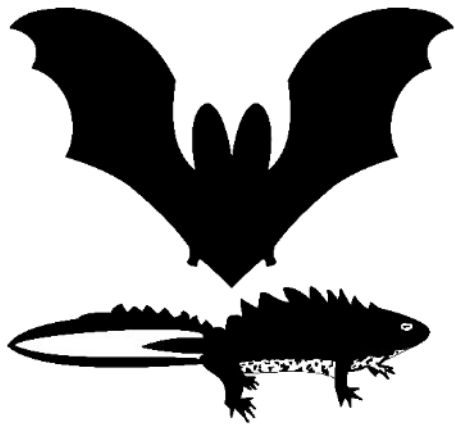




AEWC^{Ltd}

Animal Ecology & Wildlife Consultants

Extended Phase 1 Habitat Survey

Furnace Lakes

**Guildford Road
Rudgwick
Horsham
RH13 0QZ**

Natalie Arscott

**24-104
October 2024**

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Summary

- AEWCLtd were commissioned by Batcheller Monkhouse on behalf of their client to undertake an extended Phase 1 habitat survey at Furnace Lakes, Guildford Road, Rudgwick, Horsham, RH13 0QZ at grid reference TQ 10702 33486 to support a partly retrospective application for the site.
- This report details the results of the survey, which was carried out on the 6th September 2024 by qualified ecologist Natalie Arscott, to record and map the habitats present, assess the site for the potential presence of any protected species or species of conservation concern, and identify habitats of conservation importance.
- Additional information regarding the present and historical ecological interest of the site and within a 2km radius was provided by Sussex Biodiversity Records Centre. This helps to inform the likelihood of protected species occurring within the site boundary.
- The site is approximately 0.38ha in size and largely comprises a grassed clearing between a lake and woodland, a hardstanding car park, and a long hardstanding access track. Historically, the northern part of the site comprised ancient woodland, however this was cleared prior to 2018 under previous site ownership.
- Habitats present in September 2024 include artificial unvegetated, unsealed surface, developed land; sealed surface, modified grassland, ruderal/ephemeral, willow scrub, native hedgerow, and individual trees. Works already carried out to construct two shepherd's huts have likely involved the replacement of modified grassland with artificial unvegetated, unsealed surface. Habitats onsite are common and widespread, and mostly of low ecological value. Individual mature trees and the off-site adjacent woodland and lake have higher ecological value.
- **No further surveys are required. Recommendations to avoid ecological impacts include the removal of invasive species, protection and buffering of the adjacent ancient woodland, a pre-works site check for [REDACTED] covering of trenches at night, minimising and controlling lighting, maintaining the proposed working area as a short sward prior to commencement, careful vegetation clearance, and habitat enhancements particularly adjacent to the ancient woodland.**

This report has been prepared by AEWCLimited, with all reasonable skill, care and diligence within the terms of the Contract with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

The information and data which has been prepared and provided is true and has been prepared and provided in accordance with the 'Guidelines for Preliminary Ecological Appraisal' and 'Code of Professional Conduct' issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

1 Introduction

- 1.1 AEWCLtd were commissioned by Batcheller Monkhouse on behalf of their client to undertake an extended Phase 1 habitat survey at Furnace Lakes, Guildford Road, Rudgwick, Horsham, RH13 0QZ to support a partly retrospective application for the site.
- 1.2 This survey comprised a desktop study of historic satellite imagery of the site, biological records within the vicinity of the site, an ecological walkover survey to record and map the habitats present and an assessment for protected wildlife and species of conservation importance, pre- and post-development, including habitats, and was carried out by a qualified ecologist Natalie Arscott on the 6th September 2024.
- 1.3 This report presents the results of the following:
 - Desktop Biodiversity Report
 - UK Habs Habitat Survey
 - Protected Species Walkover Survey
- 1.4 In addition, the report outlines any recommendations, further surveys, and/or enhancements that may be necessary. This will ensure that any protected species are not detrimentally impacted by the proposed development works on site, that there is no loss of ecological viability and that the favourable conservation status of the species in the local area are not affected.

2 Background

- 2.1 The proposed development site is located at Furnace Lakes, Guildford Road, Rudgwick, Horsham, RH13 0QZ at central grid reference TQ 10702 33486.
- 2.2 The site is located in a rural area in Rudgwick, accessed from the A281 and 6.6km to the northwest of the centre of Horsham. The surrounding landscape comprises predominantly woodland, pasture, and arable land. See Figure 1.
- 2.3 The site is approximately 0.38ha and largely comprises a grassed clearing between a lake and woodland, a hardstanding car park, and a long hardstanding access track. See Figure 2.
- 2.4 The proposal is a partly retrospective application for the siting of three shepherd's huts adjacent to a fishing lake, to be offered as holiday lets. The development area was historically used for fishery purposes, with eight swims and associated tents for overnight camping. At the time of the survey, two of the shepherds' huts had already been constructed along with associated decking and landscaping. See Figure 3.



FIGURE 1: SHOWING THE SITE LOCATION



FIGURE 2 : AERIAL VIEW OF THE SITE SHOWING THE SITE BOUNDARY



FIGURE 3 : EXISTING (LEFT) AND PROPOSED (RIGHT) PLANS

3 Methods

Desk Study

- 3.1 The Multi Agency Geographic Information for the Countryside (MAGIC) website provided by the Department for Environment, Food and Rural Affairs (Defra) was consulted to obtain information about any international or European level designated nature conservation sites within 2km of the site boundary, afforded protection either directly by the Conservation of Habitat and Species (Amendment)(EU Exit) Regulations 2019 or to the same level of protection through planning policy (the National Planning Policy Framework and Local Development Framework). Information regarding statutory designated sites, such as Sites of Special Scientific Interest (SSSI) within a 2km radius of the site, were also obtained from MAGIC.
- 3.2 Current and historic aerial photos of the site (Google Earth, 2024) were examined to determine habitats surrounding the site and hence species likely to be present in order to make appropriate recommendations in the wider landscape context.

