

AEWC Ltd

Animal Ecology & Wildlife Consultants

**Protected Species Walkover
and
Bat Assessment**

**1st Petworth Scouts
Sheepdown Drive
Petworth
West Sussex
GU28 0BW**

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16-059
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Summary

- AEWCLtd were commissioned by 1st Petworth Scouts to undertake a protected species walkover and bat assessment at Petworth Scout Hut, Sheepdown Drive, Petworth, West Sussex, GU28 0BW at grid reference SU 98066 21488 to help inform the proposed development of the site.
- This report details the results of the survey, which was carried out on the 14th February 2024 by Annika Binet, Natural England licensed bat ecologist, to assess the site for the potential presence of any protected species or species of conservation concern and identify habitats of conservation importance.
- The site is approximately 0.19ha in size and largely comprises amenity grassland. Hedgerows, comprising ornamental and native species, occur on the site boundaries with several conifer and deciduous trees on the northern and western edges. Patches of scrub also occur on the western boundary. There are two buildings on site, the scout hut and a garden shed.
- The daytime assessment identified negligible potential in the scout hut proposed for demolition due to a lack of suitable roosting features. Potential features identified were found to be very shallow and considered to be too small for use by roosting bats. The roof voids were highly cobwebbed and no evidence of the presence of bats was identified. As the buildings on site have negligible potential for bats, no further surveys are required.
- Lighting can have notable negative impacts on commuting bats, that are known to be present locally. There is potential for lighting during and post-development to cause indirect disturbance in these areas. Additional external lighting should be avoided or kept to the minimum necessary, and preferably on a motion sensor to reduce lighting time. No lighting should be positioned so as to shine upon the adjacent tree or hedge lines. Any external lighting must consist of down lighters only.
- Vegetation, tree or building removal must be undertaken outside the breeding bird period from March to August. Should any vegetation or building 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 or buildings can be cleared whilst a nest is occupied, regardless of species.

This report has been prepared by AEWCLtd, 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 1st Petworth Scouts to undertake a protected species walkover and bat assessment at Petworth Scout Hut, Sheepdown Drive, Petworth, West Sussex, GU28 0BW to help inform the proposed development of the site.
- 1.2 Surveys carried out at the site in 2017 identified that the buildings had very low potential to support roosting bats, with the wider site holding suitability for hedgehogs and nesting birds.
- 1.3 This survey comprised a bat assessment plus ecological walkover survey for all protected wildlife and species of conservation importance, including habitats, and was carried out by Annika Binet, a Natural England licensed bat ecologist on the 14th February 2024.
- 1.4 The bat surveys and report writing were carried out in accordance with Bat Surveys: Good Practice Guidelines (Bat Conservation Trust, 2023).
- 1.5 The purpose of this report is to detail the results of the bat assessment and walkover survey, give an assessment as to the presence or potential presence of any protected species, ecological issues and impacts that would be generated by the proposed developments, outline recommendations in relation to protected species and the proposed development of the site and identify recommendations for further surveys that may be necessary.

2. Background

- 2.1 The proposed development site is located at Petworth Scout Hut, Sheepdown Drive, Petworth, West Sussex, GU28 0BW at grid reference SU 98066 21488. The site is located approximately 50m south of the A283 in the town of Petworth. The bordering tree lines and hedgerows connect the site to suburban gardens with limited connectivity to small fragments of deciduous woodland to the southwest. The site lies within the South Downs National Park. Bognor Quarry SSSI occurs approximately 2.5km to the east of the site. The surrounding landscape comprises a mosaic of agricultural land and woodland blocks interspersed with residential development. See Figure 1.
- 2.2 The site is approximately 0.19ha in size and largely comprises amenity grassland. Hedgerows, comprising ornamental and native species, occur on the site boundaries with several conifer and deciduous trees on the northern and western edges. Patches of scrub also occur on the western boundary. There are two buildings on site, the scout hut and a garden shed. See Figure 2.



