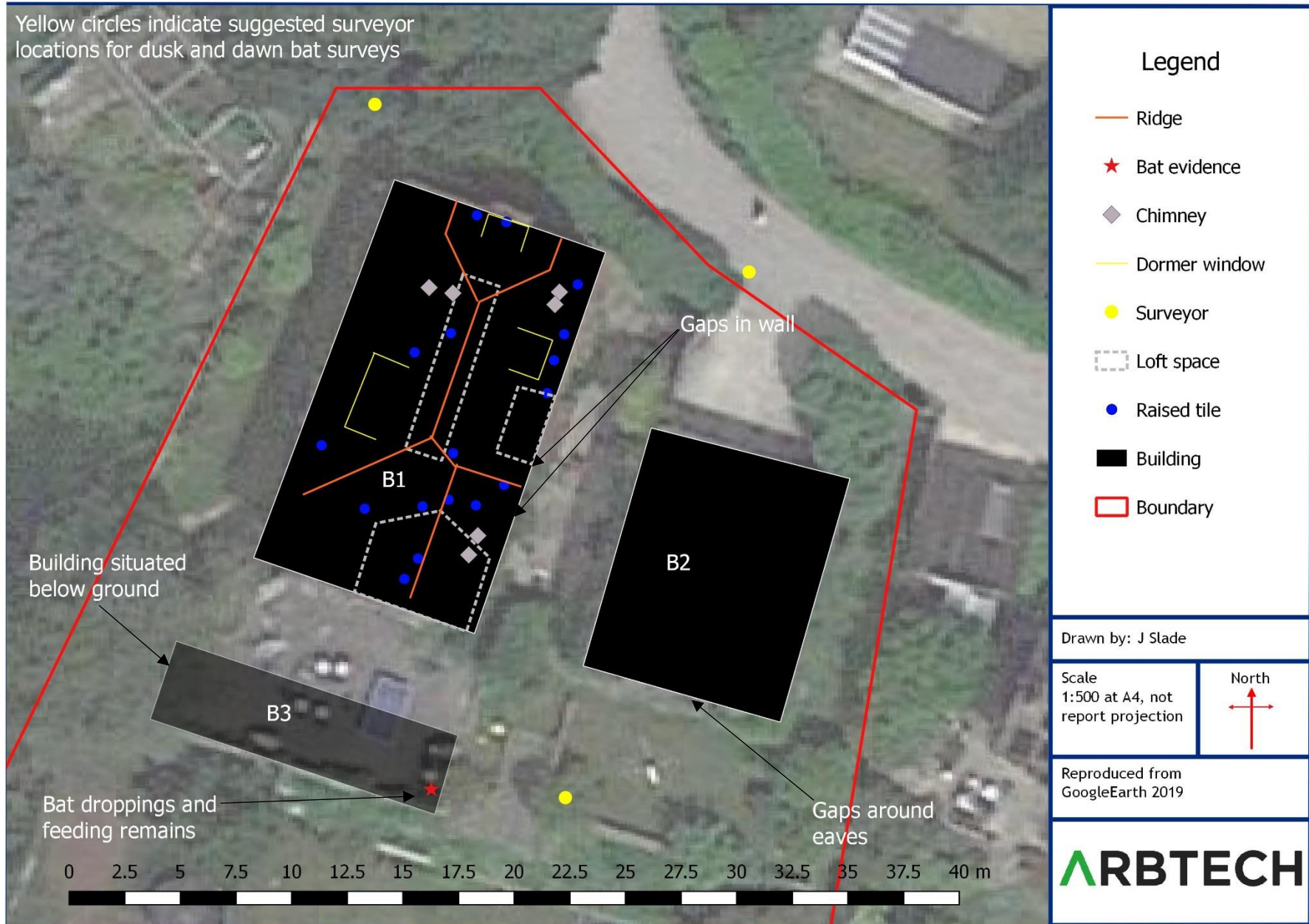
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Appendix 1a: Phase 1 Habitat Survey Map