- 3.3 Records of protected and notable species and non-statutory designated sites within 2km of the site were requested from the local biological records centre (Sussex Biodiversity Records Centre).
- 3.4 Records were screened for relevance and age with only those from the last 10 years and of species that could occur on site considered further.
- 3.5 A search for waterbodies within 500m of the site boundary was undertaken using MAGIC mapping in order to assess their connectivity to the site.

UK Habs Habitat Survey

- 3.6 A daytime ecological walkover assessment was carried out on the 6th September 2024 to record and map the habitats present, evaluate the site for its potential to support protected species in addition to other species of conservation importance that could be relevant in respect of planning policies.
- 3.7 The survey involved a UK Habitat Classification System Survey which was carried out based on the standard methodology produced by UKHab Ltd (2023) and included searches for signs of protected species, as described in the Guidelines for Preliminary Ecological Assessment (CIEEM, 2017). This involves the following elements:
 - Habitat mapping using a set of standard colour codes to indicate habitat types on a UK Habitat Classification Map.
 - Description of features of ecological or nature conservation interest in notes relating to numbered locations on the UK Habitat Classification Map, called Target Notes (for habitat and features of possible interest).
 - A plant species list with subjective estimates of the relative abundance of species in selected habitat parcels using a modified DAFOR scale. The DAFOR scale ranks species according to their relative abundance in a given parcel of land as follows: d – dominant, a – abundant, f – frequent, o – occasional, r – rare. In addition, the following prefixes are used: l – locally, v – very.
- 3.8 Plant nomenclature in this report follows Stace (2010) for native and naturalised species of vascular plant. Nomenclature for mosses and liverworts follow the Checklist for British and Irish Bryophytes 2009. Plant names in the text are given with the English name first, followed by the Latin name. Latin names for all species are given just once and not repeated.

Protected Species Walkover

- 3.9 An assessment was made of habitat suitability in and around the site for those protected species that occur in the region. Obvious signs and incidental sightings of protected species are noted when encountered, but walkover surveys do not usually confirm species presence or absence.
- 3.10 Taking into consideration the geographical region and habitat type, species that could be encountered are:
 - [REDACTED]
 - bats;

- breeding birds;
- great crested newt;
- hazel dormice;
- otter;
- reptiles;
- water vole;
- other mammals; and
- other Species of Principal Importance (SPI) (e.g. hedgehog, stag beetle etc).

3.11 In addition, observations of any invasive species, important plant communities, plant species of note, Habitats of Principal Importance (HPI) or other valuable ecological features will be recorded and detailed.

3.12 Details of the initial survey method for each species are given below.

3.13 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

3.14 **Bats** – The site and the surrounding area were assessed for the suitability of the habitat to support bats.

3.15 **Breeding Birds** - habitats were assessed for their suitability for nesting birds. This would centre on birds that favour trees and areas of grassland.

3.16 **Great Crested Newt** - initial surveys centre on identifying suitable habitat within the site. If breeding ponds are present within the locality then great crested newt (*Triturus cristatus*) could potentially be using the terrestrial habitat on the site. Maps are used to identify any ponds (that are not isolated by unsuitable habitat or physical barriers) within 500 metres of the site. A Habitat Suitability Index (HSI) is used to quantifiably assess whether a pond is suitable, this is undertaken for any onsite ponds during the walkover survey.

3.17 **Hazel Dormice** – scrub and areas of dense vegetation are assessed for their suitability for foraging and nesting hazel dormice (*Muscardinus avellanarius*). Favoured berry and nut bearing species such as hawthorn, hazel and bramble were looked for in particular. Additionally, the connectivity of this habitat and to suitable habitat beyond the site is also assessed. If hazel nuts are present a brief search for nuts that have been chewed by hazel dormouse (i.e. displaying the characteristic smooth round hole) was conducted.

3.18 **Otter** - initial surveys aim to assess the site for watercourses suitable for otters (*Lutra lutra*). If suitable watercourses are present on site, evidence of otter is searched for. Signs of otter includes spraints, feeding remains and sightings are recorded if encountered during the survey.

3.19 **Reptiles** - the site was assessed for habitat suitable for reptiles, such as long grassland and areas of scrub, with particular attention paid to those features that

provide suitable basking areas (e.g. south-facing slopes and walls), hibernation sites (e.g. banks, log piles and piles of rotting vegetation) and opportunities for foraging (e.g. rough grassland and scrub).

- 3.20 **Water vole** - initial survey aims to assess the site for watercourses that may be suitable for water voles (*Arvicola amphibious*). If suitable watercourses are present on site, evidence of water voles is searched for. Signs of water voles includes faeces, latrines, feeding stations, burrows, footprints, runs or pathways and sightings which are recorded if encountered during the survey.
- 3.21 **Other mammals** – any signs of occupancy by other mammals (e.g. Rabbit warrens) are recorded.
- 3.22 **Other Species of Principal Importance (SPI)** – the habitats present on site were assessed for the likelihood of presence for species of regional and national importance.
- 3.23 **Invasive species** - Any invasive plant or animal species identified during the site walkover are recorded.
- 3.24 **Plant species of note** – Any plant species of conservation concern found on the site are recorded.
- 3.25 **Habitats of Principal Importance** - Habitats of Principal Importance within or adjacent to the site (such as arable field margins, traditional orchards, ponds, rivers, wet woodlands) are recorded.
- 3.26 **Other valuable ecological features** - Other ecological features e.g. ancient woodland, veteran trees, bird feeding stations etc, habitat enhancements etc. within or adjacent to the site are recorded.

4 Constraints/Limitations

- 4.1 An initial site assessment such as this is only able to act as a snapshot to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.
- 4.2 Some protected species records are confidential and therefore not included within the data search results provided by the records centre. Absence of records does not automatically correspond to absence of species within the impact zone of the development.

