



EXTENDED PHASE 1 ECOLOGICAL ASSESSMENT AND PHASE 2 BAT SURVEYS

PARK FARM, WHEATSHEAF ROAD, WOODMANCOTE, HENFIELD,
WEST SUSSEX BN5 9BA

DRAFT REPORT

November 2024

Report conditions

<i>Report title</i>	Extended Phase 1 Ecological Assessment and Phase 2 Bat Surveys– Park Farm, Wheatsheaf Road, Woodmancote, Henfield, West Sussex BN5 9BA		
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Executive Summary

- This extended phase 1 ecological assessment report has been prepared in order to support a planning application for the redevelopment of the site at Park farm, Wheatsheaf Road, Woodmancote, Henfield, West Sussex BN5 9BA.
- An extended phase 1 ecological assessment of the application site was undertaken on the 12th June 2024 by Trevor Codlin MCIEEM of Phillips Ecology.
- The survey area comprised the entire site within the red line boundary. A data search extended to a 2km radius for statutory designated sites and 1km radius for priority habitats and protected species.
- There are no statutory designated sites within a 2km radius of the site. Three blocks of ancient woodland, and two priority habitats were identified by the data search. None of these are located on the site.
- The site includes 12 buildings, including the main house and associated barns and outbuildings. These are in the centre of the site. Seven of the buildings were considered to provide bat suitability and further surveys were recommended.
- The site supports an active badger sett and numerous breeding bird species. Suitable habitat is considered present for hazel dormouse, hedgehog and widespread reptiles.
- Further phase 2 bats surveys were carried out during July, August and September 2024 on the seven buildings with suitability, and roosting bats were confirmed.
- Further surveys for other species are not recommended at this time; however, additional surveys may be necessary if proposed works are likely to impact suitable habitat areas.
- Impacts on certain species can likely be avoided through the implementation of targeted mitigation and precautionary avoidance measures; however, the suitability of these measures will depend on the specific scope of the proposed works.
- Enhancement opportunities have been suggested for the site.
- Information regarding the length of time the findings of this report are valid for can be found in section 13.

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1. Introduction

1.1 Report purpose

This extended phase 1 ecological and bat roost assessment report has been prepared in order to support a planning application for the redevelopment of Park Farm, Wheatsheaf Road, Woodmancote, Henfield, West Sussex BN5 9BA centred at NGR: TQ 22780 17291.

1.2 Description of proposal

The proposals for the site are yet to be confirmed but include the renovation of the farmhouse and conversion of some of the outbuilding for use as a wedding venue.

Phillips Ecology have been instructed by the applicant to undertake an ecological assessment of the site.

1.3 Scope of assessment

An extended phase 1 ecological assessment was carried out on the 12th June 2024. The survey comprised a field survey and desktop study in order to identify notable or protected sites, habitats or species potentially affected by the proposal under consideration. This was followed by species-specific surveys for bats.

1.4 Survey area

The survey area comprised the entire site within the red line boundary. A data search extended to a 2km radius for statutory designated sites and 1km radius for priority habitats and protected species.

1.5 Survey conditions

The survey was carried out in dry conditions, 40% cloud cover, a light (F1-2) northerly breeze and a temperature of 16°C.

1.6 Limitations

Limitations which are specific to each phase of the assessment are provided in the relevant sections, below.

2. Data search

2.1 Methodology

A desk-based assessment was undertaken by Phillips Ecology on the 16th July 2024 with Multi-Agency Geographic Information for the Countryside (MAGIC). The MAGIC database was consulted for records of statutory designated sites within a 2km radius and priority habitats and protected species within a 1km radius.

2.2 Limitations

The data search results are bound by the following statement contained within MAGICs general disclaimer: “The materials contained on this website are of a general, informational, nature. We have used reasonable endeavours to ensure the accuracy and completeness of the contents of the pages on this site but the information does not constitute advice and must not be relied on as such”.

2.3 Results

2.3.1 Statutory designated sites

The data search revealed no statutory designated sites within a 2km radius of the site.

2.3.2 Ancient Woodlands

There are three blocks of ancient woodland located within a 1km radius of the site.

Table 1: Ancient woodlands within 1km of the application site

Woodland Name	Approx. distance and direction from the site	Reason for designation
Woodhouse Wood	0.87km E	This 4.25ha site is designated for its ancient and semi-natural woodland.
Newfield, Old Orchard, Twinhams gill, gate field Copse	0.75 km S	This 0.76ha site is designated for its ancient and semi-natural woodland.
Un-named	0.98 km S	This 0.47ha site is designated for its ancient and semi-natural woodland.

2.3.3 Priority habitats

The data search revealed records of six priority habitats within a 1km radius of the site. These are listed below.

- Deciduous woodland (210m SW).
- Traditional orchard (710m S).

2.3.4 *Protected species*

The data search did not reveal any records of protected species licences within a 1km radius of the site.

3. Habitats

3.1 Methodology

A field survey was carried out on the 12th July 2024 by Trevor Codlin MCIEEM of Phillips Ecology. During the survey, all broad habitat types were identified and a list of characteristic plant species within each habitat type was compiled. These habitats are described below in accordance with UK Habs terminology.

3.2 Limitations

No limitations to the habitat survey were identified.

3.3 Existing records

The data search revealed two priority habitats within a 1km radius of the site, these were associated with woodland habitats. None of the priority habitats were identified as being present on the site.

3.4 Results

The site is located to the north-east of Henfield in a rural location. The surrounding habitat is made up of arable land and grazed pasture, with hedgerows bisecting the individual land parcels. A tributary of the River Adur flows west beyond the southern boundary of the site.

The site itself is made up of buildings, a swimming pool, tennis court, mature trees and hedgerows with areas of grassland, including two meadows and managed lawn areas.

The following habitat types were recorded within the survey site.

3.4.1 Modified grassland (g4)

The most extensive areas of habitat on the site are grassland. These are generally species poor, for example the large meadow forming the southwestern part of the site (Figures 1 and 2). Grasses dominate the sward with the total cover amounting to greater than 75%, and including Yorkshire fog *Holcus lanatus*, meadow foxtail *Alopecurus pratensis*, cock's foot *Dactylis glomerata* and false oat-grass *Arrhenatherum elatius*. Forbs are limited and include creeping buttercup *Ranunculus repens*, creeping thistle *Cirsium arvensis*, common chickweed *Stellaria media* and curled *Rumex crispus* and broad-leaved dock *R. obtusifolius*.

A second, smaller meadow is located in the northern part of the site (Figures 3 and 4). This meadow is again dominated by grasses, with Yorkshire fog, meadow foxtail and perennial rye-grass *Lolium perenne* the dominant species but also some red fescue *Festuca rubra* and crested dog's-tail *Cynosurus cristatus*. Forbs are again limited with creeping buttercup, common chickweed and white clover *Trifolium repens* the most numerous, with occasional agrimony *Agrimonia eupatoria* and creeping cinquefoil *Potentilla repens*.



Figures 1 & 2: Large Yorkshire fog dominated meadow forming western part of the site.



Figures 3 & 4: Meadow located in the northern part of the site, isolated patch of bramble scrub.

Other areas of grassland within the curtilage of the dwelling are of a similar species mix but are more intensively managed and at the time of the survey, some were mown. The species assemblage was broadly similar with Yorkshire fog dominating and other grasses including annual meadow-grass *Poa annua*, cock's foot and false oat-grass. Forbs were more frequent than in the meadows, but still sparse, including ground-ivy *Glechoma hederacea*, creeping buttercup, common chickweed, common field speedwell, daisy *Bellis perennis* and dandelion *Taraxacum* agg.



Figures 5 & 6: Mown grassland and trees around the tennis court (left) and around farm buildings (right).

A raised bund in the central northern part of the large meadow is vegetation with grasses and forbs at the western end and scrub at the eastern end. The grassland end is the most

floristically diverse of all the grassland on the site with the species recorded including hoary ragwort *Senecio jacobaea*, creeping cinquefoil, common vetch *Vicia sativa*, white clover, smooth tare *V. tetrasperma*, grass vetchling *Lathyrus nissolia*, curled dock and common fleabane *Pulicaria dysenteria*.

3.4.2 Broadleaved woodland and scattered trees (w1g7 & 11)

The site is characterised by mature trees that are mostly oak *Quercus rubor*, with some birch *Betula pendula* (Figures 5, 7 and 8). These are situated as scattered trees and in places large groups which are best described as woodland. The shrub layer closest to the dwelling includes native and introduced species. Other tree species recorded included ash *Fraxinus excelsior*, lime *Tilia cordata* with the shrub layer including bramble *Rubus fruticosus* agg., hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, blackthorn *Rubus spinosa*, wayfaring tree *Viburnum lantana* and yew *Taxus baccata*.



Figures 7 & 8: Groups of scattered trees located throughout the site.

3.4.3 Hedgerows and trees (h2a, 1170)

The site is enclosed by native hedgerows, some of which are species-rich with trees, whereas others are without trees and species-poor. One short section includes mostly conifer *Leylandii* sp. and another enclosing the garden and swimming pool is dominated by beech *Fagus sylvatica*, cherry laurel *Prunus laurocerasus* and yew. The species mix of the hedgerows located throughout the site includes blackthorn, field maple *Acer campestre*, oak, dog-rose *Rosa canina* agg., bramble, hawthorn, honeysuckle *Lonicera periclymenum*, ash *Fraxinus excelsior*, elder *Sambucus nigra*, wild privet *Ligustrum vulgare*, elm *Ulmus procera*, willow *Salix* sp., broom *Cytisus scoparius*, black bryony *Tamus communis* and hop *Humulus lupulus*.



Figure 9: Northern boundary hedgerow with mature oak trees.