FIGURE 1: SHOWING THE SITE LOCATION



FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE SITE BOUNDARY AND BUILDING SUBJECT TO SURVEY

2.3 The proposed development involves the demolition of the existing scout hut (approximately 106m²) and erecting a new hut. The size of the new hut will occupy a similar sized footprint to the existing hut. The majority of the habitat area on site is unlikely to be negatively affected by these proposals.

Legislation

2.4 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.

2.5 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.

2.6 Any disturbance of a bat occupying a roost can lead to prosecution. Disturbance can be caused by noise, vibration and artificial lighting. Penalties for breaking the law can include fines of £5,000 per bat, imprisonment and the seizure of equipment.

2.7 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*.

3. Methods

3.1 A daytime ecological walkover assessment was carried out on the 14th February 2024 to 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.

3.2 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.

3.3 Taking into consideration the geographical region and habitat type, species that could be encountered are:

- badger;
- barn owl;
- bats;

- breeding birds;
 - great crested newt;
 - hazel dormice;
 - reptiles;
 - other mammals; and
 - other Species of Principal Importance (SPI) (e.g. hedgehog, stag beetle etc).
- 3.4 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.
- 3.5 Details of the initial survey method for each species are given below.
- 3.6 **Badger** – an initial assessment was carried out to identify areas that might be used by badgers (*Meles meles*). Signs of badgers including setts, incidental foraging signs, runs, hairs and latrines are recorded if encountered during the survey. Where possible the area within 30m of the site is also searched for badger setts.
- 3.7 **Barn owl** – The buildings were subject to a full external and internal inspection for evidence of use by barn owl, namely live/dead owls, pellets, droppings, feathers, nest debris, nestling fluff and eggs or eggshells.
- 3.8 **Breeding Birds** - habitats were assessed for their suitability for nesting birds. This would centre on birds that favour hedgerows, areas of longer grassland, scrub, trees as well as buildings.
- 3.9 **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.
- 3.10 **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.
- 3.11 **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).
- 3.12 **Other mammals** – any signs of occupancy by other mammals (e.g. Rabbit warrens) are recorded.

- 3.13 **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.
- 3.14 **Invasive species** - Any invasive plant or animal species identified during the site walkover are recorded.
- 3.15 **Plant species of note** – Any plant species of conservation concern found on the site are recorded.
- 3.16 **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.
- 3.17 **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.

Daytime Bat Assessment

- 3.18 A detailed bat building inspection was undertaken on the 14th February 2024 by Annika Binet, a Natural England licensed bat ecologist.
- 3.19 A systematic internal inspection of the building was conducted using a high-powered torch to illuminate all areas thought to be suitable for roosting bats. Additionally, an external search around the perimeter of the buildings was conducted and any possible access points i.e. gaps and crevices were noted and surveyed with a high-powered torch and ladder as appropriate.
- 3.20 The building's suitability for bat roosting was assessed by examining structural features that may influence the suitability of a building to support roosting bats; these include the presence of a roof void, the presence of access points into the building (including gaps beneath barge boards, weatherboarding, soffits and fascias, gaps under lead flashing, gaps within masonry and under loose tiles, gaps between tenon and mortise joints), the complexity and size of any roof void and daytime light levels in the roof void.
- 3.21 The building's suitability for roosting bats was also assessed by examining the surrounding habitat. Important habitat features surrounding the structure which may influence roost potential include whether the structure is in a semi-rural or parkland location, its proximity to a significant linear habitat features such as a watercourse, mature hedgerow, wooded lanes or an area of woodland.
- 3.22 All surfaces were also surveyed for signs of bat presence. Features of potential value to bats were surveyed not only for the presence of bats but also for signs that could indicate use by bats, such as:
- bat droppings that are dry and do not putrefy, but can crumble away to dust;
 - staining of access points used by bats to enter the structure; and
 - feeding remains such as moth and butterfly wings.