- 4.3 As some works have already been completed on site, the historic habitats and potential impacts of this work have been speculated using the available evidence, however, this cannot be confirmed for definite.

5 Results and Evaluation

Desk Study

Sites and Habitats

Statutory Designated Sites:

- 5.1 There are no statutory designated sites within 2km of the proposed site.

Non-Statutory Designated Sites

- 5.2 There are two Local Wildlife Sites (LWS) within 2km of the proposed site. The nearest is Godley's Copse LWS, located 500m to the northwest.

Habitats of Principal Importance

- 5.3 Habitats data available via MAGIC was reviewed for the presence of Habitats of Principal Importance (HPI). This shows much of the site to be covered by deciduous woodland priority habitat, which is also designated as ancient and semi-natural woodland. However, this area was cleared of most trees in 2018 and has comprised a combination of hardstanding and grassland since. It is therefore considered that the ancient, deciduous woodland is immediately adjacent to the site's eastern boundary. There is also ancient, replanted woodland further to the east.

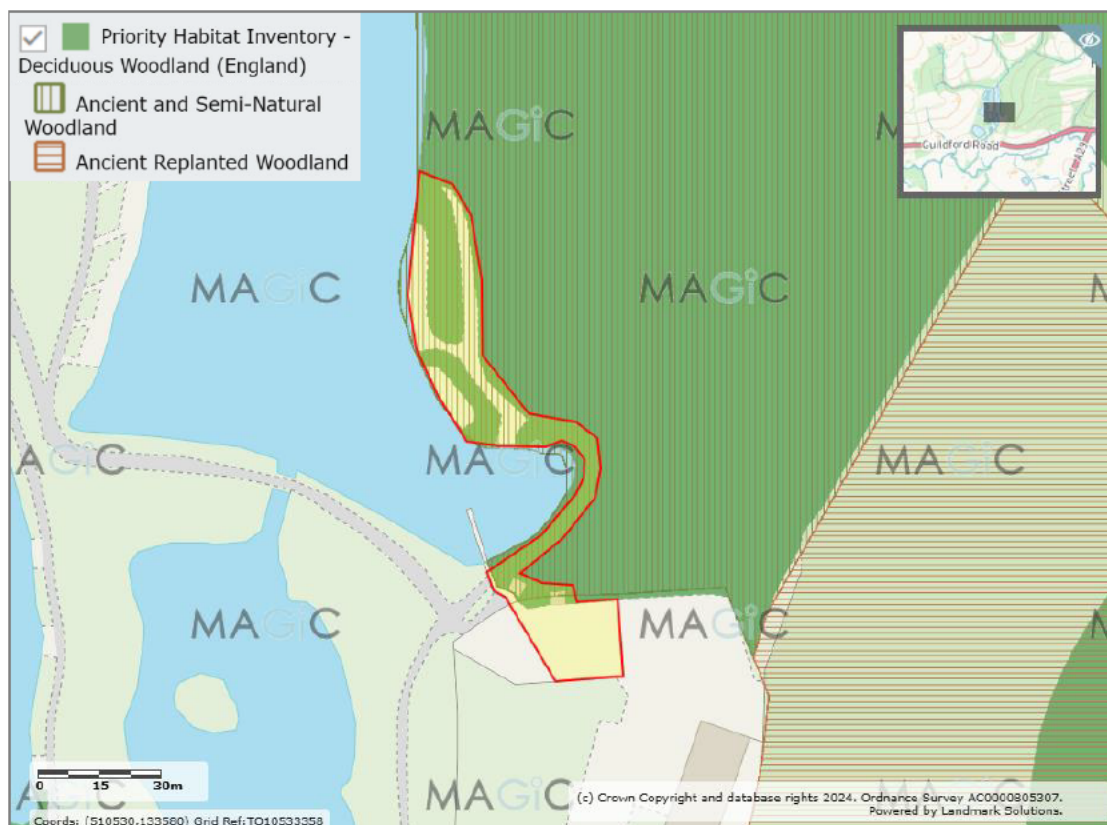


FIGURE 4: HABITATS OF PRINCIPAL IMPORTANCE ON AND ADJACENT TO THE SITE

Waterbodies within 500m of the site boundary

5.4 The Ordnance Survey map available via MAGIC was reviewed for waterbodies within the accepted dispersal distance of 500m of the main part of the site (access track excluded since this is entirely hardstanding and will be unchanged), that are not separated from the site by significant barriers to dispersal such as main roads. 10 waterbodies were found occurring to the north, west, and south of the site (see Figure 5): These are listed below:

- Waterbody 1: A pond, 280m to the south.
- Waterbody 2: A fishing lake, 290m to the southwest.
- Waterbody 3: A fishing lake, 180m to the southwest.
- Waterbody 4: A fishing lake, 190m to the southwest.
- Waterbody 5: A fishing lake, 40m to the southwest.
- Waterbody 6: A fishing lake, 110m to the west.
- Waterbody 7: A fishing lake, 150m to the west.
- Waterbody 8: A fishing lake, adjacent to the west.
- Waterbody 9: A fishing lake, 140m to the northwest.
- Waterbody 10: A stream ending in a pool of water, 145m to the south.
- Waterbody 11: A pond, 150m to the southwest.
- Waterbody 12: A pond, 165m to the southwest.