Figure 10: Managed parallel hedgerow along southwestern side of the garden.

3.4.4 *Other eutrophic standing waters (r1a6, 366)*

There are only two areas of standing water located on the site, a small ornamental pond and a swimming pool. At the time of the survey the ornamental pond was half full and the surface covered with dead leaves and the swimming pool was highly eutrophic, and lacked any emergent vegetation.



Figure 11: Ornamental pond near dwelling.



Figure 12: Unmanaged swimming pool, with highly eutrophic water.

3.4.5 *Bramble scrub (h3d)*

Isolated and more extensive patches of scrub are located across the site, with the most extensive areas where hedgerows have been allowed to extend into field corners or margins through a lack of management. Where they are present, bramble is the dominant species.

3.4.6 *Tall herb (g4, 17)*

Patches of tall ruderals are present in areas where the grassland is more unmanaged, for example within the large meadow in the west of the site with other patches scattered throughout the site. Where present common nettle is the dominant species.

3.4.7 *Built up areas – buildings & hard standing (u1b5, 88, 109, 115)*

There are several buildings located on the site, including the main dwelling, barns and other outbuildings and associated concrete and tarmac hardstanding, access to the site is via a gravel and tarmac track leading on the site from the northernmost point to a gravel area in front of the dwelling. A secondary access to the barns is present to the east.

3.5 **Assessment**

The habitats on site are mostly modified, with the meadows being generally species-poor which may reflect a previous early cut for silage. During the survey no assemblages of rare or notable species were recorded, but some early flowering woodland species would no longer be visible. The species-rich hedgerows and mature trees are currently considered to be the habitats of highest botanical value, with some of the trees appearing to be very aged, although probably not veterans. The hedgerows, where they are species-rich, are priority habitats.

4. Protected and notable species assessment

The scope of works, data search and habitat assessment have informed the scope of the protected and notable species assessment. On this basis, the protected and priority species that have been considered further within this report are detailed below. Otter *Lutra lutra*, water vole *Arvicola amphibious* and white-clawed crayfish *Austropotamobius pallipes* and are not considered further due to the lack of any ponds, larger waterbodies, streams and rivers on or adjacent to the site.

- Bats
- Badger
- Hazel dormouse *Muscardinus avellanarius*
- Hedgehogs
- Reptiles
- Great crested newt *Triturus cristatus*
- Breeding birds

The surveyed site has been assessed for its potential to support the above-named protected species based upon the criteria in Table 2.

Table 2: Protected species grading criteria

Grading criteria	Justification
Negligible	Site is entirely unsuitable for species. Presence of species highly unlikely.
Low	Minimal suitable habitat present or, if present, highly degraded/fragmented. Minimal linkage to suitable habitat beyond site. Presence of species unlikely.
Moderate	Presence of some suitable habitat features for species. Surveyed site within/close to known range or known occurrence but factors such as isolation/fragmentation may reduce potential. Presence of species is more likely than not.
High	Presence of optimal habitat features for species. Surveyed site within known range/close to known occurrence. Excellent connectivity to optimal habitat. No justification for discounting presence of species.
Confirmed presence	Species confirmed on site through direct sighting, presence of field signs (e.g. scat, hair, prints, nest, eggs, habitation etc.) or through desk-based assessment.

5. Bats

5.1 Preliminary roost assessment methodology

5.1.1 Survey Description

The survey did not depart from the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) which states that "A preliminary roost inspection survey is a detailed inspection of the exterior and interior of a structure to look for features that bats could use for entry/exit and roosting and to search for signs of bats".

The internal and external features of the structures which will be modified by the proposed works in such a way that bats or their roosts could be impacted (directly or indirectly) if present, were systematically inspected in detail to compile information on potential and actual bat access points and roosting places such as lifted or broken tiles, loose brickwork and open eaves. This included a thorough search for evidence of bat activity such as bat droppings, urine splashes and fur staining.

5.1.2 Survey Equipment

Survey equipment comprised:

- High-powered torch
- Camera
- Video endoscope
- Ladder
- Binoculars (8x magnification)

5.1.3 Assessment methodology

The suitability of the building and trees for supporting bat roosts will be assessed against the guidelines within Table 3 which have been adapted from the BCT Good Practice Guidelines.

Table 3: Suitability assessment guidelines

Suitability	Description of Roosting Habitats
Negligible	Structure or tree has no reasonable likelihood of supporting roosting bats i.e. no suitable roosting features present.
Low	A structure or tree which could be used opportunistically by individual bats i.e. one or more potential roost sites which do not provide sufficient space, shelter, protection, appropriate conditions (e.g. temperature, light, humidity) and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure or tree which could be used by bats but is not likely to support a roost of high conservation status (e.g. maternity roost). This structure would support features which exhibit suitable size, shelter, protection, conditions and surrounding habitat for roosting bats.
High	A structure or tree which is obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time.

The site's suitability for supporting commuting and foraging bats will be assessed against the guidelines within Table 4 which have been adapted from the BCT Good Practice Guidelines.

Table 4: Suitability assessment guidelines

<i>Suitability</i>	<i>Description of Foraging/Commuting Habitats</i>
<i>Negligible</i>	Negligible habitat features on site likely to be used by commuting or foraging bats.
<i>Low</i>	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitats. Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not parkland situation) or a patch of scrub.
<i>Moderate</i>	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such tree, scrub, grassland or water.
<i>High</i>	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of tree and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

5.1.4 Limitations

No limitations to the survey were identified.

5.1.5 Existing records

The data search did not reveal any bat records within 1km radius of the site. However, six species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Daubenton's *Myotis daubentonii*, whiskered *M. mystacinus*, serotine *Eptesicus serotinus* and brown long-eared *Plecotus auritus* have been recorded between 1 and 3km of the site.

5.2 Preliminary roost assessment results

5.2.1 Overview

There are 12 buildings on the site that were assessed as part of the preliminary roost assessment, which for ease of reference have been numbered 1 – 12. The building number and location is depicted in Figure 13, with building descriptions, suitable bat roosting features and recorded evidence detailed in Table 5.



Figure 13: Building numbers, as used throughout this report and locations.

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
1	 Figure 14: Building 1, showing hanging tiles.  Figure 15: Building 1, older part of building.	This building comprises a Grade II listed building which has been extended over time and now consists of a significant structure, which broadly forms a 'U' shape. The central part of the building is orientated with the ridge running southwest – north-east, with the wings extending in a northwesterly direction from each end. The original dwelling was constructed in Tudor times and consists of a brick and timber framed structure with daub infill. Ornate chimney stacks are present in places and extend up the exterior. The later additions to the building are constructed with brick to the lower half, or sometimes the whole elevation, but for the majority the upper half is clad with clay hanging tiles. The roof is also clad with clay tiles, and is complex in its design, comprising hipped, half-hipped and gable sections, rising to a central ridge.	There are numerous potential bat roosting features on this building. <u>Exterior</u> • Beneath ridge tiles. • Beneath roof tiles. • Beneath hip tiles. • Behind hanging tiles. • Within timber frames, where split (Figure 16).  Figure 16: Gaps in timber frame and brick work.	Bat evidence, in the form of droppings considered to be from a long-eared bat species <i>Plecotus</i> sp., were recorded throughout the roof void. Occasionally a concentration was found, suggesting roosting bats, but no live bats were recorded (Figure 17).  Figure 17: Cluster of long-eared bat droppings. A long dead brown long-eared bat was recorded within the roof void (Figure 20).	High

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 18: Hanging tiles on Building 1.  Figure 19: Part of roof void.	Internally, a large roof void is present, and extends around the dwelling. The original timbers are still present in the Tudor section, but in other areas the rafters are constructed with a collar beam design, or traditional rafters. The clay roof tiles are underlaid with a variety of approaches, including bitumen felt, a modern breathable membrane, sarking or not underlaid. Gaps are present in several locations along the ridges and wall plate height, presumably to aid ventilation. Two basements are present, one is accessed from the kitchen via a trap door, the other from a door on an external wall.	<u>Exterior</u> - Gaps where daub has fallen out, including at gable. - Around entrance porch. - Where lead flashing is present in valleys. - Gaps where mortar is missing in brickwork. - Ventilation hole in chimney. <u>Interior</u> - Within the roof void	 Figure 20: Long dead long-eared bat. Externally, droppings consistent with a pipistrelle bat species <i>Pipistrellus</i> sp., were recorded at various locations on hanging tiles, suggesting bats roosting beneath the tiles. Barn swallow <i>Hirundo rustica</i>, robin <i>Erithacus rubecula</i> and wren <i>Troglodytes troglodytes</i> nests were recorded on the exterior of the building.	

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 21: Part of roof void.  Figure 22: Part of roof void.				

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
2	 Figure 23: Southern elevation of Building 2  Figure 24: South-east corner of Building 2.	This building comprises an old oak framed threshing barn, that is constructed with a slate roof in a pitched and hipped design. The side elevations are wooden clad. The roof has suffered some damage and holes are present within it. Internally the building is mostly open plan, and the underside of the roof and beams are visible. However, the barn has undergone some modification previously, and part of the interior has been partitioned by creating block walls. These create several separate stables, which open onto a small triangular courtyard. The oak beams are typical of an old threshing barn and numerous mortice joints are present within them.	Potential bat roosting features on this building are mostly located internally, and within the old oak beams, or where they abut the side elevations. External features are associated with the hip and ridge tiles, and where slates have raised up to provide a secure crevice suitable for roosting.  Figure 25: Mortice joint.	Bat evidence in the form of droppings was recorded in several locations within the barn. These were mostly of cleaner surfaces, and indicative of bats flying within the barn, rather than the location of a roost. Several mortice joints in the oak beams were free of cobwebs, and staining to the wood from bats crawling up joints strongly suggested a roost location. In one instance a dropping was also located below the joint (Figure 28)	High

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 26: Northern elevation of Building 2.  Figure 27: Internal view of Building 2.			 Figure 28: Mortice joint with dropping and fur staining. A barn owl <i>Tyto alba</i> box was present within the barn and a long dead and mummified barn owl chick and stock dove <i>Columba oenas</i> chicks were present.	