- 3.23 The survey included an external inspection of the trees present within the survey area to look for the presence of Potential Roosting Features including woodpecker and rot holes, horizontal cracks and splits in stems and branches, partially detached platey bark, cankers, hollows and cavities, double-leaders forming compression forks with included cavities, gaps between overlapping branches, partially detached ivy with stem diameter exceeding 50mm and bat, bird or dormouse boxes.
- 3.24 Taking account of these architectural, habitat features and signs of presence, the building was then assigned a level of roost suitability based the criteria given in the Bat Conservation Trust's Bat Surveys: Good Practice Guidelines (Collins, 2016) and professional judgement. The primary objective of this exercise was to identify the need for further detailed bat survey later in the year, or alternatively to obtain sufficient information that would dismiss the need for further assessment.

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 Bats are difficult to locate in large structures, with so many potential roosting areas, particularly in inaccessible areas such as large buildings, finding the exact roosting site can be difficult, especially male/single bat roosting sites. It should be noted that it is not always possible to identify bat presence by examining externally around buildings as poor weather conditions may have washed away droppings which were deposited on exposed surfaces.
- 4.3 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed. For this reason, bats may potentially be present but remain undetected, particularly during daytime assessment.
- 4.4 The bat assessment was undertaken in February outside of the primary active period for bats, external evidence which may have been present during the active season was therefore likely to have been destroyed by weathering at the time of the survey.

5. Results

Badger

- 5.1 No badger setts were identified present on site. No evidence of badger activity such as latrines, tracks, guard hairs or snuffle holes were observed on or directly adjacent to the site, which would suggest that the site is otherwise used for foraging. It is considered unlikely that any badger setts are present within 30m of the site boundary as no evidence of badger activity was identified.

Barn owl

5.2 The scout hut and shed are both well sealed with no fly-in access suitable for barn owls.

Breeding birds

5.3 There is habitat suitable for breeding birds on the site, the hedges and trees around the site boundaries hold suitability for use by nesting birds. Evidence of historic nesting was noted within the eastern boundary hedge and within the southern gable of the building.

Great Crested Newt (GCN)

5.4 The site is considered to have some potential to support terrestrial GCN, the hedgerows around the site boundary have suitability for use for foraging and refuge.

5.5 No ponds were recorded within the site boundary. The Ordnance Survey map available via MAGIC was reviewed for ponds within the accepted dispersal distance of 500m that are not separated from the site by significant barriers to dispersal such as main roads. No ponds were found occurring in any direction. A tributary of the River Rother is present to the north and east of the site.

