



Preliminary Ecological Appraisal

7 Mill Hill, Shoreham-by-Sea

November 2023

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7 Mill Hill, Shoreham-by-Sea

28/11/2023

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Non-technical Summary

Phlorum Ltd was commissioned by Fresh Architects to undertake a Preliminary Ecological Appraisal and Bat Building Inspection (BBI) which was carried out at 7 Mill Hill, Shoreham-by-sea, BN43 5TG on the 18th July 2023 in order to determine whether any ecological constraints could affect the proposed works for the site.

Current proposed development plans involve the demolition of the existing building and the construction of a new building which includes a basement. The survey area extended over approximately 0.2 hectares (ha).

The main findings of the surveys are as follows:

-  The site is not subject to any statutory or non-statutory designations. The closest statutory site is The Adur Estuary Site of Special Scientific Interest (SSSI) located 0.5km to the west at its closest point and the survey area does not support any features that contribute to the designation of this site.
-  The site comprises buildings, hardstanding, introduced shrub, compost piles, planted beds, hedge, hedge and trees, and individual trees.
-  It is recommended that targeted surveys in respect to bats are carried out.
-  In addition, a precautionary approach to site clearance in respect to breeding birds, foraging badgers, reptiles, hedgehogs and stag beetles is recommended to minimise any adverse impacts on these species groups.

Further information on precautionary working practices and additional surveys together with recommended mitigation and enhancement measures are discussed in Section 5.

1. Introduction

Background

- 1.1 Phlorum Ltd has been commissioned by Fresh Architects to undertake a Preliminary Ecological Appraisal, with a Bat Building Inspection (BBI) to inform the potential ecological constraints of proposed future development at 7 Mill Hill, Shoreham-by-sea, BN43 5TG (hereafter referred to as “the site”).
- 1.2 The purpose of the Preliminary Ecological Appraisal was:
 - 🌿 to identify the major habitats present;
 - 🌿 to identify the potential for any legally protected species to be present; and
 - 🌿 to recommend any additional ecological surveys, if required.
- 1.3 As part of the assessment, a desktop review and a site visit were carried out. The results of which were used to assess the nature conservation importance of the site and the potential of the site to support protected species.
- 1.4 This report has been compiled in accordance with current guidelines (British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development, 2013 and CIEEM, 2017 and 2018).
- 1.5 It is understood that the proposed development is for the demolition of the existing building and the construction of a new building which includes a basement.






Site Location

- 1.6 The site is located at 7 Mill Hill, Shoreham-by-sea, BN43 5TG. The site is in a residential area, with a large green space adjacent to the western boundary, the river Adur SSSI 0.5km to the west, residential areas to the east and south of the site and the Shoreham-by-pass immediately to the north. In the wider surroundings are the town of Shoreham, the Adur estuary Shoreham beach, the English Channel to the south, and agricultural fields to the north and the Mill Hill and Benfield Hill LNRs to the north and northeast.
- 1.7 The National Grid Reference for the centre of the site is TQ21250640. The survey area extended over approximately 0.2 hectares (ha).

2. Methodology

Desk Study & Consultations

Database and Map Search









- 2.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites, legally protected species and features of interest within a 2km radius of the site. The database and map search was based on available information provided by the following sources:
-  Sussex Biodiversity Records Centre (SxBRC, 2023);
 -  Multi-Agency Geographical Information for the Countryside (MAGIC, 2023);
 -  Ordnance Survey mapping;
 -  Aerial photography; and
 -  The Woodland Trust online Ancient Tree Inventory.

Habitat Survey and Assessment








- 2.2 Phlorum Limited carried out an ecological survey of the site on the 18th July 2023. The survey was carried out by a suitably qualified ecologist, Harry Webster who has over 3 years' professional experience of undertaking ecological surveys. The survey results and assessment was reviewed by Paul Carter (BSc (Hons), MBA and awaiting MCIEEM application), an ecologist with over 20 years of experience of managing ecological and landscaping projects, and by the project director Richard Schofield (BSc (Hons), MSc, CSJK, MCIEEM, MIEMA, CEnv), with over twenty years of experience in managing projects. The weather conditions during the survey were sunny and clear.
- 2.3 The field survey comprised a walkover inspection of the land and habitats present. The survey followed standard Phase 1 survey methodology (JNCC, 2010) and covered all accessible parts of the site, including boundary features. The description of the site habitats has used the code/referencing from The UK Habitat Classification User Manual 2.0 (UKHab 2023). UKHab uses primary habitat codes, either on their own or followed by one or more secondary codes. Each individual code is separated by a space. Habitats were described and mapped (Figure 1: Appendix A). A list of plant species was compiled, together with an estimate of abundance made according to the DAFOR scale. The DAFOR scale provides an estimate of the relative abundance of plant species within the Survey Area (Appendix D).

- 2.4 This assessment provides information on the habitats in the survey area and identifies actual or potential presence of legally protected or otherwise notable species/habitats in or immediately adjacent to the site.
- 2.5 Target notes highlighting a particular feature of ecological interest are provided in Appendix B, with associated photographs.
- 2.6 Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species.

Protected Species Assessment

- 2.7 The potential for the site to provide habitat for protected species was assessed from field observations in conjunction with results of the desk study. The site was inspected for indications of the presence of protected species including:
 -  Habitat considered suitable to support widespread reptile species including areas with a scrub/grassland mosaic and potential hibernation sites;
 -  On-site ponds offering potential breeding opportunities for great crested newts (*Triturus cristatus*) and the presence of suitable terrestrial habitat including hedgerows and rough grassland;
 -  The presence of features in and on trees indicating potential for roosting bats (Chiroptera), including knot and rot holes and loose bark. Secondary evidence of bats including staining, droppings, and feeding remains were also looked for;
 -  The presence of nesting habitat for breeding birds, including mature trees, dense scrub, and hedgerows, and direct evidence of bird nesting including bird song, old nests etc.;
 -  Habitats considered suitable to support badger (*Meles meles*) setts, and evidence in the form of hair, pathways, and latrines;
 -  Presence of woodland and/or hedgerows providing suitable habitat to support hazel dormice (*Muscardinus avellanarius*);
 -  Riparian habitat supporting suitable features for water voles (*Arvicola amphibius*) and otters (*Lutra lutra*); and the
 -  Presence of nationally protected and/or invasive plants.
- 2.8 The potential presence for protected species is categorised as **Negligible, Low, Moderate, High, or Present**, based on the findings of the field survey and on the evaluation of existing data.
- 2.9 The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species or mitigation should be recommended.

Preliminary Roost Assessment

- 2.10 The inspection of the onsite buildings was carried out on the 18th July 2023 concurrently with the initial habitat survey, in accordance with good practice guidelines (Collins, 2016).
- 2.11 The interior and exterior of the structures were inspected closely with the aim of identifying the presence of bats and any secondary evidence together with any potential roost sites. Secondary evidence includes droppings, feeding remains, scratch marks and oil and urine staining.
- 2.12 The external inspection comprised a detailed search of all accessible architectural features for bat droppings, urine staining, scratch marks, staining around suitable crevices and feeding remains. A high-powered torch was used to illuminate internal features at height, for instance the apex of the roof and associated supporting beams, and these were inspected using close focusing binoculars when required.
- 2.13 In accordance with current standing advice issued by Natural England (2015), the following types of bat roosts were considered during the assessment:
-  Day Roost - where individual bats, or small groups of males, rest or shelter in the day
 -  Night Roost - where bats rest or shelter at night between foraging in the active period, but rarely during the day
 -  Feeding 'Perch' Roost - where bats hang to eat or catch their prey or rest at night between feeding sessions.
 -  Hibernation Roost - where bats are found during winter. These roosts typically comprise a stable environment where bats can enter torpor; these areas are normally of a constant temperature.
 -  Transitional or Occasional Roost - where individual or small numbers of bats gather at a temporary site before and after hibernation.
 -  Maternity Roost – where female bats give birth and raise their young.
 -  Satellite Roost – an alternative roost found in close proximity to the main nursery roost colony and used by a few individual breeding females to small group of breeding females through the breeding season.