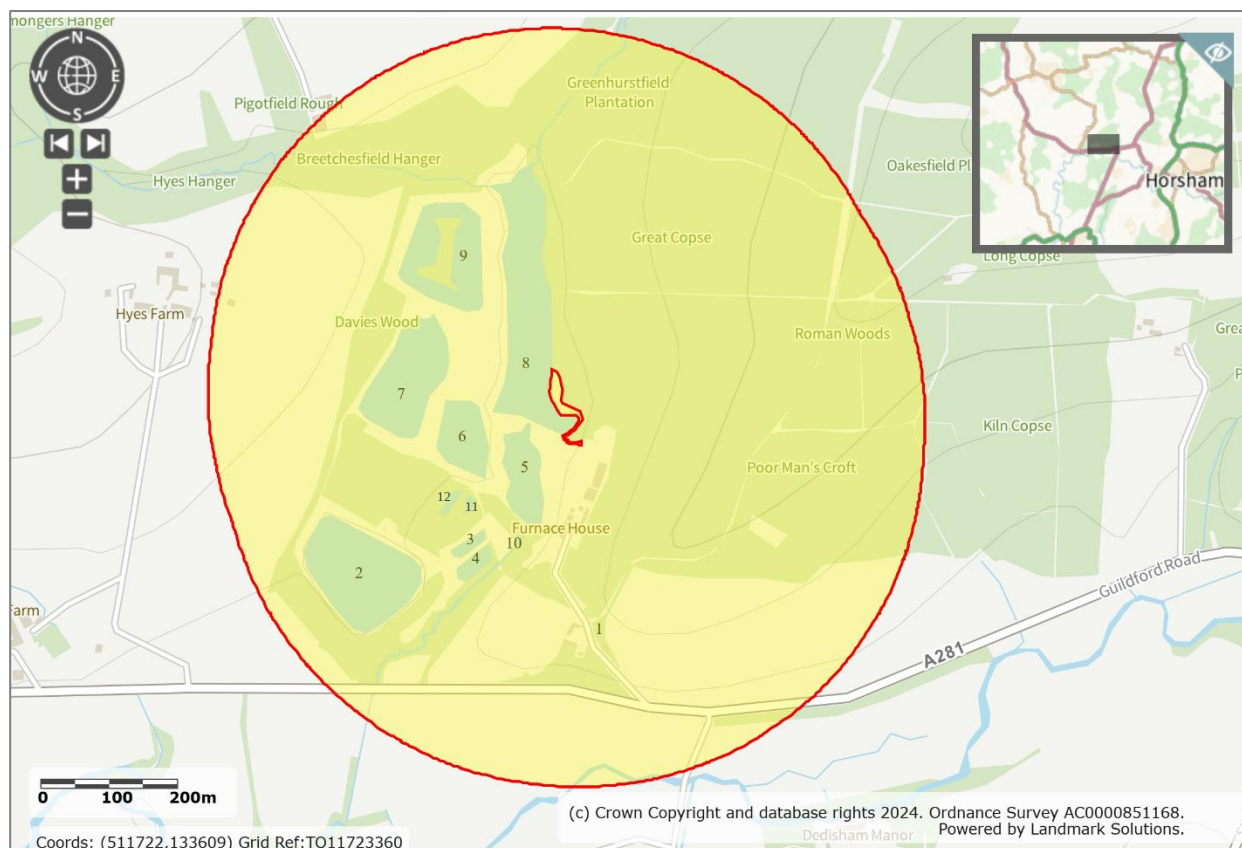


FIGURE 5: WATERBODIES WITHIN 500M

Protected Species

Bats

- 5.6 Records of common pipistrelle (*Pipistrellus pipistrellus*) were made within 2km of the site. There are historic records for other bat species, but not within the past 10 years.

Birds

- 5.7 A range of bird species have been recorded within 2km of the site, including grey wagtail (*Motacilla cinerea*), spotted flycatcher (*Muscicapa striata*), chiffchaff (*Phylloscopus collybita*), and dunnock (*Prunella modularis*).

Great crested newt

- 5.8 Several records of great crested newts were found within 2km of the site, the closest being approximately 1.2km to the northwest. The majority of records were from within Rudgwick village.

Hazel dormice

- 5.9 No records of hazel dormouse were found within 2km of the site.

Otter

- 5.10 Records of otter are not returned by this local records centre.

Reptiles

- 5.11 There is a single record of grass snake (*Natrix helvetica*) within 2km of the site in the past 10 years.

Water vole

- 5.12 No records of water vole were found within 2km of the site.

Other Mammals

- 5.13 Records of European rabbit (*Oryctolagus cuniculus*) were found within 2km of the site.

Other Species of Principal Importance (SPI)

- 5.14 Records of common toad (*Bufo bufo*), west European hedgehog (*Erinaceus europaeus*), and a range of invertebrates were found within 2km of the site.

Field Survey

Habitats and Plants

Current Existing Habitats

- 5.15 A UK Habs Habitat map is included in Figure 6 and a species list is given in Appendix 3. The Habitat map is zoomed for clarity to show only the main part of the site, which includes the entire area to be impacted by development. The remainder of the red line boundary encompasses a long access track leading from the main part of the site to the road to the south. The access track comprises entirely developed land; sealed surface and is actively used for vehicle access to the existing fishery business and will be unchanged by the proposed development. The habitats present on the site at the time of the survey in September 2024 are described below.

Artificial unvegetated, unsealed surface

- 5.16 A pre-existing gravel track leads from the car parking area in the south of the main part of the site to the area of the proposed shepherd's huts, extending behind (to the east) of the two shepherd's huts already constructed before coming to an end. There is some gravel visible from here to the proposed location of the third shepherd's hut, from a previously existing track, however this has become overgrown with grassland. Sections of the track have been resurfaced with wood bark and it is understood that the intention is to have the entire track as bark surfacing.
- 5.17 There are small sections of pre-existing gravel surfacing at the edge of the lake on the site's western boundary, from the previous fishing swims here.
- 5.18 The two shepherd's huts and associated structures and surfacing that have already been completed have created areas of artificial unvegetated, unsealed surface. This includes gravel on which the huts are mounted, shingle, and raised decking.



Photograph 1 – pre-existing gravel access track.



Photograph 2 – section of access track resurfaced with bark.



Photograph 3 – pre-existing gravel at the lake edge.



Photograph 4 – new shingle, decking, and hut mounted on a gravel bed.

Developed land; sealed surface

- 5.19 The southern area of the main part of the site comprises a pre-existing hardstanding car park. Adjoining the car park are two pre-existing small outbuildings. The entirety of the access track leading to the road to the south also comprises developed land; sealed surface - this section of the red line boundary has been cropped from the habitat map in Figure 6 for clarity of the development area.