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 29: Internal view of Building 2.				
3	 Figure 30: North-east elevation of Building 3.	This building comprises a single-storey brick and flint structure, with a clay tiled roof constructed in a pitched and hipped design. The building is partitioned internally below tie beam height to create separate compartments. The roof tiles are lined beneath with a bitumen felt underlay.	Potential roost locations are present externally and internally. On the exterior they are associated with the roof tiles, where they are damaged, thereby allowing access into the void between the tiles and the felt. Internally some suitability is present in the apex of the roof.	A scattering of long-eared bat type droppings was recorded on the floor and on top of tie beams, within this building.	Moderate

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 31: Southwest elevation of Building 3, facing into courtyard.				
4	 Figure 32: North-east elevation of Building 4.	This building consisted of a large, open sided barn, sat on brick pillars and constructed with a pitched and hipped clay tiled roof. The roof is constructed in a King post design, and the roof clad with clay peg tiles, which are not lined beneath. The underside of the roof is visible from within the building and no enclosed voids are present. A small wooden clad shed is situated in the northern corner.	Given the open plan nature of this building, potential roosting locations are limited, with those identified being beneath ridge and hip tiles and where roof tiles overlap.	No evidence of bat activity was recorded in this building. Barn owl splatter, a few pellets and feathers were recorded on the floor of this building.	Low

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 33: Underside of roof of Building 4.				
5	 Figure 34: North-east elevation of Building 5.	This building comprises a modern steel framed open-sided structure, with no internal areas.	No potential roosting features were present on this building.	No evidence of bat activity was recorded. Barn owl splatter and feathers were recorded, suggesting a perched bird, preening.	Negligible

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 35: Interior and underside roof of Building 5.				
6	 Figure 36: North-east elevation of Building 6.	This building consists of a brick and block-built structure with a pitched and hipped clay tiled roof. The clay tiles are traditional peg tiles, which are unlined, and the rafters appear traditional, in a Queen post design. Several large access points to the interior were present, these included at the entrance (north-east elevation), along the south-eastern elevation, where door and window openings were present and at the	The only potential roosting location was considered to be within the apex of the roof, but there were gaps present in places and the overall impression of the building was that it was unsuitable, and any roosting would be on a temporary basis, for example as a feeding hang up.	No evidence of bat activity was recorded either internally or externally on this building. Barn owl roosting in building.	Negligible

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 37: Internal view of Building 6.	southwest corner. Windows on the northwestern elevation were intact. At the southwestern end a large hole was present at the apex of the hip, this added to the illumination of the interior and exposed it to the prevailing weather. The interior was damp and cool with water ingress in places.			
7	 Figure 38: Building 7 viewed from the east.	This building consists of a brick-built structure with a clay tiled roof, constructed in a hipped design, rising to a central peak. A large opening is present on the northwest facing elevation. The roof is constructed with clay tiles which are lined beneath with a bitumen felt underlay, the roof rafters are a modern trussed design. A temporary void is present since sheets of chipboard have been placed on the rafters. It is considered that this may be to	Potential bat roosting features on this building are as follows: - Beneath roof and hip tiles; - Within the roof area	A scattering of pipistrelle bat type droppings were recorded on a shelf within the garage and on the chipboard sheets on the rafters. Old (not the current year) swallow nests were present.	Moderate

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 39: Building 7 viewed from the south-east.	prevent barn swallow droppings falling onto any cars in the garage.			
8	 Figure 40: Building 8 viewed from the south.	This building comprises a single-skin, corrugated metal structure with a shallow pitched roof. A large opening is present on the south-east facing elevation, this and the opaque panels in the roof illuminated the interior. Internally there were no contained voids or crevices.	No potential bat roosting locations were identified on this building.	No bat evidence recorded, but a main badger sett was present within the building, and barn owl splatter and pellets were recorded within.	Negligible

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 41: Internal view of Building 8.				
9	 Figure 42: View of Building 9.	This building consists of a wooden shed, with a flat felt lined roof. The side cladding is single skin, although in places, secondary sheets were present. There is no internal roof void. The building is illuminated internally through the presence of windows, and at the time of the survey the doors and windows were closed, with no potential bat access locations.	No potential bat roosting locations were identified on this building.	No bat evidence recorded.	Negligible

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 43: Internal view of Building 9.				
10	 Figure 44: View of Building 10.	This building comprises a small wooden clad structure with a clay tiled roof in a pitched and hipped design. The structure had partially collapsed, with a small section of the roof remaining, although there were a small number of gaps in the remaining roof section. The side elevations were single skin, and only one side remained intact. It was not possible to gain access to the building due to dense vegetation within it, and the unsafe nature of the structure.	No potential bat roosting features were identified on this building.	No bat evidence recorded.	Negligible

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 45: View of Building 10.				
11	 Figure 46: View of Building 11.	This building comprises a brick-built stable, with a pitched roof constructed in a gable end design. The southwest facing elevation is clad with traditional clay peg tiles, which are unlined, whereas the north-east facing elevation is clad with corrugated metal sheets. The gables are infilled with wooden cladding, this is single skin, with no lining behind.	The only potential roosting location identified in this building was within the apex of the roof, where bats could potentially cluster against the ridge beam. It was considered that this roosting feature was most likely temporary or occasional roost feature.	No evidence of bat activity was recorded on the floor or upper face of the internal rafters, of this building, which would be expected if being used as a roost. Extensive barn owl evidence and a roosting barn owl was recorded in this building.	Low

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 47: View of southwest elevation of Building 11.  Figure 48: Internal view of Building 11.	The roof is constructed in a Queen post design, with the apparent traditional rafters present. The building is partitioned internally to just below tie beam height, above that it is open plan. At the south-east facing elevation a single storey brick-built kennel, with a mono-pitch corrugated metal roof is located			

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 49: Single storey extension section of Building 11.  Figure 50: Internal view of single storey extension section of Building 11.				

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
12	 Figure 51: View of Building 12.  Figure 52: Internal view of Building 12.	This building comprises a single storey brick-built structure with a corrugated asbestos roof, constructed in a pitched and gable end design. A sliding wooden door is located at the south-east facing elevation, this was ajar at the time of the survey. Internally the building is open to the roof, and no contained voids or crevices were present. The building is partitioned internally, and several cracks were present in the partition walls. The interior was open and drafty, and illuminated through the presence of sky lights in the roof.	Given the design of the roof and lack of any internal rafters or beams and concealed void areas no suitable roosting locations were identified. There were numerous places where bats could gain entry to the building, but it is considered that its use as a foraging area during periods of inclement weather was the most likely scenario.	No bat evidence recorded despite the undisturbed condition of the interior and access to all suitable roost features. Bird splatter indicative of barn owl, and a disused wren nest of the year, was located within the building.	Negligible

Table 5: Description of potential bat roost features, recorded evidence and suitability of buildings on the site.

Building no.	Figures	Description	Potential bat roosting features	Recorded evidence	Assessment of suitability
	 Figure 53: Underside of roof of Building 12.				

5.2.2 *Tree assessment relevant to bats and their roosts*

There are numerous trees located on the site, with the most mature appearing to be along the western and eastern site boundaries and along the northern part of the access road. The trees were not assessed for their bat potential, since at the time of the survey it was unclear whether any would need to be removed as part of the works. However, it was noted during the survey that numerous trees were of an age and structure considered suitable for supporting bat roosts.

5.2.3 *Foraging potential*

The site is situated in a rural location with the surrounding landscape primarily comprising arable land and grazed pasture. To the south of the site, a tributary of the River Adur flows west and along its course blocks of woodland and scrub are located. The riparian and woodland habitats will be of high value for foraging bats, and also provide a corridor along which bats can forage and commute.

When assessed against the criteria in Table 4 the site is considered to provide high suitability for bat foraging.

5.3 **Bat emergence survey methodology**

5.3.1 *Surveyor/s*

The surveys were carried out by licenced and suitably qualified bat ecologists. The number of surveyors varied according to the size of the building to be surveyed, and number of vantage points required to cover all emergence points, when stationary.

5.3.2 *Survey area*

The survey included all elevations of each building, where suitable bat access or roosting features were identified.

5.3.3 *Survey date*

The date and timing of the emergence surveys and number of surveyors is presented in Table 6. The surveys commenced 15 minutes prior to sunset and continued for at least 1.5 hours post sunset.

Table 6: Survey dates and timings

Date	Building Number	No. of Surveyors	Start	Finish	Sunset/sunrise
09/07/2024	B2, B4	B2 - 4 B4 - 2	21:00	22:44	21:14
16/07/2024	B7	2	20:52	22:37	21:07
17/07/2024	B3	2	20:51	22:36	21:06
23/07/2024	B1	7 + additional camera	20:44	22:59	20:59

Date	Building Number	No. of Surveyors	Start	Finish	Sunset/sunrise
01/08/2024	B2	4	20:31	22:16	20:46
04/08/2024	B4	1	20:26	22:11	20:41
08/08/2024	B7	2	20:19	22:04	20:34
20/08/2024	B1	7 + additional camera	19:56	21:41	20:11
05/09/2024	B2	4	19:21	21:06	19:36
08/09/2024	B3	2	19:15	21:00	19:30
24/09/2024	B1	7 + additional camera	18:39	20:24	18:54

5.3.4 Survey description

The emergence surveys were undertaken in accordance Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). Surveyors with Night Vision Aids (NVAs) were positioned in order to provide sufficient coverage of all potential access/egress points when stationary. NVA screenshots for each survey occasion are provided in Appendix 3.