Caveat

Data Search Constraints

- 2.14 It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

Survey Constraints

- 2.15 Ecological surveys are limited by factors that affect presence of plants and animals such as seasonality. Whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the environment.
- 2.16 The survey was carried out during the growing season and therefore most species would be expected to be visible and identifiable.
- 2.17 The appraisal does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species. This survey provides a preliminary view of the likelihood of protected species occurring on the site based on the suitability of the habitat, known distribution of the species in the local area, and any direct evidence on the site. It is therefore used as a tool to recommend further protected species surveys (or other species of significant nature conservation interest) if on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.
- 2.18 It is however considered that the survey was sufficiently rigorous to assess the ecological value of the site.

Bat Survey Constraints

- 2.19 Bats are mobile animals which can move roost sites throughout the year. It is possible that surveys carried out in July may miss roosts not occupied until later in the year. However, where undisturbed, it is generally possible to find secondary evidence of bats throughout the year.
- 2.20 It is considered that the survey was sufficiently rigorous to assess the ecological value of the site for the purposes of this assessment.

Limitations

- 2.21 This appraisal also does not constitute as a full invasive species survey. All surveys are subject to the conditions on site at the time of the survey. Site surveys are non-intrusive and rely on the visual identification of aboveground growth. If parts of a site are inaccessible, then these areas can often not be surveyed unless they can be viewed from other areas. If any aboveground growth is being managed or has been disturbed or covered, or the below ground growth is dormant, then it may be impossible for us to identify invasive plants in these areas during our non-intrusive survey.

3. Baseline Conditions

Aerial Photography and OS Maps

- 3.1 Aerial photographs and OS maps show the site to be predominantly urban gardens and residential areas to the east, agricultural land to the north, northwest and southwest and the river Adur to the west and south. There appear to be several drainage ditches/streams within 500m of the site.

Statutory and Non-Statutory Designated Sites

Statutory Sites

- 3.2 The closest statutory designated site is The Adur Estuary Site of Special Scientific Interest (SSSI) located 0.5km to the west. The Adur Estuary is home to a RSPB reserve at the southmost curve. The site also sits within the UNESCO Brighton and Lewes biosphere reserve.
- 3.3 Table 1 provides a list of statutory sites within 2km of the site.

Table 1: Statutory sites within 2km of the site

Site Name	Reason for Designation	Area (ha)	Distance from the Site
UNESCO Brighton & Lewes Downs Biosphere Reserve	Three interrelated environments rural, coastal & marine and urban make up the biosphere reserve area. The habitats include coastal chalk cliffs, sub-tidal chalk reef, freshwater wetland, shingle beaches, river estuaries, deciduous woodland and chalk grassland. The area is home to many rare and species of international conservation interest.	29,514	Within
Mill Hill Local Nature Reserve LNR	Unimproved herb-rich downland on a steep west-facing slope. The site consists of a mosaic of open grassland, grassland with scattered scrub and patches of dense scrub. The site is of butterfly importance, with over 25 species recorded including nationally rare and important species. A number of species of grasshopper have been recorded including two of	35	0.3km to the north

	note, the Stripe-winged Grasshopper and Great Green Bush-cricket. Parts of the hill now support dense scrub. It provides nesting sites for Linnet, Yellowhammer, Whitethroat and Lesser Whitethroat.		
Adur Estuary Site of Special Scientific Interest SSSI	The Adur Estuary, together with Rye Harbour further to the east, represent the only significant areas of saltmarsh between Chichester and Pagham Harbours in West Sussex, and Sandwich Bay in Kent. The estuarine plant communities are unusual due to the relative scarcity of cord-grass, <i>Spartina</i> spp. The large area of intertidal mudflats within the estuary are important for a variety of wading birds. The intertidal mudflats of the Adur Estuary support a number of wading birds, particularly redshank, dunlin and ringed plover. The number of ringed plover regularly exceed 1% of the total British population, making the estuary of national importance for this species. The estuary embankment near the car park supports a large colony of viviparous lizards, (<i>Lacerta vivipara</i>).	62.2	0.5km to the northwest, west, southwest and south

Non-Statutory Sites

- 3.4 The closest non-statutory designated site is The River Adur Meadows Local Wildlife Site (LWS). Table 2 provides a list of non-statutory sites within 2km of the site.

Table 2: Non-statutory sites within 2km of the site

Site Name	Reason for Designation	Area (ha)	Distance from the Site
The River Adur Meadows Local Wildlife Site LWS	The site consists of two relatively herb-rich meadows, located on the eastern bank of the River Adur. The meadows are crossed by ditches, which contain an interesting variety of species.	13.9	0.6km to the northwest

Old Erringham Farm Valley and Road Cutting Local Wildlife Site LWS	The site includes a shallow valley, running east to west, which has rich grassland on its sides, an area of storm damaged woodland with some mature trees and supports an extremely diverse chalk grassland community. There are also three derelict ponds and a disused quarry within the boundary. A White-letter Hairstreak butterfly colony occurs on the Elms.	14.8	1.5km to the northwest
Shoreham Beach Local Wildlife Site LWS	The beach provides one of the largest and best examples of coastal vegetated shingle in the county, a habitat of international importance. This habitat supports an exceptional assemblage of invertebrates, including a large number of notable species. The vegetation includes a number of rare plant species such as Starry Clover <i>Trifolium stellatum</i> .		1.8km to the south

Ancient Woodland

- 3.5 There is no ancient woodland covering any part of the site or immediately adjacent to the site. No trees on or adjacent to the site are listed on the Woodland Trusts' Ancient Tree Inventory.

Habitats

Site Summary

- 3.6 The site comprised buildings, hardstanding, modified grassland, introduced shrub, planted beds, hedge, hedge and trees, standalone trees and a compost pile.
- 3.7 The main habitats recorded within the site are described below. The UKHab code is shown in the bracket after the habitat type (UKHab 2023). Additional details are shown on the habitat survey plan in Appendix A, and the target notes are listed in Appendix B.

Buildings

- 3.8 There were four buildings at the site which included a main house (B1), two garages (B2 and B3), and a shed (B4).

Building 1

- 3.9 B1 was a multi-storey detached house with a gable roof and vacant internal loft. A chimney stack was located at the western elevation of the building. A built-on conservatory was also located at the western aspect. The roof had clay tiles with several gaps and loose tiles noted. The building also had French double glazed sealed windows. Overall the building was in a good state of repair, with no obvious points of ingress or egress recorded.

Building 2 and 3

- 3.10 B2 and B3 were identical detached garages located either side of each other. The garages had hipped gable roofs with no internal loft space. Both roofs had clay tiles which appeared to be in good condition without gaps or holes. Both garages were in use as storage and for car parking.

Building 4

- 3.11 B4 was a shed within the garden at the northern site boundary. The shed was wooden with a single skin felt roof. Inside, there were garden tools and gardening equipment, and no obvious sign of ecological value.

Hardstanding

- 3.12 The area surrounding B1, B2, and B3 was noted as hardstanding. This included the tarmacked driveway, and concrete tiles to the west of B1.

Modified Grassland

- 3.13 The entire garden was close-mown lawn which was dry and brown at the time of the survey. This meant species identification of herbs at the ground layer was not possible.

Introduced Shrub

- 3.14 Shrub planting was prominent at the west boundary, and there was a pergola planted with fruit trees at the southeast extent of the site. Species noted include fig (*Ficus carica*), cherry (*Prunus sp.*), Portuguese laurel (*Prunus lusitanica*), and grape vine (*Vitis vinifera*).

Planted Beds

- 3.15 There were planted beds at the northern extent of the site which was a vegetable bed. There was also a bed running parallel with the southern aspect of B1.

Hedge

- 3.16 Hedges with a low mix of species were present at the north, west, and south boundary. Species noted include privet (*Ligustrum ovalifolium*), hazel (*Corylus avellana*), and holly (*Ilex aquifolium*).