Appendix 1b: Preliminary Roost Assessment Survey Map



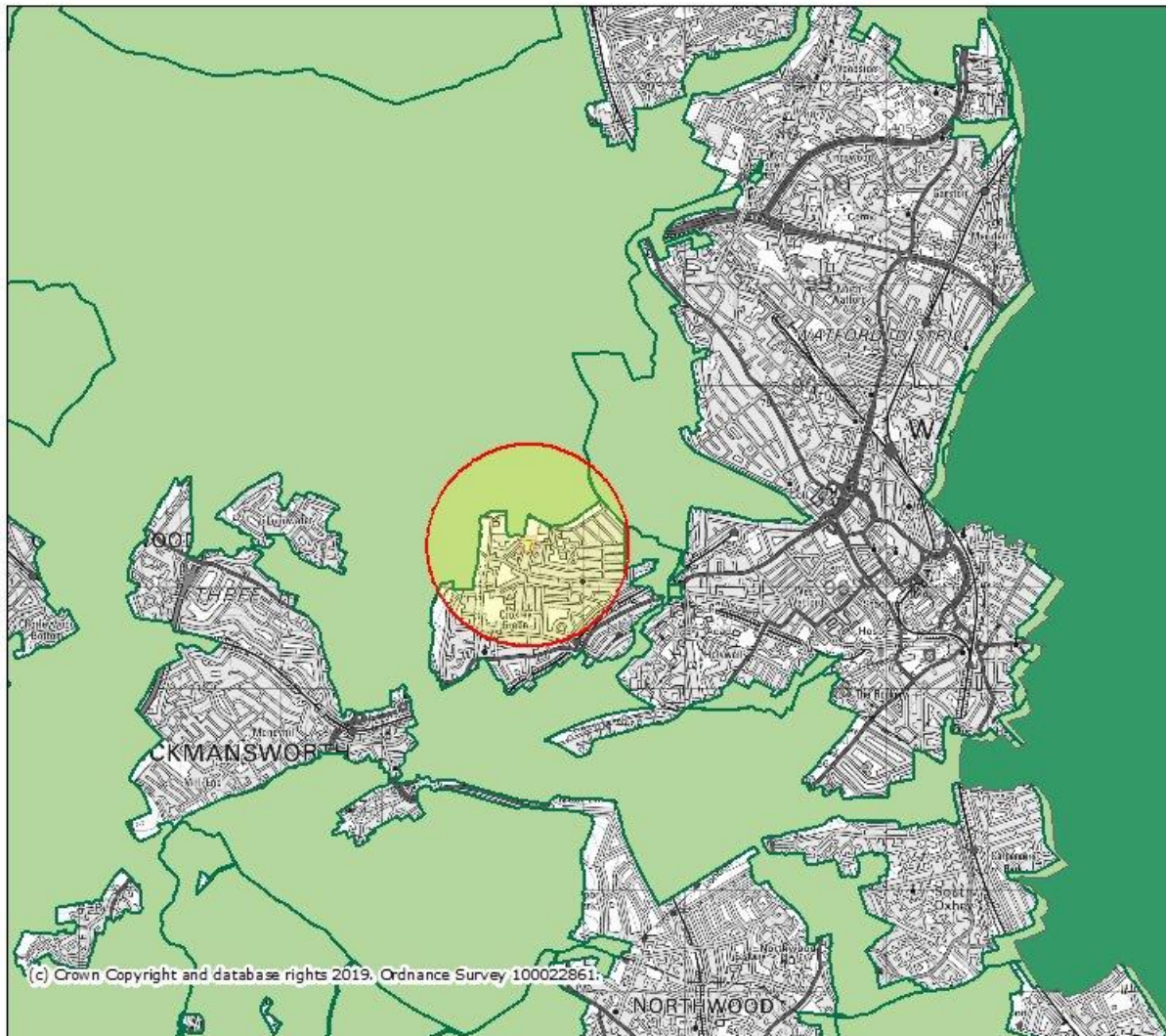
Appendix 2: Proposed Site Plan



Appendix 3: Desk Study Information
 Full historical records can be provided on request.