Photograph 5 – pre-existing car park and one of the outbuildings.



Photograph 6 – access track connecting the main part of the site to the road.

Modified grassland

- 5.20 Most of the main part of the site is covered by pre-existing short sward modified grassland. This includes the clearing between the woodland and the lake, within which the shepherd's huts are to be situated, and the strip of land adjacent (to the east) of the track connecting the car park to the shepherd's huts. The grassland is species-poor with typically less than 6 species present per m². Species noted include creeping bent (*Agrostis stolonifera*), perennial ryegrass (*Lolium perenne*), creeping thistle (*Cirsium arvense*), ragwort (*Jacobaea vulgaris*), hard rush (*Juncus inflexus*), bramble (*Rubus fruticosus* agg.), dock (*Rumex* sp.), sedge (*Carex* sp.), dandelion (*Taraxacum* sp.), bird's-foot trefoil (*Lotus corniculatus*), common knapweed (*Centaurea nigra*), and bracken (*Pteridium aquilinum*).
- 5.21 Part of the curtilage of the northern of the two shepherd's huts already created has been recently re-turfed with lawn turf. This appeared to comprise a monoculture of an unidentified grass.
- 5.22 Within the modified grassland areas in the curtilages of the two shepherd's huts already constructed, a small number of individual ornamental shrubs have been recently planted.



Photograph 7 – modified grassland in the location of the proposed third shepherd's hut.



Photograph 8 – retained modified grassland around one of the shepherd's huts already constructed.



Photograph 9 – retained modified grassland adjacent (to the east) of the track.



Photograph 10 – new lawn turf in the curtilage of the northern of the two shepherd's huts already constructed.

Ruderal/Ephemeral

- 5.23 Along much of the western edge boundary of the site, where it borders the fishing lake, is a narrow strip of dense ruderal vegetation. Historic gravel surfacing undermines much of this. Species include bramble, sedge, hard rush, colt's-foot (*Tussilago farfara*), great willowherb (*Epilobium hirsutum*), and common nettle (*Urtica dioica*).



Photograph 11 – ruderal vegetation between the track and lake.



Photograph 12 – ruderal vegetation between new shingle and the lake.

Willow scrub

- 5.24 There is a small amount of willow (*Salix* sp.) scrub along the site boundaries, adjacent to the lake.



Photograph 13 – willow scrub on the site boundary within the curtilage of a shepherd's hut.



Photograph 14 – length of willow scrub on the southern boundary adjacent to the lake.

Native hedgerow

- 5.25 There is a newly planted hawthorn (*Crataegus monogyna*) hedge on the northern boundary of the car park. Approximately 10m of the hedge falls within the site boundary, with the hedge extending further off-site to the east.
- 5.26 Being recently planted and unestablished, it is considered that the hawthorn hedge does not currently qualify as native hedgerow priority habitat, nor does it meet the criteria of 'important hedgerow' under the 1997 UK Hedgerow Regulations.



Photograph 15 – newly planted hawthorn hedge on the car park boundary.



Photograph 16 – newly planted hawthorn hedge on the car park boundary.

Individual trees

- 5.27 There are several individual trees scattered throughout the modified grassland within the site, ranging from small to large in size. These mostly comprise mature English oak (*Quercus robur*) trees which are remnant from the woodland that previously covered this area. There are also a low number of small willow and hawthorn trees.



Photograph 17 – two oak trees.



Photograph 18 – a small willow tree.



FIGURE 6: UK HABS HABITAT MAP

Previously Existing Habitats

- 5.28 The previously existing habitats on-site have been assessed using historic satellite imagery from Google Earth. See Figures 7 – 9 below.
- 5.29 Google Earth satellite imagery prior to 2018 shows the northern part of the site, where the proposed shepherd's huts are to be located, as being covered by deciduous woodland. The car park in the south of the main part of the site has been hardstanding for as long as satellite imagery dates back to for the site (2001). The area connecting the car park to the northern part of the site appears to have been grassland with scattered trees prior to 2018.
- 5.30 Satellite imagery from 2018 shows the woodland in the north of the site to have been cleared, except for a small number of retained individual trees. Much of this area had been surfaced with hardcore, with small areas of grassland between the hardcore sections. A hardcore track had also been created joining the northern part of the site to the car park. The site appears largely unchanged between 2018 and 2021.
- 5.31 Satellite imagery from July 2022 is the most recent available prior to the installation of two shepherd's huts and associated works at the site. In 2022 it appears that maintenance of the hardcore areas previously created had ceased, and whilst hardcore was still present in the north of the site this was becoming overgrown with grassland. The satellite imagery colouring indicates that the grass cover was sparse. The car park and track connecting the car park to the northern part of the site appear unchanged.



FIGURE 7: GOOGLE EARTH SATELLITE IMAGERY OF THE SITE FROM AUGUST 2013



FIGURE 8: GOOGLE EARTH SATELLITE IMAGERY OF THE SITE FROM SEPTEMBER 2018



FIGURE 9: GOOGLE EARTH SATELLITE IMAGERY OF THE SITE FROM JULY 2022

Habitat evaluation

5.32 The habitats present on-site both in 2024 and prior to the current shepherd's hut works, but after 2018, are common and widespread and mostly of low ecological value. A low level of species-poor vegetation is present, with most of the site having

been previously surfaced and the grassland present being maintained as a short sward. The highest ecological value on-site is currently associated with the mature oak trees which have been retained from the woodland historically covering the site. Prior to 2018, the northern part of the site was covered by ancient woodland which is a highly valuable habitat. The clearance of this occurred under previous ownership and was not associated with the proposal for three shepherd's huts. There remains valuable ancient woodland immediately adjacent to the east of the site, which should be taken into consideration, and a lake immediately adjacent to the west of the site.