Standalone Trees


- 3.17 There were two individual semi-mature trees noted at the east and west boundaries. Species noted include holly and Scots pine (*Pinus sylvestris*).

Compost Pile

- 3.18 A compost pile was present at the southwest boundary.

Target Note (TN)

- 3.19 The following features of interest were noted during the survey and have been marked on Figure 1:

 **TN1** – Loose clay tiles at B1.

Preliminary Roost Assessment

- 3.20 The buildings on site were all examined externally for features that could indicate use by bats.
- 3.21 Building 1, was inspected thoroughly internally, including all roof spaces. Potential ingress/egress points including missing tiles to the south and west elevations of the building roof, allowing potential access for roosting bats were observed.
- 3.22 The remaining buildings were examined internally and externally. No evidence of use by bats was seen. There was little in the way of potential points of egress.

Protected Species

- 3.23 Legislation relating to the protected species referred to in this section is included in Appendix C.
- 3.24 The following paragraphs detail the suitability of the on-site habitats to support protected species and include information from the data search for protected, rare and otherwise notable species returned within a 2km radius.

Bats

- 3.25 The data search showed records of bats from the genera pipistrelle (*Pipistrellus*), long eared (*Plecotus*), myotis (*Myotis*), serotine (*Eptesicus*), Noctule/Leisler's (*Myctalus*), occurring within the 2km search area in the past 15 years. There have been European protected Species Licenses for bats granted as shown in drawing 2 above. The closest of these is approximately 1.5km to the southeast.
- 3.26 During the survey potential bat roosting features were seen on building 1. These included missing/loose and lifted tiles to the south and west roof elevations.
- 3.27 Overall, it was considered that the onsite building 1 offered **low** potential for roosting bats and buildings 2, 3 and 4 offered **negligible** potential for roosting bats.

Amphibians

- 3.28 The data search showed no records of great crested newt (*Triturus cristatus*) and several records of palmate (*Lissotriton helveticus*) and smooth newt (*Lissotriton vulgaris*) within 2km of the site within the past 15 years. Aerial photographs and maps show several waterbodies ponds within 250m/500m of the site.

- 3.29 During the survey no water was seen on site. The habitat on the site was not considered to be suitable for amphibians. The grassland habitat was intensively mown, and there were no waterbodies and therefore considered to be unsuitable.
- 3.30 It was considered that the site offered **negligible** potential for breeding newts and **low** potential for foraging and commuting newts.

Reptiles

- 3.31 The data search showed several records of slow worm (*Anguis fragilis*), grass snake (*Natrix helvetica*), adder (*Vipera berus*) and common lizard (*Zootoca vivipara*) within 2km of the site within the past 15 years.
- 3.32 The habitat on the site was not considered to be suitable for reptiles. The grassland habitat was intensively mown, with introduced planting bordering which was considered to be unsuitable. The compost pile was considered to be relatively small and fragmented, but could provide habitat for reptiles, albeit at low densities due to the unsuitable habitat across the rest of the site.
- 3.33 Overall, the site was assessed as having **moderate** potential to support reptiles.

Birds

- 3.34 Several Red or Amber listed Birds of Conservation Concern¹ (BoCC), and notable² bird species were returned by the data search that may utilise habitats within the site. Species include swift (*Apus apus*), lesser spotted woodpecker (*Dryobates minor*), and house sparrow (*Passer domesticus*).
- 3.35 During the survey it was noted that the onsite trees/hedgerows/buildings provided suitable habitat for nesting birds.
- 3.36 Overall it was considered that the site offered **moderate** potential for breeding birds.

Badgers

- 3.37 Records for this species are kept confidentially and were not returned by the data search.
- 3.38 The habitat on site was not suitable for breeding badgers. However, it was suitable for commuting and feeding badgers.
- 3.39 Overall, the site offered **negligible** potential for breeding badgers and **low** potential for foraging and commuting badgers.

¹ Birds of Conservation Concern status is prioritised into high concern (Red), medium concern (Amber) and low concern (Green) (Eaton et al, 2009). Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and have not shown a substantial recent recovery. Amber-list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations. Green-list species are those that fulfil none of the criteria.

² Notable Birds are based on a list of birds that are particularly scarce or vulnerable either at national or a regional level. The majority of these bird species are designated as Schedule 1 species, under the Wildlife and Countryside Act 1981 (as amended), or listed as red or amber-listed BoCC.

Hazel Dormice

- 3.40 The data search showed no records of dormice within 2km of the site within the past 15 years.
- 3.41 The site did not contain the type or density of vegetation that would be suitable for supporting either breeding or commuting dormice.
- 3.42 Overall, it was considered that the site offered **negligible** potential to support breeding dormice and **negligible** potential to support commuting dormice.

Water Voles

- 3.43 The data search showed no records of water vole within the 2km search area in the past 15 years.
- 3.44 The site did not contain the aquatic habitat and vegetation types that would support breeding, foraging or commuting water vole.
- 3.45 Overall, it was considered that the site offered **negligible** potential to support breeding water voles and **negligible** potential to support commuting and foraging water voles.

Otters

- 3.46 Reports of otter are not returned by the record centre in this area.
- 3.47 The site did not contain the aquatic habitat and vegetation types that would support breeding, foraging or commuting otters.
- 3.48 Overall, it was considered that the site offered **negligible** potential to support breeding otter and **negligible** potential to support foraging and commuting otter.

Hedgehogs

- 3.49 The data search showed several records of hedgehogs (*Erinaceus europaeus*) within 2km of the site within the past 15 years.
- 3.50 No direct evidence of hedgehogs was seen on the site. However, the presence of short grassland could have provided the hibernation and foraging areas for this species.
- 3.51 Overall, the site offered **low** potential for hedgehogs.

Stag Beetles

- 3.52 The data search showed several records of stag beetle (*Lucanus cervus*) within 2km of the site within the past 15 years.
- 3.53 No direct evidence of stag beetles was seen on the site. However, the presence of a compost heap could have provided the dead wood required for this species.
- 3.54 Overall, the site offered **low** potential for stag beetle.

Invasive Plants

- 3.55 The data search showed records of plant species including Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Reynoutria japonica*) occurring within the 2km search area in the past 15 years. These plants are listed as invasive in Schedule 9 Part II of the Wildlife and Countryside Act (1981 amended).
- 3.56 During the survey no specimens were seen of plant species that are listed in Schedule 9 Part II of the Wildlife and Countryside Act (1981 amended) or appear on the Non Native Species Secretariat (NNSS, 2023)³ register of species that are of concern.

³ GB Non Native Species Secretariate (NNSS) (2023). Accessed from www.nonnativespecies.org
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4. Evaluation

- 4.1 On the basis of the information available from the habitat survey and desk study, the site has been evaluated in terms of its potential for biodiversity, support of protected species and habitats, and the contribution the area makes as part of the wider landscape. The nature conservation value of the site has been assessed following standard criteria developed by CIEEM (2017 and 2018) and in accordance with BS 24040:2013 Biodiversity – code of practice for planning and development. This is provided below.
- 4.2 The biodiversity value of protected species within the site is a preliminary evaluation based upon the desk study records, habitat suitability, and the conservation status of the species in question. It should be noted that where European Protected Species (EPS) or species of Principle Importance for the Conservation of Biodiversity are present on-site they may be valued at a lower level/scale where it is considered likely that populations would not be of sufficient importance to justify designation at a higher level. However, regardless of their biodiversity value, such species are still subject to national and/or European legislation.
- 4.3 Key aspects of relevant planning policy regarding conservation, including an explanation of species referred to as being of 'Principal Importance for Conservation of Biodiversity' and European Protected Species and habitats, are provided in the Legislation section in Appendix C.

Geographic Evaluation

Features of International Importance

- 4.4 Features of International Importance are principally sites covered by international legislation or conventions. The Conservation of Habitats and Species Regulations 2017 (as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 implements the Natural Habitats and Wild Fauna and Flora (92/43/EC) (Habitats Directive) in England and Wales. The Regulations mainly deal with the protection of sites with certain habitats and populations of species that are important for nature conservation in a European context, i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- 4.5 The site is not subject to any international statutory nature conservation designations. The closest site of International Importance is Castle Hill SAC located 15km to the east at its closet point. The designated habitats of this SAC are semi-natural dry grasslands and scrubland facies on calcareous substrates which are priority habitat "orchid rich sites". The site does not provide any supporting habitat for this designated site or its qualifying species. There are no sites of International Importance within 12km of the site.