All emergencies and general activity were recorded during the course of each survey. Recordings were later analysed using Sonobat and/or Kaleidoscope bat call analysis software to confirm species identification.

5.3.5 Survey limitations

No limitations were encountered during the course of the surveys.

5.3.6 Survey equipment

Survey equipment comprised:

- Sony FDR-AX53 (nightshot mode).
- Infrared illuminators, monitor and tripods.
- Wildlife Acoustics Echo Meter Touch 2 Pro bat detector.

5.3.7 Weather conditions

Weather conditions during the surveys are provided in Table 7:

Table 7: Emergence survey weather conditions

Date	Precipitation		Temperature		Wind		Cloud Cover	
	<i>Start</i>	<i>Finish</i>	<i>Start</i>	<i>Finish</i>	<i>Start</i>	<i>Finish</i>	<i>Start</i>	<i>Finish</i>
09/07/2024	Light drizzle	Light drizzle	17°C	15°C	Bf 2	Bf 2	90%	90%
16/07/2024	Nil	Nil	12°C	15°C	Bf 0	Bf 0	80%	20%
17/07/2024	Nil	Nil	18°C	14°C	Bf 1	Bf 1	50%	50%
23/07/2024	Nil	Nil	21°C	19°C	Bf 0	Bf 1	100%	100%
01/08/2024	Light rain	Nil	21°C	20°C	Bf 0	Bf 1	50%	50%
04/08/2024	Nil	Nil	17°C	17°C	Bf 1	Bf 1	10%	10%
08/08/2024	Light rain	Nil	17°C	14°C	Bf 3/4	Bf 3/4	100%	100%
20/08/2024	Nil	Nil	18°C	15°C	Bf 2	Bf 2	0%	0%
05/09/2024	Intermittent rain	Intermittent rain	19°C	18°C	Bf 2	Bf 1	100%	100%
08/09/2024	Nil	Intermittent rain	16°C	15°C	Bf 1	Bf 1	100%	100%
24/09/2024	Nil	Nil	17°C	14°C	Bf 0	Bf 0	100%	100%

5.4 Bat emergence survey results

Bat emergence survey results are provided in Table 8.

Table 8: Bat emergence survey results

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
Building 1	High	Emergences 23rd July 2024 During the course of the emergence survey carried out on the 23rd July 2024, 39 bats were recorded emerging from building 1. These comprised 35 brown long-eared bats, two common pipistrelle bats and two soprano pipistrelle bats. <u>Soprano pipistrelle:</u> The first bat to emerge was a soprano pipistrelle which emerged from a ridge tile on the southern elevation at 21:11 (Target Note 1, page 42). A second soprano pipistrelle emerged at the same time from a hanging tile beside the chimney on the southern elevation (TN2). <u>Brown long-eared:</u> At 21:22, the first brown long-eared emerged from the eaves in the corner in the south-eastern corner (TN3). This was followed by a further 32 brown long-eared bats which emerged from the same location until 22:25. Two further brown long-eared bats emerged from the building. These were at 21:45 from a ridge tile above the eastern roof face (TN4) and at 22:00 from a hip tile from the north-western wing (TN5). <u>Common pipistrelle:</u> Two common pipistrelle bats were also recorded	20th August 2024 During the course of the emergence survey carried out on the 20th August 2024, five bats were recorded emerging from the building. These comprised three soprano pipistrelle bats and two common pipistrelle bats. <u>Soprano pipistrelle:</u> The first bat to emerge comprised a soprano pipistrelle which emerged from TN2 at 20:26. The second soprano pipistrelle emerged from TN1 at 20:36. The third soprano pipistrelle emerged from the eave area on the eastern corner at 20:56 (TN8). <u>Common pipistrelle:</u> The first common pipistrelle emerged from a hanging tile on the eastern corner of the building at 20:42 (TN9). At 20:45, the second common pipistrelle emerged from TN6.	24th September 2024 During the course of the emergence survey carried out on the 24th September 2024, 16 bats were recorded emerging from the building. These comprised eight brown long-eared bats, seven soprano pipistrelle bats and one common pipistrelle bats. <u>Soprano pipistrelle:</u> The first bat to emerge comprised a soprano pipistrelle which emerged from TN2 at 18:58. The second soprano pipistrelle emerged from a hanging tile beside the chimney on the southern elevation (TN10). At 19:05, a soprano pipistrelle emerged from the fascia board on the southern face (TN11). At the same time, another soprano pipistrelle emerged from the eaves on the courtyard on the northern side of the building (TN12). At 19:13, a soprano pipistrelle emerged from TN3. A second soprano pipistrelle emerged from TN12 at 19:07 and a second soprano pipistrelle emerged from TN11 at 19:17. <u>Brown long-eared:</u> At 19:22, a single brown long-eared bat	- Brown long-eared maternity roost (33 bats). - 3 x Brown long-eared bat day roosts (1 – 2 bats) - Brown long-eared transitional roost (6 bats) - 8 x soprano pipistrelle day roosts (seven bats) - 3 x common pipistrelle day roosts (2 bats).

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
		emerging from the building these were at 21:25 from the eaves on the south-western elevation (TN6) and a hanging tile on the western corner (TN7).		emerged from a roof tile on the northern elevation of the building (TN13). Following this, seven brown long-eared bats emerged from the gable end on the northern elevation (TN14) between 19:30 and 19:33. <u>Common pipistrelle:</u> At 19:08, a single common pipistrelle bat emerged from TN14.	
		Foraging and commuting activity			
		23rd July 2024 During the survey five species of bat were recorded foraging through the garden and around the building. These comprised common pipistrelle, soprano pipistrelle, brown long-eared, Natterer's and noctule. Pipistrelle and brown long-eared bats were the most frequently recorded species as a result of emerging bats foraging within the vicinity of the building before dispersing in the foraging areas further afield. A small number of noctule bats were recorded foraging high over the site at frequent intervals throughout the survey. At 22:16, a Natterer's bat was recorded foraging to the south of the building. Four further Natterer's passes were recorded between this and the end of the survey.	20th August 2024 During the survey, surveyors observed that activity was generally lower than the July survey. Four species of bat were recorded foraging during the survey. These comprised common pipistrelle, soprano pipistrelle, brown long-eared and Natterer's. Pipistrelle bats were the most frequently recorded species as a result of emerging bats foraging within the vicinity of the building before dispersing in the foraging areas further afield. A single long-eared was recorded on several occasions by surveyors as it foraged around the southern elevation of the building. A Natterer's briefly foraged through the site at 21:38.	24th September 2024 During the survey five species of bat were recorded foraging through the garden and around the building. These comprised common pipistrelle, soprano pipistrelle, brown long-eared, Natterer's and western barbastelle. Pipistrelle and brown long-eared bats were the most frequently recorded species as a result of emerging bats foraging within the vicinity of the building before dispersing in the foraging areas further afield. In addition to these, at 19:24, a Natterer's briefly foraged through the site and at 19:25, a brief western barbastelle call was recorded to the south of the building. A single Natterer's bat was recorded again at 19:36 and 19:42.	

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
Building 2	High	Emergences 17th and 23rd July 2024 <u>Soprano pipistrelle:</u> One bat was recorded emerging from beneath a hip tile on the 17th July at 21:07 whilst the surveyor was covering Building 3. The first registration on the 23rd July was at 21:18 when a soprano pipistrelle was recorded foraging within the barn. Given that this registration was only four minutes after sunset, it is considered that this bat was roosting within the barn, although the roost location was not seen. Subsequent emergences for this species were recorded at 21:36, 21:41 and 21:44. <u>Brown long-eared:</u> The first bat was recorded at 21:34, as it emerged and then foraged within the barn. Further confirmed emergences were recorded at 21:54 and 21:56, but after that it became difficult to confirm any further emergences due to the level of foraging and light sensing activity within the barn. Camera footage suggested a peak of four bats roosting within the barn. <u>Barbastelle:</u> A lone bat emerged from a roost location on the inner slope of the roof at 21:43	1st August 2024 During the course of the emergence survey carried out on the 1st August 2024, four brown long-eared bats were recorded emerging from the internal structure of the barn. <u>Brown long-eared bat</u> The first bat emerged from the pitch of the roof at 21:33. This was followed by a second bat from the same location at 21:35 and a third at 21:44. The fourth brown long-eared emerged from a mortice joint on a brace at 21:59.	5th September 2024 <u>Barbastelle</u> One barbastelle bat was recorded emerging from its roost at 20:05. It then foraged within the barn for a minute before exiting at 20:06. <u>Brown long-eared bat</u> The first registrations were of two long-eared bats that flew into the barn through the door on the northern elevation at 19:51. These bats foraged within the barn and were joined by two others at 20:00. No long-eared bats were seen to emerge from features within the building, but extensive social calling activity was recorded. A maximum of four long-eared bats were recorded within the barn. <u>Natterer's bat</u> Two Natterer's bats were recorded within the barn at 21:04 and were considered to have emerged. Though the roost location was not seen, it is likely the bats emerged from one of the recorded crevices within mortice joints. They foraged within the barn, with up to four long-eared bats for two minutes before exiting at 21:06.	- Soprano pipistrelle – day roost for up to five bats. - Brown long-eared – satellite/pre-breeding roost, 3 – 4 bats. - Barbastelle – day roost. - Natterer's bat – day roost, two bats.