MAGiC

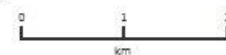
Non-statutory sites



Legend

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- Green Belt (England)

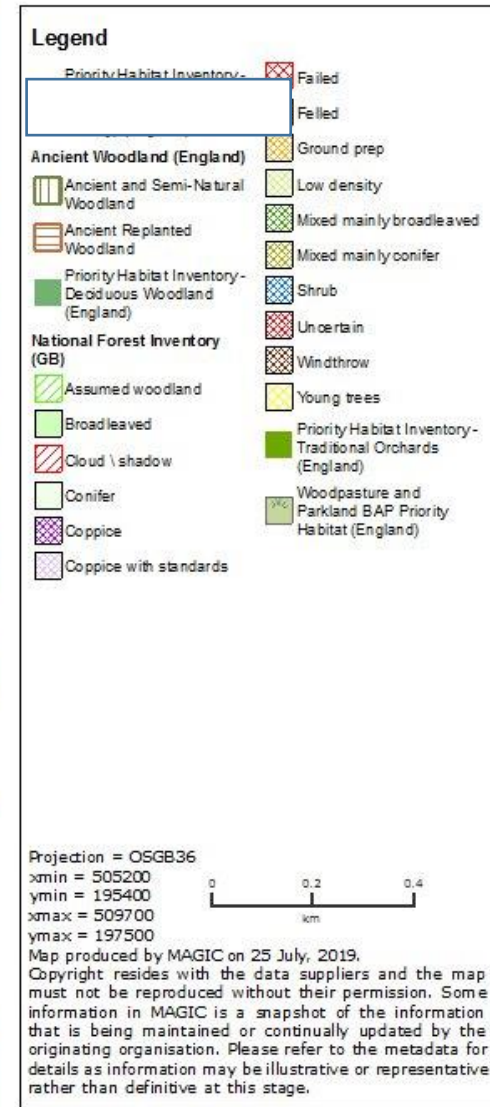
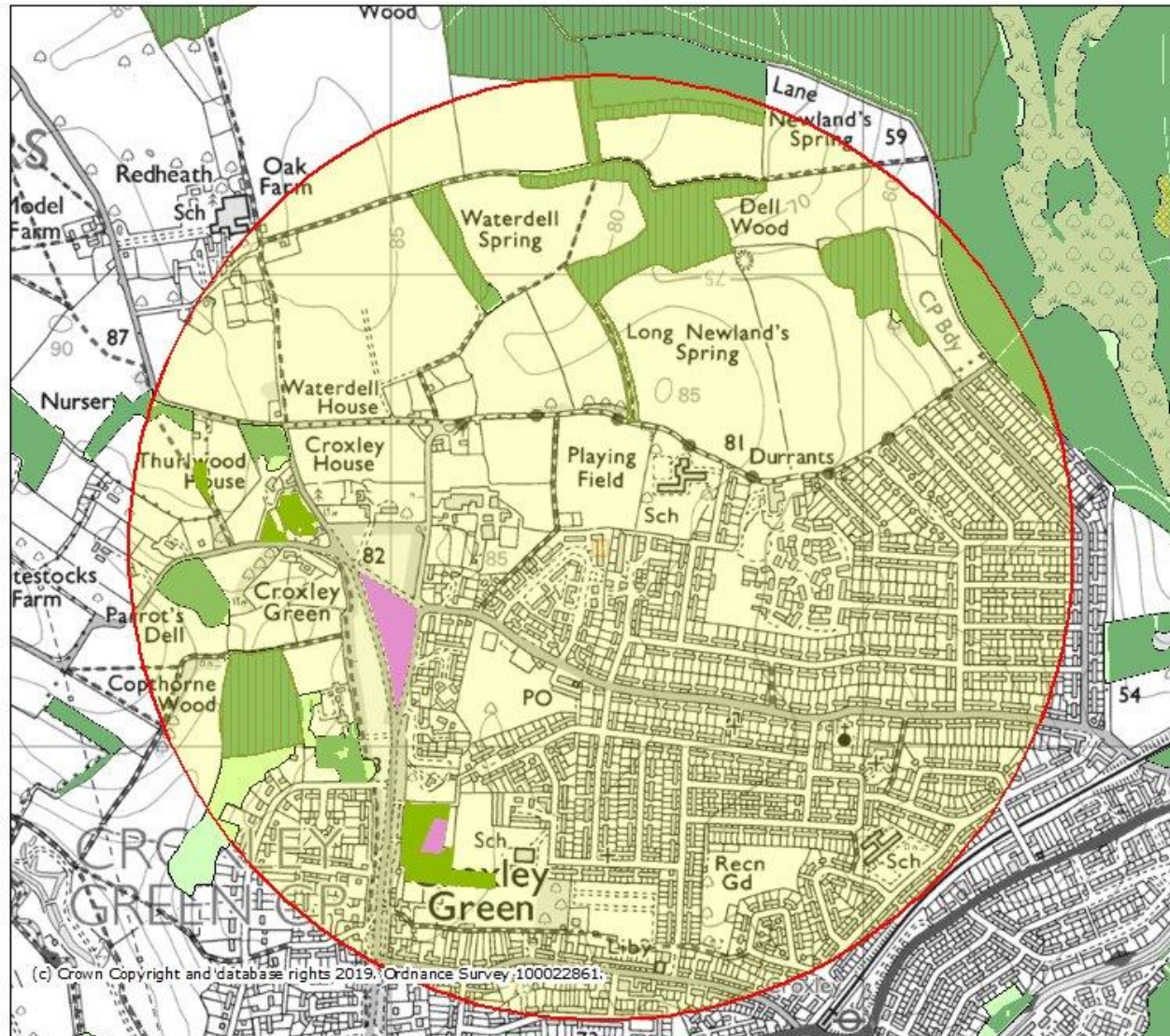
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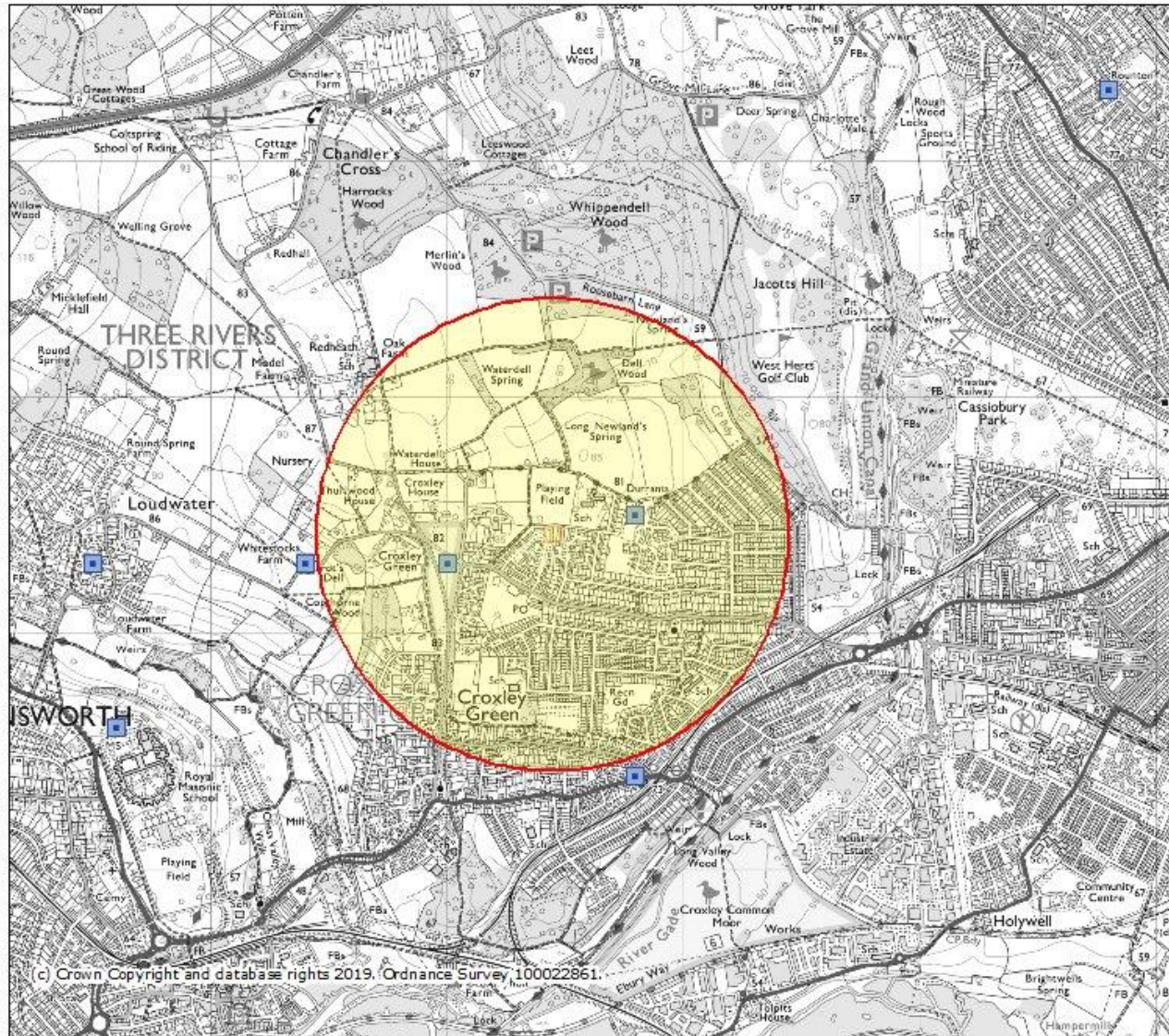