Features of National Importance

- 4.6 Features of national importance include Sites of Special Scientific Interest (SSSIs) which are designated under the Wildlife and Countryside Act 1981 (as amended). The site is not subject to any national statutory nature conservation designations and it is not considered that any habitats or populations or assemblages of species within the site would meet the criteria for the designation of SSSIs at an appropriate geographic level⁴.
- 4.7 The closest designated site of national importance for nature conservation is The Adur Estuary Site of Special Scientific Interest (SSSI) located 0.5km to the west at its closest point. The site does not provide any supporting habitat for this SSSI.
- 4.8 The site is also located within the 10km Impact Risk Zone of The Adur Estuary Site of Special Scientific Interest (SSSI) but the site does not have any supporting habitat for this SSSI.

Features of Regional (i.e. Sussex) Importance

- 4.9 The site does not include any features of value at this level neither is it likely to be selected as a SINCE based on the results of the current survey.

Features of District (i.e. Adur) Importance

- 4.10 The site is relatively small and does not support any features that were considered to be of value at this level.

Features of Local (i.e. Shoreham-by-Sea) Importance

- 4.11 The site does not support any features that were considered to be of value at this level.

Features of Value Immediate Vicinity (c. 250m) of the Project

- 4.12 The on-site vegetation is of value within the immediate vicinity and provides suitable habitat to support protected species including breeding birds, foraging badgers, hedgehogs and stag beetles. It also forms part of the wider ecological network of habitats in the locality, providing wildlife corridors for mobile species to move through the landscape.

Summary


- 4.13 Overall on the basis of the survey results and the above criteria, habitats within the site are considered to be of low ecological value within the immediate vicinity only. The site provides suitable habitat to support several protected species and groups including breeding birds, foraging badgers, hedgehogs and stag beetles. However, populations of these are unlikely to be locally significant.

⁴ JNCC Guidelines for selection of biological SSSIs (see <http://jncc.defra.gov.uk/page-2303#download>).

Local Plan Evaluation

- 4.14 It is considered that the statutory Adur District Council Local Plan (Adopted 2017) contains the following nature conservation policies relevant to the site. A list of the policies is provided below. The full text of the relevant policies is contained in the Legislation section in Appendix C and this should also be referred to.

Adur Local Plan (2017)

-  Policy 31: Biodiversity.

5. Discussion and Recommendations

Discussion

- 5.1 The survey site is located at 7 Mill Hill, Shoreham-by-sea, BN43 5TG. The survey area extended over approximately 0.2 hectares (ha). Habitats to be impacted by the development proposals include buildings, hardstanding, modified grassland, introduced shrub, planted beds, hedge, hedge and trees, and standalone trees.
- 5.2 Design proposals include the demolition of the existing building and the construction of a new building which includes a basement.
- 5.3 Habitats within the proposed development area were assessed as being of low value to wildlife within the local vicinity with potential to support breeding birds, foraging badgers, reptiles, hedgehogs and stag beetles and these species may pose a constraint to works.
- 5.4 It is recommended that targeted surveys in respect to bats is undertaken in order to determine presence or likely absence.
- 5.5 In addition, a precautionary approach to site clearance in respect to breeding birds, foraging badgers, reptiles, hedgehogs and stag beetles. is recommended to minimise any adverse impacts on these species groups.
- 5.6 Details regarding specific mitigation, including further surveys and precautionary working practices together with habitat enhancement measures are provided below.

Recommendations

Bats



- 5.7 Bats receive protection under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (as amended).
- 5.8 Due to building 1's low potential suitability to support roosting bats, a single emergence or re-entry survey is recommended in order to provide information on if and how bats are using the site. This survey must be undertaken during the peak active period for bats taken to run between May and August.
- 5.9 The results of the bat survey can then be used to inform specific mitigation and enhancement measures for this species group to include a lighting scheme that is sympathetic to bats.
- 5.10 Where a roost is likely to be impacted by the works, and where avoidance is not possible, it may be necessary to obtain a European Protected Species Mitigation (EPSM) Licence before the works can proceed and to complete any necessary mitigation.

- 5.11 Such a licence would need to be obtained from Natural England once full planning permission is in place. The application will require the drafting of a detailed mitigation strategy including timing and construction methods in addition to the mitigation measures proposed. Natural England currently require 30 working days to determine a licence application.
- 5.12 If a bat roost is found for a common bat species and the roost is of low conservation value, then a Low Impact Class Licence may be obtained for the site instead. This type of licence is typically obtained within 15 days.

Breeding Birds

- 5.13 The on-site trees/hedgerows/buildings provide suitable nesting habitat for a range of bird species. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).
- 5.14 In order to avoid any potential impact on breeding birds, the clearance of any trees /hedgerows / demolition of buildings should be undertaken outside the main bird nesting season which runs from March to August inclusive⁵, with clearance works possible between September and February. Where this is not possible, an ecologist would need to check the vegetation for active nests and signs of bird breeding activity.
- 5.15 In the event that a nest is found, an exclusion zone around the nest would be established. Works would have to cease within this buffer area until the young birds have fledged.

Badgers

- 5.16 Badgers receive protection under The Protection of Badgers Act 1992.
- 5.17 Due to the potential presence of badgers in the area, a series of general precautions are recommended. This will include the following;
-  Throughout construction, all on-site contractors must be made aware of the potential presence of badgers in the locality and a tool box talk should be given by a qualified ecologist immediately prior to the start of construction works to discuss the potential for badgers to pass through the site and to provide information on legislation and the ecology of this species.
 -  All trenches should be covered at night or if this is not possible, ramps must be installed into the trenches to enable badgers to escape should they enter the excavations. All materials must be stored safely and lids securely fitted, particular waste and other potential food sources.

⁵ It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

Reptiles

- 5.18 All reptiles are protected under the Wildlife and Countryside Act 1981 (as amended).
- 5.19 The proposed development is considered to have a relatively low impact on any potential reptile populations that may be present. It is therefore felt that a precautionary approach to vegetation clearance should be sufficient to safeguard this protected species group. This would involve vegetation and compost clearance to be carried out in stages in order to avoid any potential impacts on reptiles. This work should be supervised by a suitably experienced ecologist.

Hedgehogs

- 5.20 Hedgehogs are listed on the Natural Environment and Rural Communities (NERC) Act 2006 Section 41 as a Species of Principal Importance and a London BAP Priority Species. They are a rapidly declining species.
- 5.21 Hedgehogs need short grass areas to search for invertebrate prey. Log piles and decaying vegetation are used to forage and hibernate in. Areas of leaf litter can be collected and used in nests. Dense scrub areas are also useful to build hibernation nests during winter. Wildlife friendly corridors allow hedgehogs and other wildlife to migrate across a site. These are discussed in the Wildlife Friendly Pathways Section below.

Stag Beetles

- 5.22 Stag beetles are a Species of Principle Importance for the UK and are also listed on the Sussex Rare Species inventory, therefore a precautionary approach to the clearance of all dead wood should be taken during works. Where possible the standing dead wood around the site boundaries should be retained as part of the works. Where the dead trees pose a health and safety risk, the above ground section should be felled and the arisings stacked on the ground. The tree base and root system of these trees should be retained where possible.
- 5.23 Where it is not possible to retain these areas, the root system of the dead trees should be removed under an ecological watching brief and any larvae encountered should be removed to suitable retained deadwood habitat elsewhere around the site boundaries.

Habitat Retention

- 5.24 All retained trees, including all adjacent off-site trees should be protected in accordance with British Standards (BS 2012) 5837:2012 Trees in Relation to Design, Demolition and Construction. The root protection areas of any retained trees must be left free from excavation and disturbance, and protected during any proposed works. Protection should be in the form of fencing and signs installed for the duration of the works.