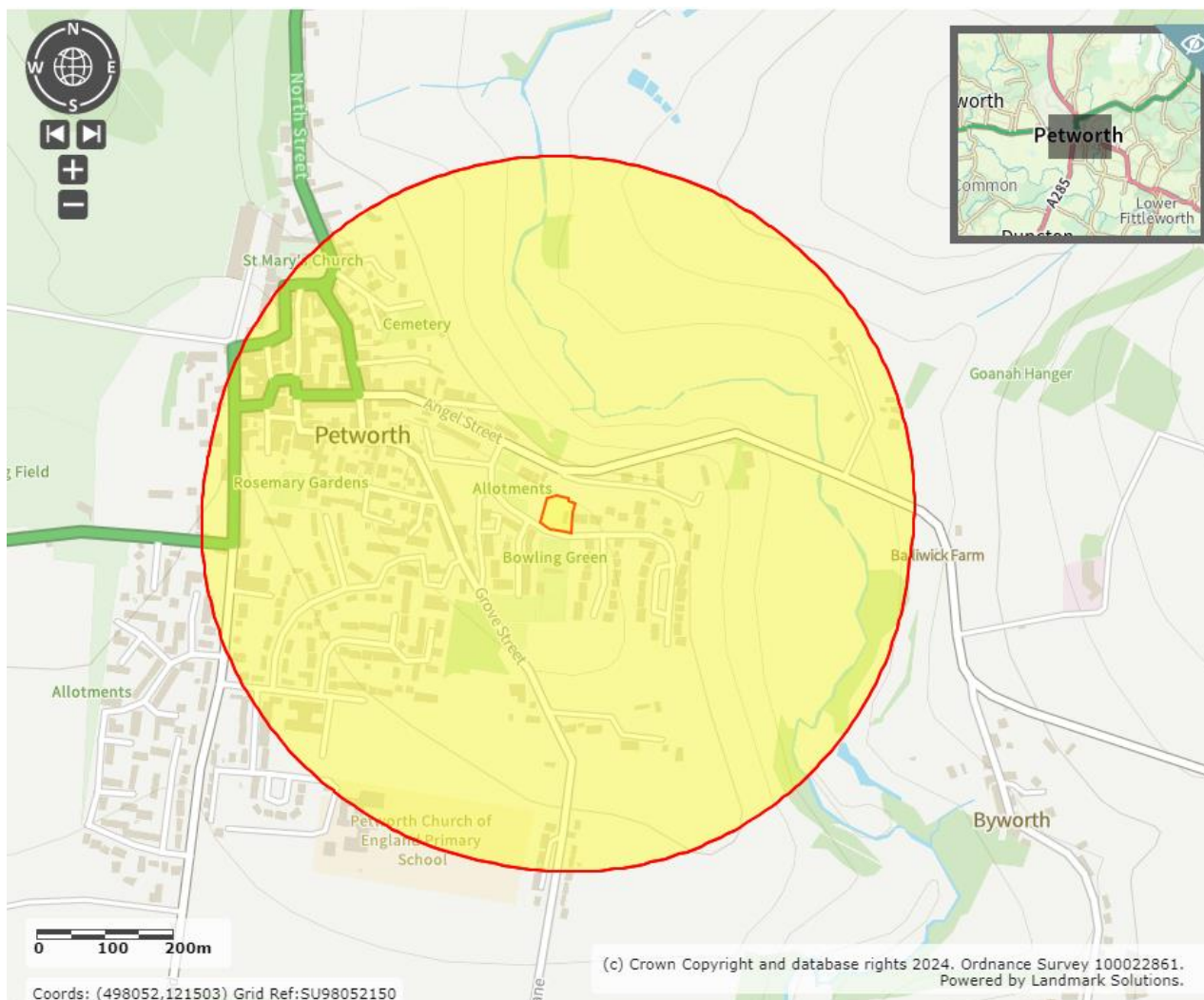


FIGURE 3: WATERBODIES WITHIN 500M OF THE SITE

- 5.6 There are no ponds within 500m of the site which are unobstructed by a major barrier to dispersal and therefore the likelihood of GCN using the site is considered to be negligible.

Hazel dormice

- 5.7 The hedgerows on the site boundary are considered to have some suitability to support hazel dormouse as they offer foraging opportunities and are well connected to adjacent suitable habitat.
- 5.8 No hazel nuts were available to check for those that may have been chewed by hazel dormouse.

Reptiles

- 5.9 The grassland on site is maintained as a short sward significantly reducing the suitability for reptiles. The hedgerows on the site boundaries provide suitable foraging habitat for common reptiles such as slow worms, common lizards and grass snakes. Compost heaps are present on the northern boundary of the site which provide additional suitability for reptiles and may be suitable as egg-laying sites for grass snakes.

Other Mammals

- 5.10 No evidence of other mammals was recorded within the site.

Other Species of Principal Importance

- 5.11 There is potential for the site to support SPI such as house sparrow and hedgehog. The hedgerows on the site boundary provide potential foraging opportunities for house sparrows, the scout hut provides very limited nesting opportunities which are not considered to be suitable for house sparrows. The hedgerows provide suitable foraging habitat for hedgehogs. Compost heaps are present on the northern boundary of the site which provide additional foraging and refuge opportunities.
- 5.12 The site does not appear to have suitability for any other SPI.

Invasive species

- 5.13 No invasive species of note were identified.

Plant species of note

- 5.14 No plant species of note were identified.

Habitats of Principal Importance

- 5.15 No HPI were identified within or adjacent to the site on MAGIC, see Figure 4. The hedgerows on the site boundary may qualify as HPI as they contain native woody species in addition to non-native species and are over 20m long.