Map produced by MAGiC on 25 July, 2019.
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MAGIC

Habitats





Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

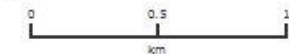
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Map produced by MAGiC on 25 July, 2019.

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Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1,000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many annex II species): a strict protection regime must be applied across their entire natural range within the EU, both within and outside Natura 2000 sites.

Annex V species (over 90): Member States must ensure that their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles from the coast (i.e. 'territorial waters') are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2017 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994.

The Conservation of Offshore Marine Habitats and Species Regulations 2017 consolidate and update the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007. The 2017 Regulations introduce amendments which transfer responsibility for European nature conservation in the Welsh offshore region to Welsh Ministers. This gives Welsh Ministers similar powers in Welsh offshore waters to those currently exercised by Scottish Ministers in Scottish offshore waters. These regulations transpose into national law Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), and elements of Council Directive 2009/147/EC on the conservation of wild birds (Wild Birds Directive) in the UK offshore area. They came into force on 30th November 2017. These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area. The Conservation of Habitats and Species Regulations 2017 form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12nm in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as "*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*".

However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of 'migration' and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests':

- The action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;
- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett

- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agency's to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as "Schedule 1" birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

Works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Reptiles (Amphibians and reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

Effects on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

Effects on development works:

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species

- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Dormice

Hazel Dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales (NB: Hazel Dormouse are entirely absent from Scotland)). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White clawed crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking
- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

It is also classified as Endangered in the IUCN Red List of Endangered Species. As a result of this and other relevant crayfish legislation such as the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, a series of licences are needed for working with White-clawed and non-native crayfish. These are:

- A licence to handle crayfish (therefore survey work) in England
- A licence for the keeping of crayfish in England and Wales with an exemption for Signal crayfish (England).
- People in the post-code areas listed with crayfish present prior to 1996 do not need to apply for consent for crayfish already established. It does not, however, allow any new stocking of non-native crayfish into waterbodies. Consent for trapping of non-native crayfish for control or consumption is most likely to be granted in Thames and Anglian regions in the areas with "go area" postcodes.
- Harvesting of crayfish is prohibited in much of England and in any part of Scotland and Wales.

Effects on development works:

The relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

Effects on development works:

An EPSM licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for works which are likely to affect species of plants listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

National Planning Policy Framework (England)

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Scottish Planning Policy (Published: 23 Jun 2014)

The SPP sits alongside the Scottish Government planning policy documents. The National Planning Framework (NPF) provides a statutory framework for Scotland's long-term spatial development. The NPF sets out the Scottish Government's spatial development priorities for the next 20 to 30 years.

A Natural, Resilient Place - Valuing the Natural Environment (National Planning Framework Context) Paragraph 193. The natural environment forms the foundation of the spatial strategy set out in NPF3. The environment is a valued national asset offering a wide range of opportunities for enjoyment, recreation and sustainable economic activity. Planning plays an important role in protecting, enhancing and promoting access to our key environmental resources, whilst supporting their sustainable use.