Habitat Enhancement

- 5.25 New development offers the opportunity for habitat enhancement in accordance with national and local planning policy and some recommendations are included below.

Bird and Bat Boxes

- 5.26 Additional bird nesting and bat roosting provision could be incorporated into new design proposals. These could either be installed on trees or incorporated into the new building design. Some recommendations are made below as a guide.
- 5.27 Bat roosting opportunities could be provided through the installation of boxes on the outside of the walls or remaining trees, such as the Schwegler 2F, or other makes of a similar design, such as Chavenage Bat box. There are a range of bat boxes available and these can be selected to suit the development and bat species in the locality.
- 5.28 Bird boxes could be installed on the walls of the new building or in the remaining trees which could include the following Schwegler bird house or 1B makes, or similar designs from alternative suppliers. If the client is happy for bird boxes to be installed on the walls of the new building then a Schwegler sparrow terrace 1SP could also be used.
- 5.29 Further details of the bird and bat boxes are provided in Appendix F.
- 5.30 Bat boxes should be installed at appropriate locations ideally with south-east, south, or south-west facing aspects at least 3m from ground level. Ideally they need to be exposed to 6-8 hours of direct sunlight, but sheltered from strong winds. If installed on the building, these should ideally be positioned directly below the eaves.
- 5.31 Bird Boxes should be located out of prevailing wind, rain, and strong sunlight, ideally with a clear flight path to the entrance. Ideally they should be installed two to four metres from the ground facing north or north-east.

Wildlife Friendly Pathways









- 5.32 The increase in building can result in ecological areas which are unconnected. Effectively these are ecological islands, and often there is no way for wildlife to migrate to and from these areas. One way to reduce the impact and allow wildlife, including hedgehogs, to migrate across sites is to install wildlife friendly pathways across a site. This can include a range of things such as wildlife corridors, such as hedgerows and scrub or rough grassland corridors, but also installing holes in fences. Wildlife holes, often referred to as hedgehog holes, help wildlife migrate through areas. The holes need to be at least 13cm by 13cm, at ground level.

Compensatory Planting

- 5.33 Additional tree and shrub planting could be incorporated into the landscape proposals to compensate for any removal to facilitate the works. Planting should include a high proportion of native species and be of local provenance where possible. These should be carefully selected to ensure they contain species suitable for the area. Some species of known wildlife value are listed in Appendix E.

6. Conclusions

6.1 The site survey revealed the following habitats:

-  Buildings;
-  Hardstanding;
-  Modified Grassland;
-  Introduced Shrub;
-  Planted Beds;
-  Hedge;
-  Standalone Trees ; and
-  Compost pile

6.2 The site is not subject to any statutory or non-statutory designations. The closest statutory site is The Adur Estuary Site of Special Scientific Interest (SSSI) located 0.5km to the west at its closest point and the survey area does not support any features that contribute to the designation of this site.

6.3 The following protected species surveys are recommended in order to determine presence or likely absence:

-  Bats (at B1)

6.4 In addition, a precautionary approach to site clearance in respect to breeding birds, foraging badgers, reptiles, hedgehogs and stag beetles is recommended to minimise any adverse impacts on these species groups.

6.5 It has been recommended that the site is enhanced by introducing some compensatory planting and installing bat and bird boxes.

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8. Glossary of Terms

BAP	Biodiversity Action Plan
BRC	Biological Records Centre
CIEEM	Chartered Institute of Ecology and Environmental Management
Habitats Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographical Information for the Countryside
NNR	National Nature Reserve
Nomenclature	The system of devising of names for plants
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal- formerly referred to as a Phase 1 Habitat Survey
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Figures and Appendices

Appendix A

Habitat Map and Target Notes

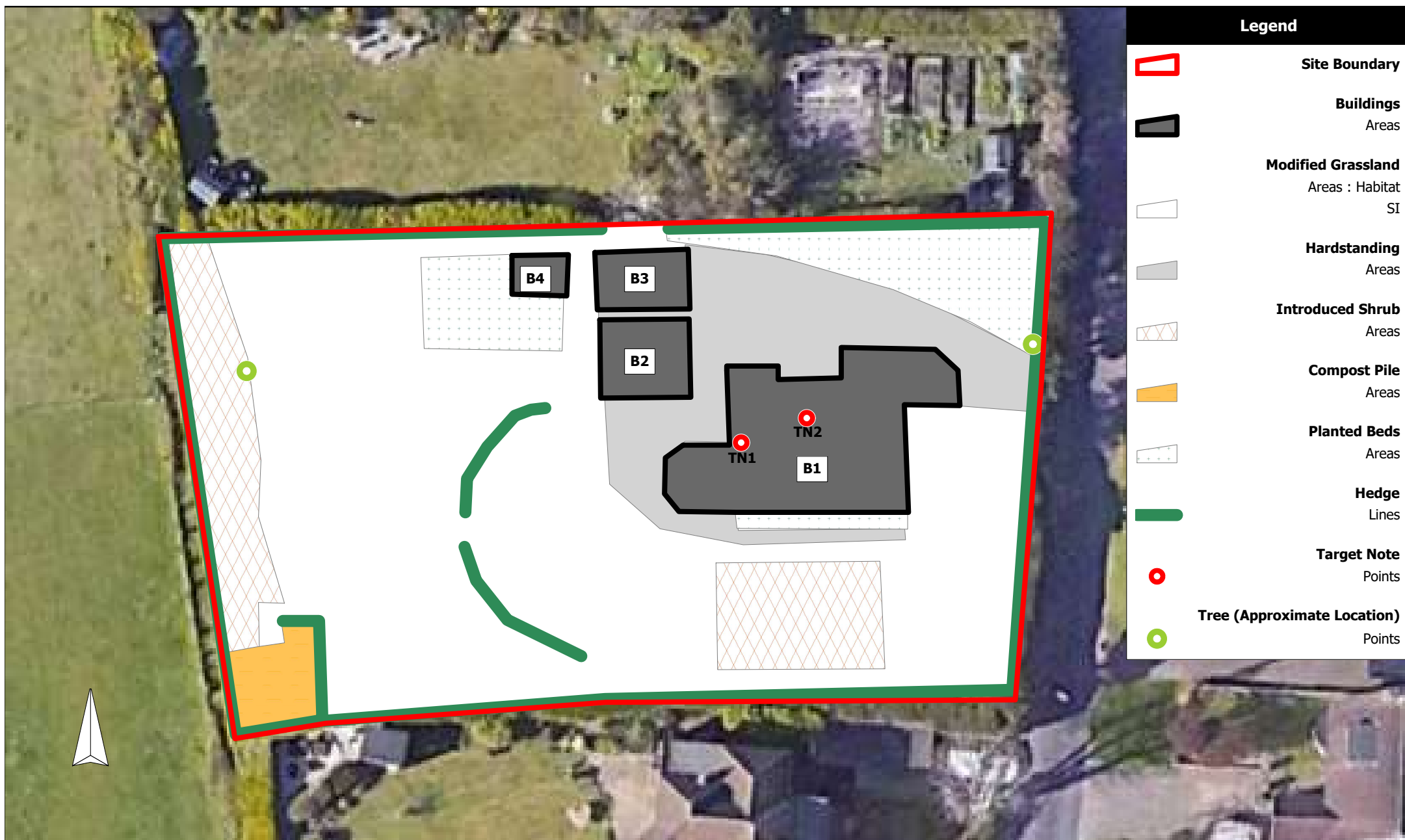


Figure 1: 7 Mill Hill Habitat Survey Map

Drawn by: HW
 On the: 13/11/2023
 Not to Scale
 Ref: 12059



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Target Notes (TN)