Daytime Bat Assessment

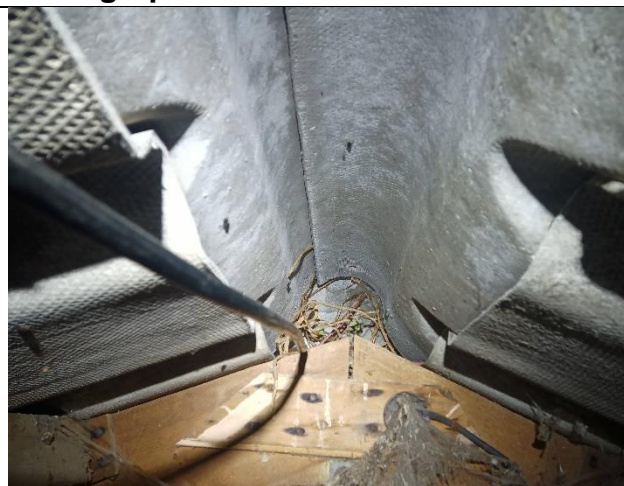
- 5.16 Two buildings are present on site, the scout hut and a storage shed. Only the scout hut is proposed for impacts and was the only building subject to detailed bat assessment.
- 5.17 The scout hut is a pre-fabricated building constructed of concrete with a corrugated roof which is unlined. Internally the main central area of the building has a vaulted ceiling with small roof voids present at the northern and southern ends of the building.
- 5.18 Externally the building is largely well sealed, a gap was noted to be present below the southern ridge and apex board where bird nesting materials could be seen which appeared to be blocking the potential access point. Shallow gaps were also present under the fascia boards present on the gable, these appeared to be blocked along the wall top with spray foam insulation resulting in a very shallow crevice which was considered to be too small for use by roosting bats.
- 5.19 A small gap was noted to be present between two of the concrete panels, this was examined with an endoscope and found not to extend as the panels interlock, filling the potential crevice space and leaving the available space too small for use by roosting bats.
- 5.20 The roof voids were found to be highly cobwebbed; a small amount of historic nesting material was identified at the southern gable where a gap is present under the apex boarding. Spray foam insulation has been used to seal the verge gaps internally.
- 5.21 No evidence of the presence of roosting bats was identified internally or externally around the building.



Photograph 5: *North and east elevations*



Photograph 6: *Southern gable*



Photograph 7: *Nesting material visible within the apex of the southern gable*



Photograph 8: *Highly cobwebbed roof void with sealed verges*

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.

Badger

- 6.2 The survey did not identify any evidence of badgers on the site and it is considered unlikely that there is a sett present within 30m. No further surveys for badgers are considered necessary.
- 6.3 As badgers could potentially be present in the wider area, good building practice should be followed to prevent animals from becoming trapped, such as covering trenches at night or providing a ramp to allow animals to escape.

Barn owl

- 6.4 The survey did not identify any evidence of barn owls on the site.

- 6.5 The buildings have no access into the interior for barn owls and are therefore considered to hold negligible potential for this species.

Breeding birds

- 6.6 Vegetation, tree or building removal must be undertaken outside the breeding bird period from March to August. Should any vegetation or building 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 or buildings can be cleared whilst a nest is occupied, regardless of species.

Great Crested Newt (GCN)

- 6.7 Due to the lack of ponds within 500m the site is considered unlikely to be used by GCN and therefore no further surveys or mitigation for this species is required.

Hazel dormice

- 6.8 The boundaries of the site hold some suitability for hazel dormice but are not proposed to be impacted by the works. The central portion of the site is considered unlikely to be used by hazel dormouse.
- 6.9 As there are no anticipated impacts to potential dormouse habitats on site, no further surveys for this species are considered necessary. Hedgerows must be protected from impacts during works through the implementation of suitable fencing.

Reptiles

- 6.10 The site provides a small amount of habitat for reptiles such as the compost piles and hedgerows on the boundaries of the site. These areas are not proposed for impacts and the central section of the site, which will be impacted by the works is considered to be unsuitable for reptiles due to them consisting of buildings, hard standing and short-mowed grassland.
- 6.11 Any areas of suitable vegetation should be gradually cut down and maintained as a short sward to discourage movement of reptiles into the site.