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
		Foraging and commuting activity 23 rd July 2024 Six species of bats were recorded during the survey. The first was noctule at 21:01 and then occasionally throughout the survey, as it foraged over the site. Common and soprano pipistrelles were recorded throughout the survey. Brown long-eared activity was highest along the southern elevation of the barn, with bats going back and forth along the adjacent track. A single serotine and a <i>Myotis</i> , presumed Natterer's, were recorded at 21:41 and 22:02, respectively.			
		1 st August 2024 The first recorded bat was a noctule which was recorded foraging back and forth over the site at 21:11. Common and soprano pipistrelles were recorded throughout the survey. Brown long-eared bats were recorded emerging from and re-turning to the interior of the barn via the doorways on the northern elevation of the barn between 21:33 and 22:11. Single <i>Myotis</i> , presumed Natterer's, were recorded at 22:07 and 22:08. At 21:53, a barbastelle was recorded foraging to the south of the barn.	5 th September 2024 Foraging activity was again dominated in and around the building by long-eared bats. Common and soprano pipistrelle were both present, but foraging activity was reduced compared to the previous surveys. A Nathusius' pipistrelle was recorded at 20:00 and again at 20:41 as it foraged along the track that runs past the eastern elevation. What was considered to be a small <i>Myotis</i> bat species, whiskered or Brandt's <i>M. mystacinus</i> or <i>M. brantii</i> was recorded foraging under the roof of Building 5 at 20:54.		
Building 3	Moderate	Emergences 17 th July 2024 Two species of bats were recorded emerging from this building. <u>Common pipistrelle</u> One bat was recorded emerging from the middle stable door at 21:26 and subsequently flying north over the roof. <u>Brown long-eared</u> The first bat was recorded emerging at 21:43 through the westernmost stable door but flew back in at 21:52. At 21:54 one bat emerged from the westernmost stable door, and two bats re-	8 th September 2024 No bats were recorded emerging on this survey date.	N/A	- Brown long-eared – satellite roost and day roost. - Common pipistrelle – day roost

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
		entered the same door at 22:08. At 22:10, one bat emerged from the westernmost stable door, and another at 22:12 from the middle stable door. From 22:17, activity was quite intense with bats exiting and re-entering the building continuously and it was considered by the surveyor that a satellite roost was present within the building. It is considered that at least six bats were using the building.			
		Foraging and commuting activity In addition to the long-eared bats, five other species were recorded: common and soprano pipistrelle, noctule, serotine and a bat of the <i>Myotis</i> genus.	The first bat recorded was a noctule at 19:47, and again at 20:04 as it foraged over the site. A Nathusius' pipistrelle <i>Pipistrellus nathusii</i> was recorded to the north of the building at 19:59 and two registrations of bats of the <i>Myotis</i> genus were recorded. Common and soprano pipistrelles were again the most numerous species.	N/A	
Building 4	Low	Emergences 4 th August 2024 <u>Brown long-eared</u> The only emergence was of a brown long-eared bat which emerged from a hip joint on the underside of the roof at 21:31 and flew north-east towards the trees. At 21:46, presumably the same bat returned to the same location,	N/A	N/A	- Brown long-eared - day roost

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
		it then briefly emerged again before settling back in the roost. Foraging and commuting activity Four other species were recorded foraging during the survey. The most numerous species was common pipistrelle, with bats foraging beneath the canopies of Buildings 4 and 5, and throughout the wider area. A serotine made a single pass at 21:21 and was recorded by both surveyors. At 22:06 and again at 22:26, a noctule was recorded foraging over the site.			
				N/A	
Building 7	Moderate	Emergences 16th July 2024 <u>Common Pipistrelle</u> The interaction with the building was at 21:49 when a bat appeared from the south and flew into the building. At 21:54 a bat dropped down from a roost in the roof and began foraging. At 21:56 and again at 21:57, single common pipistrelle bats entered the building and began foraging. At 22:02 one common pipistrelle exited the building, and two bats entered it at 22:04 and 22:05. At 22:07 three bats exited the building. At 22:11 three common pipistrelles were recorded foraging within the building again, two remained in the building, one emerged. At 22:19 a common pipistrelle exited the building, flew	8th August 2024 No bats were recorded emerging on this date.	N/A	- Common pipistrelle - day roost for up to three bats. Note: given the regularity that bats were entering and exiting the building it was difficult to confirm the exact number.

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
		around outside briefly before re-entering. The final common pipistrelle was recorded at 22:20, when it was recorded foraging within the building before exiting.			
		Foraging and commuting activity			
		Four bat species were recorded foraging over the site or in the vicinity of the building. Noctule was recorded flying high over the site at 21:16 and 22:17. Common pipistrelle activity was continuous throughout the survey. Up to three soprano pipistrelle bats were recorded sporadically foraging and a long-eared bat species, presumed brown, was recorded at 22:05.	Six species of bats were recorded on this date. The first and most numerous, common pipistrelle, was first recorded at 20:35 when a bat was not seen, but heard social calling in the vicinity of the garage. One or two bats were subsequently recorded throughout the survey. At 20:53 a noctule was recorded high over the site. Following the emergence, subsequent long-eared bat registrations were recorded at 21:20, 21:28 and 21:35. A single pass of a serotine was recorded at 21:38 and a bat of the <i>Myotis</i> genus flew past the northwest elevation of the building at 21:00.	N/A	
Building 11	Low	Emergences 16 th July 2024 No emergences but three presumed brown long-eared bats appeared from behind the surveyor and entered this building, the first at 21:15. They subsequently foraged/light sensed within the building before exiting via the unglazed windows on the northern elevation and	8 th August 2024 Whilst carrying out a survey on Building 7, the surveyor covering the south-east elevation recorded a brown long-eared bat emerging from eave height on the southwest facing elevation.	N/A	- Brown long-eared - day roost.

Building	PRA Suitability Grade	Survey 1	Survey 2	Survey 3	Confirmed Roosts
		foraging under the canopy of Building 5.			
		Foraging and commuting activity			
		The majority of the foraging activity was from the long-eared bats, but common and soprano pipistrelles, and noctules were also recorded. The noctules were flying high over the site, and not associated with the buildings.	N/A	N/A	

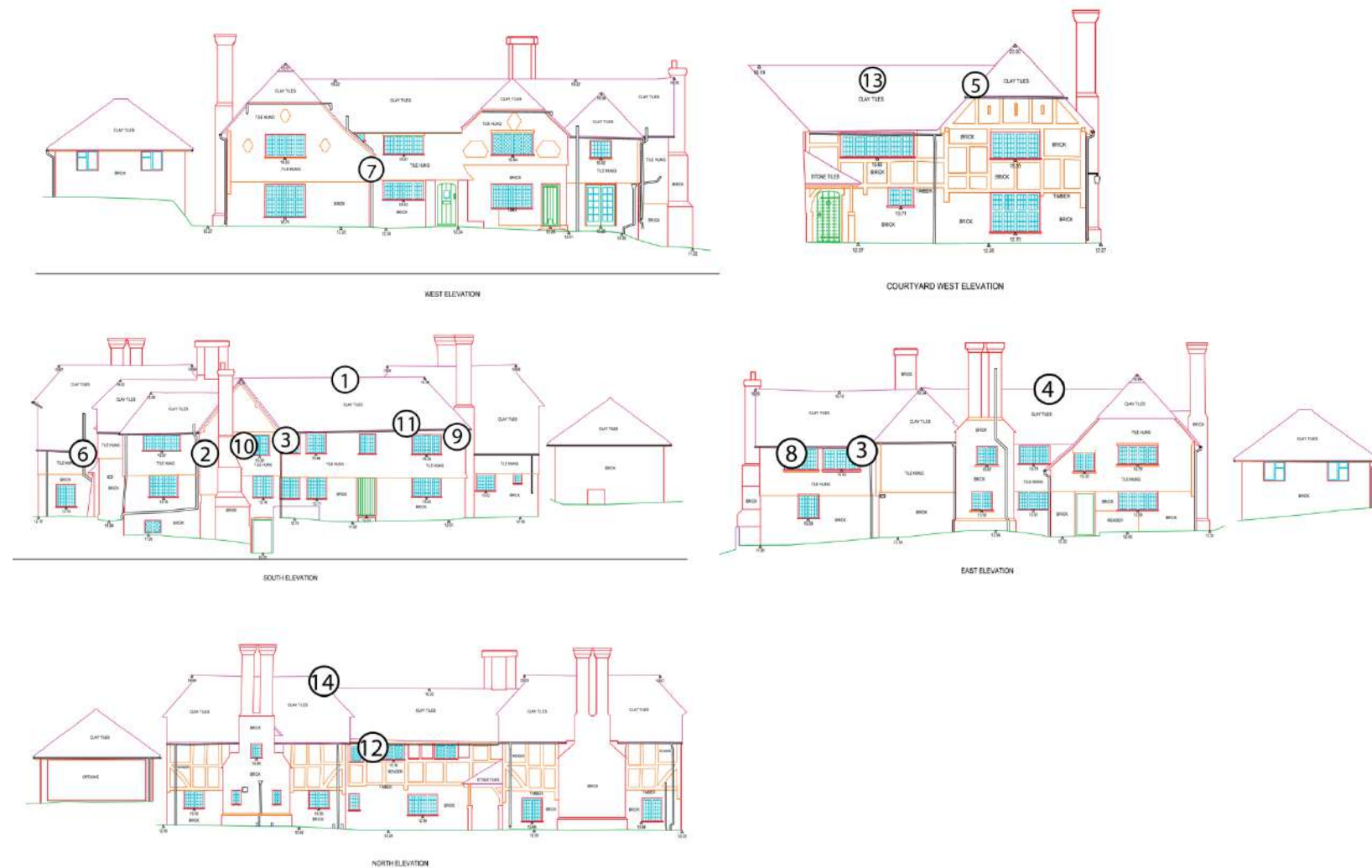


Figure 54: Bat roost emergence locations on the elevations of Building 1.