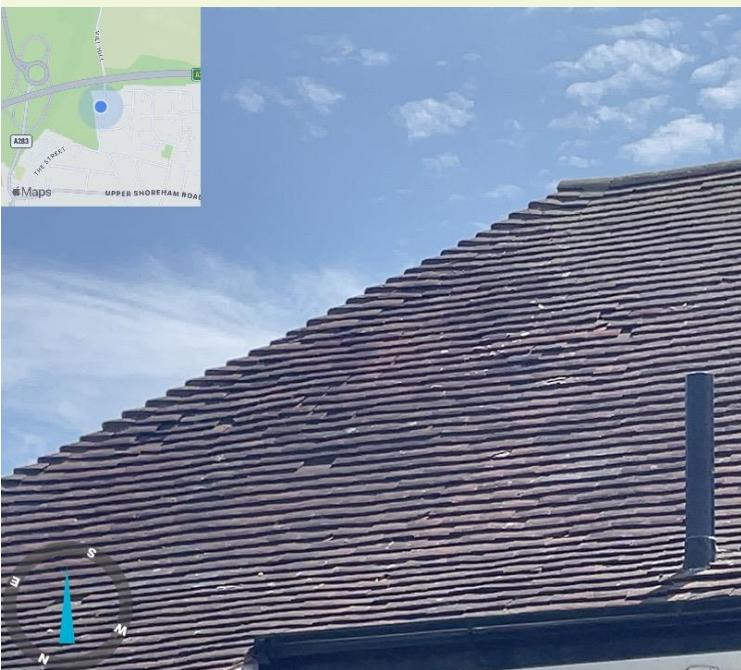
The following features of interest were noted during the survey and have been marked on Figure 1:

-  **TN1 – Loose tiles at B1**

Appendix B

Photographs

Photographs

Photo No.	Feature (Target Note No.)	Photograph of Feature
1	TN1: Loose tiles at B1	 The photograph shows a close-up of a dark brown tiled roof. Several tiles are missing or loose, revealing the underlying structure. A vertical pipe or vent is visible on the right side of the roof. In the top left corner of the photograph, there is an inset map from Apple Maps showing the location of the site (marked with a blue dot) in relation to 'THE STREET' and 'UPPER SHOREHAM ROAD'. A compass rose is overlaid on the bottom left of the photograph, indicating North (N), South (S), East (E), and West (W).

2

Modified grassland and
introduced shrub



3

Building 1 (B1)



4

Building 2 (B2)



5

Building 3 (B3)



Appendix C

Legislation

Legislation

This section contains information pertaining to the legislation and planning policy applicable in Britain. This information is not applicable to Northern Ireland, the Republic of Ireland the Isle of Man or the Channel Islands. Information contained in the following appendix is provided for guidance only.






Species

The objective of the EC Habitats Directive⁶ is to conserve plants and animals which are considered to be rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and also implements the obligations set out for species protection from the Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Various amendments have been made since the Wildlife & Countryside Act came into force in 1981. Further details pertaining to alterations of the Act can be found on the following website: www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

There are a number of other legislative Acts affording protection to species and habitats. These include:







-  Countryside and Rights of Way (CROW) Act 2000;
-  Deer Act 1991;
-  Natural Environment & Rural Communities (NERC) Act 2006;
-  Protection of Badgers Act 1992; and
-  Wild Mammals (Protection) Act 1996.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to the previous Badger Acts of 1973 and 1991. Under this legislation it is an offence to:

-  cruelly ill-treat a badger, including use of tongs and digging;




⁶ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

-  intentionally or recklessly cause a dog to enter a badger sett;
-  intentionally or recklessly damage, destroy or obstruct access to a badger sett⁷ or any part thereof;
-  intentionally or recklessly disturb⁸ a badger when it is occupying a badger sett;
-  possess or control a dead badger or any part of a badger;
-  sell or offers for sale, possesses, or has under his control, a live badger; and
-  wilfully kill, injure, take, or attempt to kill, injure, or take a badger.



A Development Licence will be required from Natural England for any development works affecting an active badger sett, or to disturb badgers while individuals are occupying the sett. Depending on the nature of the works and the specifics of the sett, badgers could be disturbed by work near the sett even if there is no direct interference or damage to the sett itself. Natural England has issued guidelines on what constitutes a licensable activity. There is no provision in law for the capture of badgers for development purposes and therefore it is not possible to obtain a licence to translocate badgers from one area to another.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). This act protects individuals from:

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

In addition, all species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

-  deliberate killing, injuring, or capturing of Schedule 2 species (all bats);
-  deliberate disturbance of bat species as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.

⁷ A badger sett is defined in the legislation as *"any structure or place which displays signs indicating current use by a badger"*. This includes seasonally used setts. Natural England (2009) have issued guidance on what is likely to constitute current use of a badger sett: www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

⁸ For guidance on what constitutes disturbance and other licensing queries, see Natural England (2007) Badgers & Development: A Guide to Best Practice and Licensing. www.naturalengland.org.uk/Images/badgers-dev-guidance_tcm6-4057.pdf, Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf, Scottish Natural Heritage (2002) Badgers & Development. www.snh.org.uk/publications/online/wildlife/badgersanddevelopment/default.asp and Countryside Council for Wales (undated) Badgers: A Guide for Developers. www.ccw.gov.uk.

- 🌱 deliberate disturbance of bat species as to affect significantly the local distribution or abundance of the species;
- 🌱 damage or destruction of a breeding site or resting place; and
- 🌱 keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part thereof.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake activities listed above. A licence is required to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Breeding Birds

Under the Wildlife & Countryside Act, 1981 (as amended), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

Under the Wildlife & Countryside Act, 1981 (as amended), all birds, their nests and eggs are protected under Sections 1-8 of the Act and it is an offence, with certain exceptions, 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 the egg of any wild bird;
- 🌱 have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act;
- 🌱 have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act;
- 🌱 use traps or similar items to kill, injure or take wild birds;
- 🌱 have in one's possession or control any bird (dead or alive) unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations; and
- 🌱 in Scotland only, intentionally or recklessly obstruct or prevent any wild bird from using its nest.

Certain rare species receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). 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; and
- in Scotland only, intentional or reckless harassment.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

- historical population decline during 1800-1995, but recovering: population has more than doubled over last 25 years;
- moderate (25-49%) decline in UK breeding population over last 25 years;
- moderate (25-49%) contraction of UK breeding range over last 25 years;
- moderate (25-49%) decline in UK non-breeding population over last 25 years;
- species with unfavourable conservation status in Europe (Species of conservation Concern);
- five year mean of breeding pairs in the UK;
- ≥50% of UK breeding population in 10 or fewer sites;
- ≥50% of UK non-breeding population in 10 or fewer sites;
- ≥20% of European breeding population in UK; and
- ≥20% of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK.



Hazel Dormice

The hazel dormouse (*Muscardinus avellanarius*) is fully protected under The Conservation of Habitats and Species Regulations 2017 through its inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring, or capturing;
- deliberate disturbance as to impair its ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of this species.

The hazel dormouse is also currently protected under the Wildlife and Countryside Act 1981 (as amended) through its inclusion on Schedule 5. Under this Act, this species is additionally protected from:






- intentional or reckless disturbance;

-  intentional or reckless obstruction of access to any place of shelter or protection; and
-  selling, offering or exposing for sale, possession or transporting for purpose of sale.







A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect dormouse breeding or resting places (N.B. this is usually taken to mean dormouse 'habitat') or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence will allow derogation from the relevant legislation but will also to enable appropriate mitigation measures to be put in place and monitored.

Herpetofauna (Reptiles and Amphibians)



The following species receive full protection under the Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

-  sand lizard (*Lacerta agilis*);
-  smooth snake (*Coronella austriaca*);
-  natterjack toad (*Epidalea calamita*);
-  great crested newt (*Triturus cristatus*); and
-  pool frog (*Pelophylax lessonae*).

Under this legislation, Regulation 41 prohibits:

-  deliberate killing, injuring or capturing of species listed on Schedule 2;
-  deliberate disturbance of any Schedule 2 species as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
-  deliberate disturbance of any Schedule 2 species as to affect significantly the local distribution or abundance of the species;
-  deliberate taking or destroying of the eggs of a Schedule 2 species;
-  damage or destruction of a breeding site or resting place; and
-  keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of a species.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). 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; and

- selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). These species include:

- adder (*Vipera berus*);
- grass snake (*Natrix natrix*);
- common lizard (*Zootoca vivipara*); and
- slow-worm (*Anguis fragilis*).