Policy Principles: Paragraph 194. The planning system should:

- Facilitate positive change while maintaining and enhancing distinctive landscape character;
- **Conserve and enhance protected sites and species, taking account of the need to maintain healthy ecosystems and work with the natural processes which provide important services to communities;**
- Promote protection and improvement of the water environment, including rivers, lochs, estuaries, wetlands, coastal waters and groundwater, in a sustainable and co-ordinated way;
- Seek to protect soils from damage such as erosion or compaction;

- Protect and enhance ancient semi-natural woodland as an important and irreplaceable resource, together with other native or long-established woods, hedgerows and individual trees with high nature conservation or landscape value;
- Seek benefits for biodiversity from new development where possible, including the restoration of degraded habitats and the avoidance of further fragmentation or isolation of habitats; and
- Support opportunities for enjoying and learning about the natural environment.

Planning Policy Wales (Draft 2018)

Paragraph 5.42 of the document refers to Biodiversity and Ecological Networks and states:

The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. Information contained in The State of Natural Resources Report (SoNaRR) (published by Natural Resources Wales and Area Statements should be taken into account. Development plan strategies, policies and individual development proposals must take into account the need to:

- Promote the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- Ensure statutorily designated sites are properly protected and managed;
- Safeguard protected species; and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil; and
- Seek enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Environment (Wales) Act 2016 and the Biodiversity Duty

The Environment (Wales) Act introduces a new biodiversity duty, which highlights biodiversity as an essential component of ecosystem resilience. This new duty replaces the biodiversity duty in the Natural Environment and Rural Communities Act 2006 (referred to as the NERC Act). Part 1 of the Act deals with Sustainable management of natural resources including Biodiversity and Resilience of Ecosystems Duty. The Environment Act enhances the current NERC Act duty to require all public authorities, when carrying out their functions in Wales, to seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”. As under the NERC Act the new duty will apply to a range of public authorities such as the Welsh Ministers, local authorities, public bodies and statutory undertakers. This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty)

- 5.44 Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. Planning authorities must also take account of and promote the resilience of ecosystems, in particular the following aspects:
- a) Diversity between and within ecosystems;
 - b) The connections between and within ecosystems;
 - c) The scale of ecosystems;
 - d) The condition of ecosystems (including their structure and functioning); and
 - e) The adaptability of ecosystems.
- 5.45 In fulfilling this duty, planning authorities must have regard to:
- a) The list of habitats of principal importance for Wales, published under Section 7 of the Environment (Wales) Act 2016;
 - b) The State of Natural Resources Report (SoNaRR), published by NRW; and
 - c) Any Area Statement that covers all or part of the area in which the authority exercises its functions.
- 5.46 A proactive approach towards facilitating the delivery of biodiversity and resilience outcomes should be taken by all those participating in the planning process. In particular, planning authorities should demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions. The broad framework for implementing the duty and building resilience through the planning system includes addressing:
- Diversity: to ensure mechanisms are in place to minimise further loss and that circumstances allow for species' populations to expand and recolonise their natural range (former range) or adapt to future change. This means development should provide a net benefit for biodiversity, and at the very least, with no significant loss of habitats or populations of species, locally or nationally;
 - Extent: to ensure mechanisms allow for the maintenance of existing assets and networks and promote the restoration of damaged, modified or potential habitat and the creation of new habitat. This means that planning choices should incorporate measures which seek the creation and restoration of green networks and linkages between habitats and maintaining and
 - enhancing other green infrastructure features and networks;
 - Condition: this is more complex to address, not least because of the interactions of various factors which underpin habitats. At the very least planning approaches should not compromise the condition of ecosystems. By taking an integrated approach to development, for example, which considers both direct and wider impacts and benefits it should be possible to make a positive contribution through the planning system; and
 - Connectivity: to take opportunities to develop functional habitat and ecological networks across landscapes, building on existing connectivity and quality and encouraging habitat creation and restoration. The opportunities could include enlarging habitat areas, developing buffers around designated sites or other biodiversity assets or corridors (including transport and river corridors) and the creation of 'stepping stones' which will strengthen the ability of habitats and ecological networks to adapt to change, including climate change.