Plant species of note

5.33 No plant species of note were identified.

Invasive species

5.30 Amongst the recently planted ornamental shrubs, a single specimen of rhododendron (*Rhododendron* sp.) and cotoneaster (*Cotoneaster* sp.) were identified on-site. *Rhododendron ponticum* and five species of cotoneaster are listed on Schedule 9 Part II of the Wildlife and Countryside Act. Rhododendron in particular is prone to spreading into woodland and reducing the ecological value of this habitat.



Photograph 19 – rhododendron on the site.



Photograph 20 – cotoneaster on the site.

Protected species and species of conservation concern

[REDACTED]

[REDACTED]

5.32

[REDACTED]

Bats

- 5.33 The trees and two small outbuildings on the site have not been assessed for roosting potential since it is understood that these will be unimpacted by the works.
- 5.34 It is understood that no buildings or trees were impacted by the works associated with the two shepherd's huts already constructed, therefore the site's roosting potential is unchanged pre- and post-works.
- 5.35 The adjacent woodland to the east and lake to the west provide good quality habitat for foraging and commuting bats.
- 5.36 These adjacent habitats have not been directly impacted by the works associated with the two shepherd's huts already constructed. Works involved clearance of small areas of short sward grassland which does not offer good quality foraging habitat in itself. Therefore, the site's suitability for foraging and commuting bats is likely unchanged pre- and post-works.

Breeding birds

- 5.37 There is suitable habitat for a range of breeding birds within the individual trees, willow scrub, and new hawthorn hedge on the site. It is unlikely that ground-nesting waterfowl would nest on the site due to the lack of dense vegetation cover, leaving any nesting birds vulnerable to predation.
- 5.38 It is understood that no trees or dense vegetation were directly impacted by the works associated with the two shepherd's huts already constructed, therefore the site's nesting potential is unchanged pre- and post-works.

Great Crested Newt (GCN)

- 5.39 The site is considered to have limited potential to support terrestrial GCN. Most of the onsite habitat provides insufficient vegetation cover to support GCN, with most of the vegetated area comprising short sward grassland. However, given there are records for GCN in the local area and the site borders ancient woodland, there remains a low likelihood that foraging and commuting GCN could utilise boundary habitats.
- 5.40 There are no ponds on-site. The site borders a very large fishing lake (waterbody 8 as per Figure 5) and there is one other large lake within 100m of the site (waterbody 5 as per Figure 5). Both of these waterbodies have been subject to HSI assessment. The two waterbodies within 100m of the site are highly unlikely to support GCN given HSI scores of 0.30, equating to 'poor' suitability (see Table 2). This is largely due to both lakes being densely stocked with fish and having a high waterfowl presence. It is unlikely that the HSI scores for these waterbodies have changed in recent years given their long-term use as fishing lakes. Seven of the twelve waterbodies identified within 500m of the site (see Figure 5) are fishing lakes and it is considered unlikely that these would support GCN.
- 5.41 The potential for the site and nearby waterbodies to support breeding GCN is unchanged pre- and post-works. From historic aerial imagery, it appears that vegetation cover on the site has been continuously sparse since 2018, and therefore the potential for the site to support foraging and commuting GCN was likely low pre-works. However, this cannot be confirmed for definite in the absence of survey information.

Table 2 – HSI calculations

Pond ref	5	8
SI¹ - Location	1	1
SI² - Pond area	0.8	0.8
SI³ - Pond drying	0.09	0.09
SI⁴ - Water quality	0.33	0.33
SI⁵ - Shade	1	1
SI⁶ - Fowl	0.01	0.01
SI⁷ - Fish	0.01	0.01
SI⁸ - Ponds	1	1
SI⁹ - Terrestrial habitat	0.67	0.67
SI¹⁰ - Macrophytes	0.35	0.35
HSI Score	0.30	0.30
HSI Category	Poor	Poor

Hazel dormice

- 5.42 The site is considered to have negligible potential to support hazel dormice due to the lack of suitable dense and connected vegetation. The small amounts of willow scrub on the site are situated at the lake edge and isolated from any other suitable habitat. The off-site woodland to the east is suitable to support hazel dormice.
- 5.43 The works associated with the two shepherd's huts already constructed did not impact on any habitat suitable for hazel dormice, therefore the site's suitability for the species is unchanged pre- and post-works.

Otter

- 5.44 No evidence of otters (spraint, footprints or feeding signs) were noted during the walkover survey. There are streams present in the local area, and any otters using these could potentially forage within the fishing lakes that are adjacent to and near the site. The site itself does not provide any habitat likely to be utilised by otters.
- 5.45 The works associated with the two shepherd's huts already constructed did not impact on any habitat suitable for otters, therefore the site's suitability for the species is unchanged pre- and post-works.

Reptiles

- 5.46 The site is considered to have limited potential to support reptiles. Most of the onsite habitat provides insufficient vegetation cover to support reptiles, with most of the vegetated area comprising short sward grassland. However, given the site borders ancient woodland habitat and a fishing lake, which could provide foraging opportunities for grass snakes, there remains a low likelihood that basking, foraging, and commuting common reptiles such as slow worms, common lizards and grass snakes could utilise boundary habitats.
- 5.47 From historic aerial imagery, it appears that vegetation cover on the site has been continuously sparse since 2018, and therefore the potential for the site to support

reptiles was likely low pre-works. The works associated with the two shepherd's huts were situated away from the woodland edge and within areas of modified grassland which may have been less likely to be used by reptiles. However, this cannot be confirmed for definite in the absence of survey information.

Water vole

5.48 It is considered to be highly unlikely that water voles would be present on the site. The site itself provides no suitable habitat. There is a fishing lake adjacent, however the banks are shallow and gravelly, therefore unsuitable for burrowing. There are streams in the local area but not within very close proximity to the site, and water voles typically do not venture far from a watercourse.

5.49 The works associated with the two shepherd's huts already constructed did not impact on any habitat suitable for water voles, therefore the site's suitability for the species is unchanged pre- and post-works.