Under this legislation, for these species it is prohibited under Section 9(1) & (5) to:

- intentionally (or recklessly in Scotland) kill or injure these species; or
- sell, offer, or expose for sale, possess, or transport for purpose of sale these species, or any part thereof.

The following species are listed in respect to Section 9(5) of Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) which only affords them protection against sale, offering or exposing for sale, possession, or transport for the purpose of sale:

- common frog (*Rana temporaria*);
- common toad (*Bufo bufo*);
- smooth newt (*Lissotriton vulgaris*); and
- palmate newt (*L. helveticus*).

Water Voles

The water vole (*Arvicola amphibius*) (= *terrestris*) is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- intentionally kill, injure, or take (capture) this species;
- 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; and
- sell, offer, or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead water vole or part of this species.

Where development works are liable to affect habitats known to support water voles, Natural England must be consulted. All alternative design options must have been explored and communicated to Natural England in order to demonstrate that works have tried to avoid contravening the legislation e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable etc. Conservation licences for the capture and translocation of water voles may be issued by Natural England 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.

Otters

Otters (*Lutra lutra*) are fully protected under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. Regulation 41 prohibits:

- 🌿 deliberate killing, injuring, or capturing of otters;
- 🌿 deliberate disturbance as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- 🌿 deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- 🌿 damage or destruction of a breeding site or resting place; and
- 🌿 keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of this species.

Otters also receive protection under the Wildlife and Countryside Act 1981 (as amended) 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; and
- 🌿 selling, offering, or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect breeding or resting places or for activities likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Wild Mammals

All wild mammals are protected against intentional acts of cruelty under the Wild Mammals (Protection) Act 1996. Under this legislation it is 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 of this legislation, due care and attention should be taken when carrying out works that have the potential to impact any wild mammal as described above.

Plants

Wild plants are protected under the Wildlife and Countryside Act 1981 (as amended) which 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.

Some rare plant species also receive full protection under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits:

- ➊ 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); and
- ➋ 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 parts.

In addition to the legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017. Regulation 45 makes it an offence to:

- ➊ deliberately pick, collect, or destroy a wild Schedule 5 species; and
- ➋ be in possession of, or control, transport, sell, or exchange any wild live or dead Schedule 5 species or anything derived from it.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect species of plant listed under The Conservation of Habitat and Species Regulations 2017.

Invasive Plant Species

Certain plants are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Species include:

- ➊ Japanese knotweed (*Reynoutria japonica*);
- ➋ giant hogweed (*Heracleum mantegazzianum*);
- ➌ Himalayan balsam (*Impatiens glandulifera*);
- ➍ certain species of rhododendron (*Rhododendron* sp.); and
- ➎ certain species of cotoneaster (*Cotoneaster* sp.).




Species listed are non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to:

- ➊ plant or otherwise cause these species to grow in the wild.



This legislation makes it is an offence to cause species listed to grow in the wild. Therefore, if they are present on site and development activities have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this.

Habitats


International Statutory Designations

-  Special Protection Areas (SPAs): Terrestrial SPAs are afforded protection by The Conservation (Natural Habitats, &c.) Regulations 1994 ((as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019) and offshore SPAs are afforded protection under The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended by EU Exit Regulations 2019). SPAs are designated under the EC Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds). SPAs are areas recognised as important habitat for rare and migratory birds within the European Union (rare birds as listed on Annex I of the Directive).
-  Special Areas of Conservation (SACs): These areas are designated under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora), designated for the habitats and (non-bird) species listed on Annexes I and II to the Directive under the same regulations as detailed for SPAs.
-  Ramsar sites: These areas are wetlands designated under the Convention on Wetlands of International Importance (1971). Wetlands can include areas of marsh, fen, water, or peatland and may be natural or artificial, permanent, or temporary. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000.



National Statutory Designations

-  Sites of Special Scientific Interest (SSSIs): These sites are designated by the countryside agencies (for example Natural England) under the Wildlife & Countryside Act 1981 (as amended). Prior to 1981 these were designated under the National Parks and Access to the Countryside Act 1949. Improved mechanisms for the protection of SSSIs have also been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).
-  National Nature Reserves: These sites are also designated by the countryside agencies under the Wildlife & Countryside Act 1981 (as amended).


Local Statutory Designations

-  1949 Local Nature Reserves (LNRs): These sites are designated by local authorities under the National Parks and Access to the Countryside Act 1949. These are sites recognised for their wildlife or geological interest at a local level and are managed for nature conservation.

Non-Statutory Designations

-  Local Wildlife Sites: Areas of local conservation interest may be designated by local authorities. The terminology for these sites varies depending on the county. They can be called Sites of Nature Conservation Importance (SNCI's), Sites of Importance for Nature Conservation (SINCs), County Wildlife Sites (CWS), Listed Wildlife Sites (LWS), Local Nature Conservation Sites (LNCS), and Sites of Biological Importance (SBIs). The designation criteria may vary between counties. Local Wildlife Sites are of material consideration when planning applications are being determined.
-  The Hedgerow Regulations 1997: These have been compiled to protect 'important' countryside hedgerows from damage or removal. A hedgerow is considered important if it (a) has existed for 30 years or more; and (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 certain hedgerows without permission from the local planning authority. Hedgerows covered by these regulations include those on or adjacent to common land, 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.

National Planning Policy

-  The National Planning Policy Framework (NPPF) (2021) replaces the former NPPF 2019, 2018 and 2012, and the former PPS9 document and emphasises the need for sustainable development. The Framework specifies the need to protect and enhance biodiversity and geodiversity, identify and safeguard components of local wildlife-rich habitats and wider ecological networks including the hierarchy of international, national, and locally designated sites of importance for biodiversity; wildlife corridors; and stepping that connect them. Plus partnerships for habitat management, enhancement, restoration, or creation. The Framework aims to promote the conservation, restoration, and enhancement of priority habitats, ecological networks, and the protection and recovery of priority species. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; appropriate mitigation or compensation measures are in place 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.

Local Planning Policy

Adur Local Plan (2017)

Policy 30 – Biodiversity

Foreword

The NPPF states that Local Planning Authorities should aim to conserve and enhance biodiversity and sets out how biodiversity issues should be addressed when determining planning applications.

All new developments will be required to take account of and incorporate biodiversity features at the design stage.

Conserving biodiversity is not just about protecting rare species and designated nature conservation sites. It also encompasses the more common and widespread species and habitats, all of which make an important contribution to quality of life. The Council will work with partners to conserve and enhance the biodiversity and geological diversity of Adur.

There are five Biodiversity Opportunity Areas (BOAs) in the district (although some lie outside of the area covered by the Local Plan). These include Shoreham Estuary and Beach, Adur to Newtimber including Mill Hill (South Downs National Park), Central Downs Arun to Adur (South Downs National Park), and Crooked Moon to Thundersbarrow (South Downs National Park). The BOAs are regional priority areas of opportunity for restoration and creation of Biodiversity Action Plan (BAP) habitats and are a spatial representation of the BAP targets and area.

Coastal squeeze is a particular issue in the south east of England and poses a significant threat to coastal habitats. Over the next twenty years coastal squeeze is likely to result in the loss of a significant amount of intertidal flats and saltmarsh. This is an issue for Adur due to its coastal location, the Adur Estuary SSSI and the compact nature of the district. New development that could result in further coastal squeeze will need to demonstrate how it is addressing this issue.