5.5 Remote bat detector survey

5.5.1 Survey description and methodology

A remote detector was placed within Building 2 following the recording of a barbastelle and several long-eared bats during the emergence survey of the 9th July. The purpose of this supplementary survey methodology was to support the emergence survey work and to verify whether bat calls occurring around typical emergence times suggested potential roosting within the barn, and to document the frequency of these calls over the period of detector deployment.

A Song Meter Mini Bat detector was deployed within the barn between the 23rd July and 13th August 2024. The detector was positioned centrally within the barn and set operate from 30 minutes before sunset and 30 minutes after sunrise.

Recordings were later analysed using Kaleidoscope-5.4.8 bat call analysis software to confirm species identification. The software works by automatically identifying which recordings are bat calls and which are noise interference. Once a recording containing a bat call is identified, each individual call within that recording is automatically identified and assigned to a UK bat species. The most frequently identified bat species within each recording determines the final Auto ID output.

In addition to Auto ID, kaleidoscope also outputs a 'match ratio'. The match ratio can be useful to establish if multiple bat species are present within a single recording or if the Auto ID lacks certainty as to which species was recorded. This is calculated by dividing the number of calls allocated to the auto identified species by the number of total number of calls identified within the recording. For example, if there are ten bat calls within a recording and eight were identified as PIPPIP (common pipistrelle) but the other two calls were identified as a different bat species, the recording output will have the auto ID PIPPIP with a 0.8 match ratio.

Once the initial automatic analysis was complete, the bat recordings were then manually analysed by a trained ecologist to check the identified bat species and confirm or alter as appropriate. This manual analysis was particularly valuable due to the quiet nature of both barbastelle and long-eared bat calls.

5.5.2 Survey limitations

Automated bat analysis software is not 100% accurate with some calls not being detected, being mislabelled as noise files, or misidentified. A significant proportion of the data was manually analysed (see Section 3.1, above) to overcome this limitation.

Due to the condition of the barn, particularly the presence of holes in the roof structure, the static detector was capable of capturing bat calls emanating from outside the building. This was evident with noctule and serotine bats, which were recorded on the detector but not observed by surveyors roosting within the barn itself.

No other limitations were encountered during the course of the surveys.

5.5.4 Remote detector survey weather conditions

The external weather conditions for the remote detector survey are provided in table 9 below.

Table 9: remote detector survey weather conditions

Date	Sunrise Temp (°C)	Sunrise Wind (mph)	Sunset Temp (°C)	Sunset Wind (mph)	Weather Conditions
23rd (Sunset) July	-	-	20	7	Sunny
24 th July	16	2	17	9	Cloudy
25 th July	14	13	17	12	Light Rain
26 th July	14	9	18	9	Dry
27 th July	16	3	19	12	Cloudy
28 th July	18	9	21	3	Sunny
29 th July	14	6	24	2	Sunny
30 th July	16	12	23	3	Sunny
31 st July	21	9	24	9	Sunny
1 st August	16	8	21	5	Cloudy/Light Rain
2 nd August	17	5	20	14	Cloudy
3 rd August	18	15	19	10	Cloudy/Light Rain
4 th August	18	10	19	13	Cloudy
5 th August	17	10	19	7	Cloudy
6 th August	18	9	19	13	Cloudy/Light Rain
7 th August	15	6	16	14	Cloudy
8 th August	16	10	18	16	Cloudy/Light Rain
9 th August	17	12	19	15	Sunny
10 th August	17	12	19	10	Cloudy
11 th August	18	8	26	9	Cloudy
12 th August	21	12	23	10	Cloudy
13 th August (Sunrise)	17	7	-	-	-

5.5.4 Remote detector results

The total number of registrations for each species during the recording period are provided in Table 10.

Table 10: total registrations for the survey period within building 2.

Species	Barbastelle	Serotine	Natterer's	Noctule	CP	SP	BLE
Total	7	22	753	70	52	1069	4917

In addition, the data collected within 55 minutes of sunset and sunrise were analysed in further detail. The 55-minute period after sunset (or before sunrise) is significant in bat surveys as it captures the peak activity time when bats typically emerge from or return to their roosts. 55 minutes encompasses the emergence period of all bat species recorded at the site therefore, monitoring during this window can indicate roosting presence. This period also helps differentiate between roosting and foraging activity, as bats recorded shortly after sunset or before sunrise are more likely roosting nearby rather than just foraging within the barn.

Table 11: registrations within 55 minutes of sunset and sunrise for the survey period within Building 2.

Recording night	Description of the activity recorded within 55 minutes of sunset and sunrise each survey night.
23rd (Sunset) July	During the night of the 23 rd , a total of 16 registrations were recorded within 55 minutes of sunset. These comprised 13 long-eared, two common pipistrelle and one Natterer's bat registration.
24 th July	During the night of the 24 th , 32 registrations were recorded within 55 minutes of sunset and sunrise. These comprised three long-eared registrations at dusk and 28 long-eared registrations at dawn. A single soprano pipistrelle registration was recorded at dusk.
25 th July	During the night of the 25 th , 21 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 18 long-eared registrations at dusk and 3 long-eared registrations at dawn.
26 th July	During the night of the 26 th , a total of 15 registrations were recorded within 55 minutes of sunset. These comprised 12 long-eared and three soprano pipistrelle registrations.
27 th July	During the night of the 27 th , 6 registrations were recorded within 55 minutes of sunset and sunrise. These comprised five long-eared registrations at dusk and one soprano pipistrelle registration at dawn.
28 th July	During the night of the 28 th , 7 registrations were recorded within 55 minutes of sunset and sunrise. These comprised three long-eared registrations and

Recording night	Description of the activity recorded within 55 minutes of sunset and sunrise each survey night.
	two soprano pipistrelle registrations at dusk and one soprano pipistrelle registration and one long-eared registration at dawn.
29 th July	During the night of the 29 th , 20 registrations were recorded within 55 minutes of sunset and sunrise. These comprised nine long-eared registrations and two soprano pipistrelle registrations at dusk and four soprano pipistrelle registrations and six long-eared registrations at dawn.
30 th July	During the night of the 30 th , 54 registrations were recorded within 55 minutes of sunset and sunrise. These comprised five long-eared registrations and three soprano pipistrelle registrations at dusk and four soprano pipistrelle registrations and 47 long-eared registrations at dawn.
31 st July	During the night of the 31 st , 49 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 20 long-eared registrations and one soprano pipistrelle registration at dusk and two soprano pipistrelle registrations and 26 long-eared registrations at dawn.
1 st August	During the night of the 1 st , 65 registrations were recorded within 55 minutes of sunset and sunrise. These comprised eight long-eared registrations at dusk and two soprano pipistrelle registrations and 57 long-eared registrations at dawn.
2 nd August	During the night of the 2 nd , 27 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 13 long-eared registrations, one Natterer's registration and three soprano pipistrelle registrations at dusk and 10 long-eared registrations at dawn.
3 rd August	During the night of the 3 rd , 14 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 11 long-eared registrations and one soprano pipistrelle registration at dusk and two long-eared registrations at dawn.
4 th August	During the night of the 4 th , 6 registrations were recorded within 55 minutes of sunset. These comprised five long-eared registrations and one serotine registration at dusk.
5 th August	During the night of the 5 th , 35 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 10 long-eared registrations, one Natterer's registration and two soprano pipistrelle registrations at dusk and 21 long-eared registrations and one common pipistrelle registration at dawn.
6 th August	During the night of the 6 th , 17 registrations were recorded within 55 minutes of sunset and sunrise. These comprised nine long-eared registrations at dusk and seven long-eared registrations and one soprano pipistrelle registration at dawn.
7 th August	During the night of the 7 th , 18 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 13 long-eared registrations and two soprano pipistrelle registrations at dusk and three long-eared registrations and one soprano pipistrelle registration at dawn.

Recording night	Description of the activity recorded within 55 minutes of sunset and sunrise each survey night.
8 th August	During the night of the 8 th , 257 registrations were recorded within 55 minutes of sunset and sunrise. These comprised 92 long-eared registrations, 131 Natterer's registrations and two common pipistrelle registrations at dusk and 32 long-eared registrations at dawn.
9 th August	During the night of the 9 th , 13 registrations were recorded within 55 minutes of sunset and sunrise. These comprised six long-eared registrations, three Natterer's registrations and one barbastelle registrations at dusk and three long-eared registrations at dawn.
10 th August	During the night of the 10 th , six registrations were recorded within 55 minutes of sunset. These comprised two long-eared registrations, three Natterer's registrations and one common pipistrelle registration at dusk.
11 th August	During the night of the 11 th , eight registrations were recorded within 55 minutes of sunset and sunrise. These comprised eight long-eared registrations at dusk and 14 long-eared registrations at dawn.
12 th August	During the night of the 12 th , two registrations were recorded within 55 minutes of sunset. These comprised one long-eared registration and one Natterer's registration at dusk.

5.6 Assessment

Based on the preliminary roost assessment, emergence and remote activity survey data the following assessment is given of the status of bat roosts within each structure at the site:

Building 1 (Grade II Listed Building): Evidence recorded during the preliminary roost assessment suggested a high level of roost suitability, with subsequent emergence surveys confirming roosts for brown long-eared bats (maternity, transitional and day roosts) and multiple soprano and common pipistrelle day roosts.

Building 2 (Old Oak Framed Threshing Barn): The survey work conducted for building 2 has confirmed that the structure supports soprano pipistrelle bat day roosts for up to five bats. The structure also supports a brown long-eared bat satellite roost which supports the function of the main maternity roost within building 1. A single barbastelle bat uses the barn as an occasional day roost as do up to two Natterer's bats. Activity levels were generally consistent across the remote detector survey period however a peak in Natterer's bat and brown long-eared bat activity on the 8th August could suggest a peak in roosting bat numbers on this occasion, however, due to low registration numbers during the preceding dawn and a return to normal registration numbers on the proceeding dusk, this peak in activity has been attributed to an increase in foraging activity within the barn, possibly due to poor weather conditions at emergence time.