Other Mammals

5.50 No evidence of other mammals was recorded within the site.

Other Species of Principal Importance

5.51 There is potential for the site to support common toad (*Bufo bufo*) within boundary habitats.

5.52 The site's suitability for SPI is likely unchanged pre- and post-works given the works impacted an area of modified grassland likely of very low suitability to SPI.

Other valuable ecological features

5.53 There is ancient woodland immediately adjacent to the east of the site.

6 Conclusions & Recommendations

6.1 In line with Natural England's Standing Advice, where further survey for protected species is recommended these should be conducted prior to submitting a planning application and appropriate mitigation measures be incorporated into the development design.

Invasive species

6.2 **Due to the location of the site adjacent to the ancient woodland, which can be heavily impacted by invasive species, it is recommended that rhododendron and cotoneaster are removed from the site.**

6.3 **It is recommended that any proposed ornamental planting is discussed with an ecologist and utilises species of known benefit to wildlife, preferably native species as far as possible.**

Plant species of note

6.4 No plant species of note were identified therefore no further action is required.

Habitats of Principal Importance

- 6.5 **The deciduous woodland adjacent to the east of the site is HPI and therefore must be protected from damage.** Root protection zones must be adhered to. There must be no increased runoff of surface water into the woodland. Materials must not be stored adjacent to the woodland to prevent soil compaction.

[REDACTED]

Bats

- 6.7 It is understood that no trees or buildings are to be impacted by the proposed works. Should plans include impacts to trees or buildings, a bat assessment will be required in the first instance to determine whether the trees or buildings have potential suitability for bats and whether further surveys are required.
- 6.8 Lighting can have notable negative impacts on commuting and foraging bats. The adjacent woodland and fishing lake may be utilised by bats. There is potential for lighting during and post-development to cause indirect disturbance in these areas. Lighting should be avoided or kept to the minimum necessary, and preferably on a motion sensor to reduce lighting time. **The adjacent woodland and lake must not be illuminated.**
- 6.9 The works to construct two shepherd's huts have included installation of fairy lights on fencing, downward-facing hanging lights adjacent to the path leading from the car park, and a single light on the front (west side) of each hut. The fairy lights and hanging lights provide a very low level of illumination and are unlikely to cause disturbance to bats. **It is recommended that baffles are fitted to the lights on the shepherd's huts to ensure there is no upward light spill.**

Breeding birds

- 6.10 It is understood that there will be no removal of dense vegetation or trees for the proposed development. **Should dense vegetation or tree removal be required, this should be undertaken outside the breeding bird period from March to August. Should any vegetation clearance be scheduled to take place between the beginning of March and the end of August, this must be immediately preceded by a survey to check for nesting birds.** No vegetation can be cleared whilst a nest is occupied, regardless of species.

Great Crested Newt (GCN)

- 6.11 A Rapid Risk Assessment calculation has been carried out using the site area and the location of the nearest potentially suitable waterbodies. No more than 0.5ha of land will be/has been affected, with the total area of vegetated habitat to be affected most likely being less than 0.1ha. HSI assessment has determined that waterbodies within 100m of the site are highly unlikely to support GCN. On this basis, the Rapid

Risk Assessment identifies that if breeding GCN are present in other ponds identified within 500m of the site and in the absence of mitigation, an offence is highly unlikely. This applies to both the works already carried out and further proposals.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.005
Individual great crested newts	No effect	0
Maximum:		0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

FIGURE 10: RAPID RISK ASSESSMENT OF THE SITE

6.12 Due to the small amount of poor suitability habitat on-site and the results of the rapid risk assessment, it is considered highly unlikely that the proposed works would impact GCN and therefore no further surveys for this species is required.

6.13 **It is recommended that the proposed working area is maintained as a short sward in the interim before works commence to prevent this habitat from becoming more suitable for GCN.**

Hazel dormice

6.14 The site is considered unlikely to be used by hazel dormouse and therefore no further surveys for this species are required.

6.15 Lighting recommendations made above regarding bats will prevent any dormice present in the adjacent woodland from being disturbed by artificial lighting.

Otter

6.16 The site is considered unlikely to be used by otter and therefore no further surveys for this species are required.

Reptiles

6.17 The site provides a small amount of habitat for common reptiles; however, this is largely restricted to boundary habitats, with most of the site providing insufficient vegetation cover for reptiles. The proposed works are situated within central modified grassland areas of very poor suitability for reptiles. Therefore, no significant impacts would be expected and no further surveys for this species group are required.

6.18 **It is recommended that the proposed working area is maintained as a short sward in the interim before works commence to prevent this habitat from becoming more suitable for reptiles.**

Water vole

6.19 The site is considered unlikely to be used by water vole and therefore no further surveys for this species are required.

Other Mammals

- 6.20 Site clearance work should be undertaken carefully (by hand if necessary) to avoid impacting any small, burrowing mammals present. Good building practice recommended for [REDACTED] above will ensure any mammals traversing through the site are not trapped during works.

Other Species of Principal Importance

- 6.21 Common toads may be present on-site but are unlikely to be found within the central grassland area proposed for works, therefore impacts are unlikely. Maintaining the proposed working area as a short sward in the interim before works commence will prevent this habitat from becoming more suitable for toads. Clearance work should be undertaken slowly and carefully to prevent harm to any species present.

Other valuable ecological features

- 6.22 **The ancient woodland adjacent to the east must be retained intact and no ground works or storage of materials should occur within 15m of this habitat, a 50m buffer is required from trampling or pollution.**
- 6.23 Where possible, the 15m buffer zone from ancient woodland should comprise semi-natural habitat. **It is recommended that habitat enhancements are incorporated in the proposals, particularly adjacent to the ancient woodland, to include scrub creation and grassland enhancement.**

Impact Assessment

- 6.24 Whilst the site's condition and presence of protected species prior to works for the construction of two shepherd's huts cannot be confirmed for definite in the absence of survey information, on the basis of the survey undertaken in September 2024 and the desk study carried out, it is considered most likely that vegetation cover in the areas impacted was low level and poor quality, and the potential for protected species to be present was limited. As such, it is unlikely that significant impacts to the fauna and flora populations within the local area resulted from the works already undertaken.
- 6.25 Overall, it is considered that there are no likely significant impacts to the fauna or flora populations within the local area from the proposed works still to be completed, provided the recommendations above are adhered to.