Policy 31: Biodiversity

All development should ensure the protection, conservation, and where possible, enhancement of biodiversity, including nationally and locally designated sites, Biodiversity Opportunity Areas (BOAs), marine habitats and other Biodiversity Action Plan (BAP) habitat areas, wildlife corridors, and protected and priority species. If significant harm cannot be avoided (by locating development on an alternative site with less harmful impacts), then such harm should be adequately mitigated. Where it cannot be adequately mitigated then such harm must be compensated for. Where it cannot be compensated for, then planning permission should be refused. Nationally designated sites: Proposed developments which would adversely affect a Site of Special Scientific Interest (SSSIs) (individually or cumulatively) will not normally be permitted. Exceptions will only be made where the benefits of the development on the particular site clearly 96 ADUR LOCAL PLAN 2017 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. Local Designations: Proposals for development in, or likely to have an adverse effect (directly or indirectly) on a Local Nature Reserve, Local Wildlife Sites (including ancient woodlands or wildlife corridors) or Regionally Important Geological/Geomorphological Site will not be permitted unless it can be demonstrated that reasons for the proposal outweigh the need to safeguard the nature conservation value of the site/feature. Where appropriate, the Authority will use planning conditions or obligations to provide appropriate enhancement and site management

measures, and where impacts are unavoidable, mitigation or compensatory measures. Where relevant, new development adjacent to the Adur Estuary or the coast will have to demonstrate how it is addressing the issue of coastal squeeze.

Appendix D

Plant Species List

Plant Species List

Scientific nomenclature follows Stace (2010) for vascular plant species and British Bryological Society (BBS) Special Volume No. 5 *English Names for British Bryophytes* for bryophyte species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk. The plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally

Key to qualifiers: G = garden origin, P = planted, Y = young, S = seedling or sucker, T = tree, H = hedge, W = water, ? = identification uncertain.

Scientific Name	Common Name	Abundance	Qualifier
<i>Corylus avellana</i>	Hazel		H
<i>Ficus carica</i>	Fig		P
<i>Ilex aquifolium</i>	Holly		T
<i>Ligustrum ovalifolium</i>	Privet		H
<i>Pinus sylvestris</i>	Scots pine		T
<i>Prunus lusitanica</i>	Portuguese laurel		H
<i>Prunus sp</i>	Cherry		T
<i>Vitis vinifera</i>	Grape vine		P

Appendix E

Suggested Compensatory Planting

Suggested Compensatory Planting

This section provides a list of plants which are of proven value to wildlife. The list is not exhaustive and merely provides a guide for suggested planting for wildlife value. Planting should be tailored on a site by site basis. The list includes some native and ornamental species however the emphasis should always be on the use of predominantly native species.

N = Native, NN = Non-native.

This list includes species that may be harmful if handled or ingested. Schedule 9 (Part 2) of the Wildlife and Countryside Act, 1981 (as amended) includes a list of invasive plants, including aquatic species, that should always be avoided in planting schemes.

Large Shrubs

Hedge veronica/Hebe (*Veronica* spp.) NN

Hawthorn (*Crataegus monogyna*) N

Blackthorn (*Prunus spinosa*) N

Rose: dog rose (*Rosa canina*), field rose (*R. arvensis*), burnet rose (*R. pimpinellifolia*) N

California lilac (*Ceanothus* spp.): (*C. arborea*) NN

Wild privet (*Ligustrum vulgare*) N

Common holly (*Ilex aquifolium*) N

Barberry (*Berberis* spp.): (*B. darwinii*), (*B. thunbergii*), (*B. x stenophylla*) NN

Daisy Bush (*Olearia* spp.): (*O. x hastii*), (*O. macrodonta*), (*O. traversii*) NN

Firethorn (*Pyracantha coccinea*) NN

Hazel: (*Corylus avellana*) N, (*C. maxima*) NN

Viburnum (*Viburnum* spp.): wayfaring tree (*V. lantana*) N, guelder rose (*V. opulus*) N, laurustinus (*V. tinus*) NN. Note: *V. lantana* can become invasive in more open habitats.

Dogwood (*Cornus sanguinea*) N

Broom (*Cytisus scoparius*) N

Escallonia (*Escallonia macrantha*) NN

Hardy fuchsia (*Fuchsia magellanica*) NN

Buckthorn (*Rhamnus cathartica*) N

Spindle (*Euonymus europaeus*) N

Tutsan (*Hypericum androsaemum*) N

Yew (*Taxus baccata*) N

Trees

Cherry (*Prunus* spp.): wild cherry (*P. avium*), bird cherry (*P. padus*), domestic plum (*P. domestica*) N, or cherry plum (*P. cerasifera*) NN

Ash (*Fraxinus excelsior*) N

Apple (*Malus* spp.): edible apple (*M. domestica*), crab apple (*M. sylvestris*) N

Pear (*Pyrus* spp.): edible pear (*P. communis*) NN

Small-leaved lime (*Tilia cordata*) N

Silver birch (*Betula pendula*) N

Yew (*Taxus baccata*) N

Black poplar (*Populus nigra*) N

Foxglove tree (*Paulownia tomentosa*) NN

Beech (*Fagus sylvatica*) N

Climbers

Jasmine (*Jasminum* spp.): summer jasmine (*J. officinale*), winter jasmine (*J. nodiflorum*) NN

Ivy (*Hedera helix*) N

Climbing hydrangea (*Hydrangea anomala* ssp. *petiolaris*) NN

Honeysuckle (*Lonicera* spp.): (*L. periclymenum*) N

Clematis (*Clematis* spp.) NN

Hop (*Humulus lupulus*) N

Firethorn (*Pyracantha atalantioides*) NN

Bulbs

English bluebell (*Hyacinthoides non-scripta*) N

Squill species (*Scilla* spp.) N/NN

Snowdrop (*Galanthus nivalis*) N

Winter aconite (*Eranthis hyemalis*) E

Crocus species (*Crocus* spp.) NN

Wild Daffodil (*Narcissus pseudonarcissus*) N

Onion species (*Allium* spp.) N/NN. Note: *Allium triquetrum* (three cornered leek) and *Allium paradoxum* (few-flowered leek) are Schedule 9 invasive plant species.

Wood anemone (*Anemone nemorosa*) N



Lesser celandine (*Ficaria verna*) N


Appendix F

Bird and Bat Box Designs



Bird and Bat Box Designs

Bird Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	Schwegler Nest Box 1B Hole-fronted 26mm entrance hole	16 x 16 x 23	Multi-purpose, including: blue-, marsh-, coal-, and crested tit, and possibly wren. All other species are prevented from using the nest box due to the smaller entrance hole.	Suitable walls or semi-mature/mature trees and shrubs; attached to a tree trunk or hung from branches. Ideal points include discrete areas away from predators, such as against walls, plant, and metal supports.
	Schwegler Bird House 32mm entrance hole	15 x 21 x 33	Multi-purpose, including: great-, blue-, marsh-, and coal tit, redstart, nuthatch, pied flycatcher, and sparrows.	Fixed to a semi-mature/mature tree trunk, wall or fence using the hanging bracket on the back. Between 1.5 m and 3 m high, and should be sited higher if area has a particularly high cat population.

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	Schwegler Sparrow Terrace 1SP	20 x 43 x 24.5	House sparrow. It may also occasionally attract tits, redstarts, and spotted flycatchers.	<p>In an elevated position such as on post/platform within dense shrub/tree planting or on top of lighting columns. Alternatively, they could be attached to the side of a building.</p> <p>The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds, and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided or install directly into the wall. Cleaning is not necessary. The front panel can be removed by turning the screw hook.</p>

Bat Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	2F Schwegler Bat Box (General Purpose) with or without Double Front Panel	16 x 16 x 33	<p>Without panel: Particularly successful with brown long-eared bat. Also used by noctule.</p> <p>With panel: Ideal for crevice-dwelling species: pipistrelles, Myotis species (particularly Daubenton's), Leisler's, and serotine.</p>	<p>On trees or buildings and at a height of 3 to 6m.</p> <p>In open sunny positions and in groups of 3 to 5 facing different directions.</p> <p>Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.</p>
	Chavenage Bat Box	10 x 18 x 38	Small crevice-dwelling bats: e.g. pipistrelles.	<p>On trees in gardens or woodland and also on house walls. 2.5 - 5m high on a building, mature tree, or vegetation line (trees/tall hedge) or on a feeding/flight route in partial daytime sun.</p> <p>Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.</p>



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