Other Mammals

- 6.12 Site clearance work must be undertaken carefully to avoid injury to any mammals which may be present on site.

Other Species of Principal Importance

- 6.13 The west European hedgehog is an SPI, therefore it is recommended that any vegetation should be cleared sensitively by destructive search with a qualified ecologist present on site. If close board fencing is to be fitted it should be raised above ground level to allow hedgehogs to pass underneath, some habitat areas should also be left un-landscaped to provide shelter and foraging opportunities. Good building practice recommended for badgers above will ensure that any hedgehogs traversing through the site are not trapped during the works. Additional habitat for hedgehogs could be provided through relaxation of mowing and seeding with an appropriate wildflower meadow mix in some areas of the site.
- 6.14 Buildings must be checked for nesting house sparrows and other bird species prior to demolition, no demolition can take place whilst a nest is occupied, regardless of species. Sparrow terraces could either be incorporated within or mounted onto the

walls of the replacement building to enhance nesting availability for this species post-development.

Invasive species

6.15 No invasive species were recorded and therefore no further action is required.

Habitats of Principal Importance

6.16 The hedgerows on the site boundary may classify as an HPI and therefore must be retained.

Other valuable ecological features

6.17 The local authority should be contacted to check if any trees within the survey area have Tree Preservation Orders.

Bats

6.18 Initial observations consider the local area suitable for bats. Woodland and pasture in close proximity to the site with a network of connective tree and hedge lines provides excellent foraging and commuting habitat for a range of bat species. A high number of bat species are known to be present within Petworth Park located within 500m to the west of the site. Buildings and trees within the local area additionally offer potential roosting opportunities.

6.19 The daytime assessment identified negligible potential in the scout hut proposed for demolition due to a lack of suitable roosting features. Potential features identified were found to be very shallow and considered to be too small for use by roosting bats. The roof voids were highly cobwebbed and no evidence of the presence of bats was identified. As the buildings on site have negligible potential for bats, no further surveys are required.

6.20 Lighting can have notable negative impacts on commuting bats, that are known to be present locally. There is potential for lighting during and post-development to cause indirect disturbance in these areas. Additional external lighting should be avoided or kept to the minimum necessary, and preferably on a motion sensor to reduce lighting time. No lighting should be positioned so as to shine upon the adjacent tree or hedge lines. Any external lighting must consist of down lighters only.

6.21 Additional work lighting which may be required must be positioned to ensure that it shines onto the area of works with minimal spread into the wider area.

6.22 In the unlikely event bats are found on site during works the procedure detailed in section 7 of this report must be followed.

7. Procedure to follow in the event a bat is found on site at unsupervised times.

7.1 Bats are present within the vicinity of the site and may be found at any location on, in or around the buildings. Bats are protected species, and these procedures must be followed to avoid committing an offence.

- 7.2 If a bat is found at any location around the site DO NOT TOUCH unless necessary for the safety of the bat.
- 7.3 If the bat was uncovered in a roosting location carefully replace covering ensuring the bat is not crushed or harmed. If this is not possible cover the animal with a loose covering.
- 7.4 Stop all work at that area and the immediate vicinity. Work may continue at other areas around the site.
- 7.5 Call the AEWC Ltd bat licensed project ecologist Annika Binet 07528 956486, call the office on 08452 505585, or licensed ecologists Daniel Whitby 07764813002 or Brigitte de Coriolis 07545130203.

Appendix 1 – Survey timetable

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

Appendix 2 – Legal protection

General

This section briefly describes the legal protection afforded to protected species. 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.

Badger

Badgers are protected under the *Protection of Badgers Act 1992*. Under this legislation it is an offence to kill or injure a badger, to damage, destroy or block access to a badger sett, or to disturb badger in its sett. The Act also states the conditions for the protection of badger's licence requirements.

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 helvetica*), 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.

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