Appendix 1 – Survey timetable

Species	Survey	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bats	Roost assessments												
	Ground level tree assess												
	Emergence and activity												
	Hibernation												
	Trapping												
Birds	Wintering												
	Breeding												
Great crested newt	HSI												
	eDNA												
	Presence/absence & popn												
	Refugia												
Hazel dormouse	Tube												
	Nut search												
Otter	Field signs												
Reptiles	Refugia & search												
Water vole	Field signs												
Invertebrates	Presence & communities												
Vegetation	Phase 1 habitat & NVC												
	Optimal												
	Sub-optimal												
	Outside survey season												

Appendix 2 – Legal protection

General

This section briefly describes the legal protection afforded to protected species and habitats. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation but summarises the salient points.



Barn Owl

Barn owls are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981 (as amended)* which makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- take, damage or destroy the nest while that nest is in use or being built;
- take or destroy the egg;
- disturb them while they are in, on, or near a nest containing eggs or young, or to disturb their dependent young;
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

The penalty for an offence involving a barn owl, its nest, or egg, includes a fine of up to £5,000, or up to six months imprisonment, or both, per bird, nest or egg.

Bats

All species of bats are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)* which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

A roost is defined as ‘any structure or place which a bat uses for shelter or protection’. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present.

Furthermore, seven bat species (barbastelle, bechstein’s, noctule, soprano pipistrelle, brown long-eared, lesser horseshoe and greater horseshoe) are also Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Breeding Birds

All species of wild bird are protected under Section 1 of the *Wildlife and Countryside Act 1981 (as amended)*. Protection was extended by the *Countryside and Rights of Way (CROW) Act 2000*. Under the above legislation, it is an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Certain species are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981 (as amended)* and receive protection under *Sections 1(4) and 1(5)*. There are special penalties where the offences listed above are committed for any *Schedule 1* species and it is also an offence to intentionally or recklessly:

- disturb any such bird when it is building its nest or while it is in or near a nest containing dependant young; or
- disturb the dependant young of any such bird.

Amphibians

Natterjack toad, northern pool frog and great crested newt are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)* which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Palmate newts and smooth newts are also afforded protection against sale only under *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*.

Natterjack toad, common toad, great crested newt and northern pool frog are also Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Hazel dormouse

Hazel dormouse is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)* which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Hazel dormouse is also a Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Otter

Otter is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Otter is also a Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Reptiles

Common lizard (*Lacerta vivipara*), grass snake (*Natrix natrix*), slow worm (*Anguis fragilis*), and adder (*Vipera berus*) are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the *Countryside and Rights of Way (CROW) Act 2000*. Under the legislation, it is an offence to:

- intentionally or deliberately kill or injure any individual of these species; or
- sell or attempt to sell any part of these species either alive or dead.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

All UK reptile species are Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Water vole

Water vole (*Arvicola amphibious*) is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, which affords them protection under *Section 9*, as amended. This makes it an offence to:

- capture, kill or injure;
- damage, destroy or block access to a place of shelter;
- disturb whilst in a place of shelter or possessing, and

- sell any part of a water vole, dead or alive.

Other Mammals

All mammals receive some protection under the *Wild Mammals (Protection) Act 1996*, which makes it an offence to crush or asphyxiate an animal (e.g. within its burrow).

Species and Habitats of Principal Importance

Section 41 of the Natural Environment and Rural Communities (NERC) (2006) requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list has 56 Habitats of Principal Importance and 943 species of principal importance listed and has been drawn up in consultation with Natural England.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under *Section 40 of the Natural Environment and Rural Communities Act 2006*, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Invasive species

It is an offence to plant, or otherwise cause to grow in the wild non-native plant species listed under *Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)*, for which *Section 14* of the Act applies. These include, but are not limited to:

- Himalayan balsam
- Cotoneaster sp.
- Japanese knotweed
- Giant hogweed.

Ancient woodland

The *National Planning Policy Framework (2012)* states that ‘*Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss*’. In addition, Natural England’s standing advice for ancient woodland states that *an appropriate buffer zone of semi-natural habitat [be in place] between the development and the ancient woodland (depending on the scale and impact of development), a minimum buffer should be at least 15 metres to avoid root damage and at least 50m for pollution or trampling*”. Ancient woodlands, and ancient and veteran trees, may also be protected by Tree Preservation Orders.

Sites of Special Scientific Interest (SSSI’s)

SSSI’s are areas notified under the *Wildlife and Countryside Act 1981, as amended*, as being of special interest for nature conservation. They are the finest sites for wildlife and natural features supporting many characteristic, rare and endangered species, habitats and natural features. LPAs have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI.

National Site Network: Special Protection Areas (SPA), Special Areas of Conservation (SAC) & RAMSAR sites.

Development proposals which will adversely affect these sites are not permitted (except where there are no alternative solutions and the proposal is necessary for imperative reasons of overriding public interest). If a development could possibly impact on a SPA or SAC, the applicant will need to submit an assessment of potential impacts and their significance with their planning application for the local authority to make an 'Appropriate Assessment'.

Local Nature Reserves (LNRs)

These are a statutory designation made by local authorities. LNRs may be given protection against damaging operations and development on and around them via the local plan.

Local Wildlife Sites (LWS)

This is a non-statutory designation for sites identified at a county level. They typically form a network of sites that are recognised of being of conservation importance locally and are often included in Local Authority development plans.

Appendix 3 – Species list

Common Name	Scientific name	DAFOR

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