Building 3 (Single-Storey Structure with Pitched Roof): With moderate roost suitability, this building supports a likely satellite roost for brown long-eared bats and a day roost for common pipistrelle and brown long-eared bats. Frequent emergences and re-entries observed during the first emergence survey suggest that this building functions as a satellite roost for the brown long-eared bat maternity roost within the main house and is likely used seasonally or for specific reproductive or transitional purposes.

Building 4 (Open Sided Barn): This building was assessed as supporting low suitability for roosting bats due to its open structure, though it does provide opportunities for opportunistic roosting and the emergence data suggests limited use as an occasional day roost for a brown long-eared bat.

Building 5 (Modern Open-Sided Structure): This structure is deemed negligible for bat roost suitability. No bat evidence was recorded, and the open nature and lack of concealed roosting features make it unsuitable for roosting.

Building 6 (Brick and Block Structure): Also assessed as having negligible roost suitability due to the lack of suitable internal or external roosting features. Bat activity was not observed within the building.

Building 7 (Brick-Built with Hipped Roof): This building has moderate roost suitability, and emergence surveys have confirmed that it is used as an intermittent day roost for common pipistrelle bats.

Buildings 8, 9, 10 and 12: These buildings support negligible suitability. Structures like Building 8 (corrugated metal) and Building 9 (wooden shed) offer minimal or no roosting features, and no bat activity was observed, supporting the negligible assessments.

Building 11: This building was assessed as supporting low suitability for roosting bats due to its open structure, though it does provide opportunities for opportunistic roosting and the emergence survey revealed that the structure functions as a covered route for brown long-eared bats emerging from roosts in adjacent buildings. A single brown long-eared bat was recorded emerging from building 11 during an emergence survey of an adjacent building.

Overall activity: Brown long-eared bats utilise several structures within the site for various roosting purposes. Building 1 supports the maternity roost and occasional day roosting whilst buildings 2 and 3 support satellite roosts which are functionally linked to the maternity roost in Building 1. Buildings 4 and 11, while offering lower roosting suitability, provide occasional or transitional roosting opportunities, with Building 11 also acting as a covered commuting route for bats emerging from roosts in adjacent buildings. These buildings collectively support an interconnected roosting network for the on-site population of brown long-eared bats. In addition to brown long-eared bats, the structures within the site support day roosts for common pipistrelle, soprano pipistrelle, Natterer's and a single barbastelle bat.

6. Badgers

6.1 Methodology

The survey involved a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity. This includes badger setts, latrine sites, dung piles, well-used trails, prints and hairs. Emphasis was placed on locating badger setts, paths and signs of territorial activity such as dung piles and latrines. In addition, a camera trap was deployed within the building 8 between the 20th August and 24th September 2024.

6.2 Limitations

No limitations to the badger survey were identified.

6.3 Existing records

Phillips Ecology is not aware of any existing records for the site.

6.4 Results

A main badger sett, with two entrances, was located within Building 8, in addition three further entrances were located beneath a hedgerow forming the boundary of the garden, approximately 8m west of Building 8. It is considered that these entrances all relate to the same sett complex given the amount of excavated spoil present within Building 8, which also suggests this sett has been active for many years. Numerous badger guard hairs were located in the sett entrances and within the spoil. During the camera trap surveys, the badger sett was found to be in frequent use with up to two badgers recorded at any one time.

Evidence of what was considered to be an old badger sett was located in the small copse located adjacent to the northwest corner of farmhouse. Some old spoil heaps and holes were present, but they did not appear to have been used for a while, and they had become overgrown.



Figure 55: Badger sett within Building 8. There are two entrances within the building, this image shows the large amount of excavated spoil.



Figure 56: Badger sett entrance beneath hedge in garden.

Numerous mammal trails were located throughout the site, with some obviously radiating away for the main sett. In most cases these could not definitively be attributed badger,

however, given that a main sett was present on the site, it is considered that at a proportion of them are badger trails. It is probable that, those that are not badger, will be fox *Vulpes vulpes*, although this species was not confirmed on the site.

Despite extensive searching, no territorial latrines were located on the site.

6.5 **Assessment**

When assessed against the criteria in Table 2, badgers were confirmed as resident on the site.

7. Hazel Dormouse

7.1 **Methodology**

An assessment was made of the suitability of habitat on site to support hazel dormice. Key habitats are woodland, scrub and hedgerows, particularly where these offer dense vegetation within which to nest/hibernate and key resources such as hazel nuts, fruiting/nectar-rich plants (e.g. hawthorn, bramble) to provide a continuum of food resources throughout the active season and honeysuckle *Lonicera periclymenum* (for nesting material). Landscape-scale habitat linkages such as hedgerows are fundamental for dormouse presence where small scale or sub-optimal habitats are recorded within a site.

7.2 **Limitations**

Limitations were not encountered during the course of the survey.

7.3 **Existing records**

The data search did not reveal records of hazel dormouse within the 1 km search radius and the closest confirmed record was near Woodmancote, approximately 3.8km SE of the site, beyond the tributary of the River Adur. The next closest records are 9km NE, and 9.5km W.

7.4 **Results**

The site is enclosed by hedgerows, which bisect the site, and extend across the wider landscape, with small copses and mature trees present. These habitats superficially look suitable for supporting the species, although the lack of records in the local area suggests they may be absent.

During the survey, no fruiting hazel was located and therefore it was not possible to carry out a nut search, looking for hazel nuts gnawed in a distinctive manner by the species, and no nests were located in the hedgerows.

7.5 **Assessment**

When assessed against the criteria in Table 2, the site is considered to support suitable habitat for the species, but the closest confirmed records, where there is some connectivity, are over 9km from the site. It is therefore considered that the site supports low suitability for the species.

8. Hedgehogs

8.1 Methodology

The site was assessed for its suitability to support hedgehogs based on the presence of favoured habitats such as woodland edges, hedgerows, grassland and suburban habitats.

Hedgehogs are most abundant within gardens, parks and amenity land close to or within human settlements. They are generally scarce in areas of coniferous woodland, marshes and moorland, probably because of a lack of suitable sites and materials for the construction of winter nests (Morris, 2006). Any evidence of hedgehog activity such as prints or droppings would be recorded.

8.2 Limitations

Low detections rates are associated with evidence of hedgehog activity; therefore, absence of evidence does not confirm the absence of hedgehogs. For this reason, the assessment of the likely presence/absence of hedgehogs has largely been informed by the species' local distribution and the habitats within the site and local area.

8.3 Existing records

Phillips Ecology are unaware of hedgehog records in the local area.

8.4 Results

The site is situated in a rural location with a mosaic of habitats that are considered highly suitable for the species for foraging and nesting. However, the presence of a main badger sett on the site may be detrimental to hedgehogs, since badgers will readily prey on hedgehogs.

No direct evidence, such as droppings, was recorded during the survey.

8.5 Assessment

When assessed against the criteria in Table 2 there is considered to be high suitability for hedgehog to occur on site.

9. Reptiles

8.6 Methodology

An assessment was made of the site's suitability to support reptile populations. Key habitat features include tussocky/patchy grassland, scrub edge, linear watercourses, ponds, compost heaps, brash piles and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated/fragmented habitats even within urban areas.

8.7 Limitations

Limitations were not encountered during the course of the survey.

8.8 Existing records

The data search revealed records for three species of reptile, slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara* and grass snake *Natrix natrix*, around Henfield, but these were all to the south of the tributary of the River Adur, which could present a barrier for slow-worm and common lizard.

8.9 Results

Areas of grassland around the farmhouse were well managed and generally unsuitable for common reptile species and the adjacent meadow supported modified grassland which was also considered unlikely for supporting reptiles. Marginal areas, that are more unmanaged, could support common reptiles if they are present in the area.

During the survey no reptiles were encountered.

8.10 Assessment

When assessed against the criteria in set out in Table 2, the unmanaged areas of the site are considered to provide moderate suitability for reptiles.

10. Great-crested Newt

10.1 Methodology

Great-crested newts (GCN) are only present in their breeding ponds during the spring and early summer – for the rest of the year, they will be dispersed across the surrounding area, generally in grassland, scrub, woodland and hedgerows, although they may be found in gardens and brownfield sites. They can travel some distance from their breeding ponds, and as a general rule, developments within 500m of such a pond may have the potential to have an impact on GCN, although to a certain extent, this does depend on any intervening habitat or barriers to dispersal.

An assessment was made of any waterbodies and terrestrial habitat within the site for their suitability to support populations of amphibians. Suitable waterbodies will generally be characterised by the presence of good quality water, diverse macrophyte cover and an absence of fish. For the great crested newt, each waterbody is normally assessed using the Habitat Suitability Index (HSI) system (Oldham et al., 2000) and assigned a grading score between zero (poor suitability) and 1 (excellent suitability).

10.2 Limitations

The HSI for great crested newts is a measure of habitat suitability. In general, ponds with high HSI scores are more likely to support great crested newts than those with low scores. However, in isolation, the system is not sufficiently precise to allow the conclusion that any particular pond with a high score will support newts, or that any pond with a low score will not do so (Oldham et al., 2000).

10.3 Existing records

The data search did not reveal any records of GCN within the 1km radius search area, however a review of various online sources revealed numerous positive records from the

wider landscape. The closest of these was approximately 2.7km SW of the site, with further positive records recorded 3.3km SSW, 3.4km NE, and 4.3km NW and SE. It is worth noting that in all cases, the records are beyond significant barrier features, such as the River Adur and/or its tributaries, major and minor roads and urban development.

The local area is included as part of a district licencing scheme for GCN. The district licensing team should be consulted to confirm, but it appears that the site is included within an amber zone, which identifies the area as having suitable habitat, and therefore GCN will likely be present, although there is no evidential justification for that categorisation, which has been determined through habitat suitability mapping and modelling.

10.4 **Results**

There are no ponds located on the site, one is identified on the OS mapping close to the farmhouse, but that is no longer present. As such, the site is considered unsuitable for supporting breeding GCN. Numerous ponds are present in the wider landscape, the closest being approximately 300m E, beyond the tributary of the River Adur, that flows past the south of the site. The pond on question is functionally linked to the tributary system flowing into the River Adur according to OS Mapping. All further ponds are located beyond waterways that are too fast flowing to support the species are considered to be barriers to dispersal of GCN into the site.

10.4 **Assessment**

When assessed against the criteria in Table 1, the site is considered to be unsuitable as a breeding site for GCN, suitable terrestrial habitat is present, however the closest ponds are located beyond habitat features that would present significant barriers for GCN, and therefore the suitability of the site for GCN is assessed as being negligible.

11. Breeding birds

11.1 **Methodology**

An assessment was made of the site's suitability to support breeding bird species. Nesting birds will utilise a broad range of habitats, including built structures, trees, scrub, isolated shrubs, dense herbaceous vegetation (terrestrial and aquatic) and open grassland. All bird species and evidence of breeding activity (active or inactive) observed on site were recorded. During the bat emergence surveys between July and September 2024, surveyors were asked to record any barn owl activity associated within the structures within the site.

11.2 **Limitations**

No limitations were identified during the survey.

11.3 **Existing records**

Phillips Ecology is not aware of the bird species of the local area.

11.4 Results

The site includes buildings and habitats that are considered to provide suitable habitat for bird nesting. These habitats include the broad-leaved woodland, hedgerows, scrub and grassland habitats. The grassland, where it is well-managed, is largely unsuitable for nesting birds.

During the survey, barn owl *Tyto alba* evidence and a roosting adult, were recorded within barns and a barn owl box was present within Building 2. A dead barn owl chick and two dead stock dove *Columba oenas* chicks were located on the floor, beneath the box. Other boxes, designed for tawny owl *Strix aluco* and kestrel *Falco tinnunculus* were located on trees around the site. During the bat emergence surveys, no behaviour typical of breeding barn owls was recorded from the structures within the site.

Other species recorded included an active starling *Sturnus vulgaris* nest within the farmhouse. In addition, blackbird *Turdus merula*, song thrush *T. philomelos*, mistle thrush *T. viscivorus*, barn swallow *Hirundo rustica*, house martin *Delichon urbicum*, whitethroat *Sylvia communis*, blackcap *Sylvia atricapilla*, robin *Erithacus rubecula*, skylark *Alauda arvensis*, woodpigeon *Columba palumbus*, dunnoek *Prunella modularis*, wren *Troglodytes troglodytes*, rook *Corvus frugilegus*, jackdaw *C. monedula*, carrion crow *C. corone*, chiffchaff *Phylloscopus collybita*, goldcrest *Regulus regulus*, pheasant *Phasianus colchicus*, blue tit *Cyanistes caeruleus*, great tit *Parus major*, house sparrow *Passer domesticus*, chaffinch *Fringilla coelebs* and yellowhammer *Emberiza citrinella* were all encountered during the survey.

Of the species recorded it is considered that the site supports suitable habitats for all, although there was no evidence of nesting for the communal nesting rook, which typically forms large, vocal colonies or house martin. Old barn swallow nests were located within the buildings, none were active and other species were exhibiting territorial behaviour, for example the yellowhammer was singing from hedgerows bounding the field.

11.5 Assessment

The man made and natural features on the site are considered to provide nesting suitability for a variety of breeding bird species, including those detailed in paragraph 11.4, and territorial activity was recorded for many. Confirmed nesting evidence was recorded for barn owl, stock dove, blackbird, starling and barn swallow.

The Birds of Conservation Concern 5 has highlighted that 70 species are now included on the red list due to significant declines in their populations, and 103 are included on the amber list due to moderate population declines. Of the species recorded during the survey and considered to be nesting on the site, five, skylark, starling, mistle thrush, house sparrow and yellowhammer are included on the red list, and seven, woodpigeon, tawny owl, kestrel, common whitethroat, wren, song thrush and dunnoek are included on the amber list due.

12. Discussion and Assessment of Impacts

12.1 General overview

Phillips Ecology understands that the proposals for site include the renovation/refurbishment of the farmhouse and conversion of various outbuildings for use as a wedding venue and associated activities. The extent to which the whole site will altered as part of the proposals, is not known at this time.

12.2 Relevant legislation and policy

Circular 06/2005 identifies that Applicants should not be required to provide information on protected species unless there is a reasonable likelihood that they will be present and affected by the proposed development. The site is considered to support habitats with suitability and potential for protected species and these may be affected by the proposed development. Therefore, the proposal triggers 'reasonable likelihood' under the Circular.

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (commonly referred to as the Habitats Regulations) may apply should protected species be confirmed on site.

In the case that a European protected species is found to be present and impacted by the proposal, the local planning authority will be required to engage with the Habitat Regulations. Permission will be granted unless:

- a) the development is likely to result in a breach of the Habitats Regulations, and
- b) is unlikely to be granted an EPS licence from Natural England to allow the development to proceed under a derogation from the law (under licence).

When considering whether Natural England would not be unlikely to grant a licence for the identified impact, the local planning authority must consider the three tests which are set out in the Habitat Regulations:

1. the consented operation must be for 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment' (Regulation 53(2)(e));
2. there must be 'no satisfactory alternative' (Regulation 53(9)(a)); and
3. the action authorised 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range' (Regulation 53(9)(b)).

Natural England will grant a licence if the development proposal is able to meet the three tests.

12.3 Designated sites

The data search did not reveal any statutory designated sites within a 2km radius of the site and therefore impacts on statutory designated sites are not anticipated.

12.4 Habitats

The habitats on site are typical of a farm and surrounding features, with the main dwelling set in large grounds, adjacent to numerous outbuildings. The grounds include two meadows, which are enclosed by mature hedgerows, some with standard trees present. Trees are located in clumps particularly in the northern part of the site where the canopies merge to form a small copse. This is mostly without an understorey, although it is present where hedgerows are located, and close to the dwelling where introduced shrubs are present.

The habitats of highest value are the hedgerows and mature trees, the grassland is quite species-poor but could be enhanced through changes in management and supplementary sowing of a grassland mix.

Phillips Ecology is not aware of any detailed plans for the site and therefore it is not possible to assess any potential impacts. However, it was noted that some significant ash trees are present around Building 2, which may require some management if they are infected with diseases such as ash dieback *Hymenoscyphus fraxineus* or canker.

12.5 Bats

The bat surveys conducted at the site have confirmed the presence of the following bat roosts within the structures within the application site:

Building 1 (Grade II Listed Building): Brown long-eared bat maternity and day roosts; multiple soprano and common pipistrelle day roosts.

Building 2 (Old Oak Framed Threshing Barn): Soprano pipistrelle day roost (up to five bats); brown long-eared bat satellite roost supporting the maternity roost in Building 1; occasional day roost for a single barbastelle bat and a day roost for up to two Natterer's bats.

Building 3 (Single-Storey Structure with Pitched Roof): Likely satellite roost for brown long-eared bats; day roosts for common pipistrelle and brown long-eared bats.

Building 4 (Open Sided Barn): Occasional day roost for a brown long-eared bat (low suitability due to open structure).

Building 5 (Modern Open-Sided Structure): Negligible bat roost suitability; no bat evidence recorded.

Building 6 (Brick and Block Structure): Negligible roost suitability; no bat activity observed.

Building 7 (Brick-Built with Hipped Roof): Intermittent day roost for common pipistrelle bats.

Buildings 8, 9, 10, and 12: Negligible suitability for roosting bats; no observed bat activity.

Building 11: Low suitability but provides occasional or opportunistic roosting; functions as a covered route for brown long-eared bats emerging from adjacent roosts, with one brown long-eared bat recorded emerging during a survey.

The UK Bat Mitigation Guidelines (2023) identify that the bat species recorded within the application site fall within the following rarity categories:

- Widespread all geographies: common pipistrelle, soprano pipistrelle and brown long-eared bat.
- Widespread in many geographies but not as abundant in all: Natterer's.
- Rarest Annex II species and very rare: barbastelle.

This assessment of rarity underpins the subsequent assessment of the importance of the roosts recorded within the structures at Park Farm, provided in table 12 below.

Table 12: the importance of the recorded bat roosts at Park Farm (in accordance with the UK Bat Mitigation Guidelines (2023)).

Species	Roost	Building reference	Importance (in accordance with the Bat Mitigation Guidelines).	Final importance level following consideration of assemblages and County distribution.
<i>Brown long-eared</i>	Maternity	1	Unlikely to exceed District importance unless colonies are atypically large; importance increased for assemblages.	District – due to typical size of maternity roost and assemblage formed by small numbers of roosting pipistrelle bats.
	Satellite	2 and 3	Unlikely to exceed District importance unless colonies are atypically large; importance increased for assemblages.	District – small satellite roosts.
<i>Soprano pipistrelle</i>	Day	1, 3, 4 and 11.	Site.	Site.
	Day	1 and 2.	Site.	Site.
<i>Common pipistrelle</i>	Day	1, 3 and 7.	Site.	Site.
<i>Natterer's</i>	Day	2	Site.	Site.

Species	Roost	Building reference	Importance (in accordance with the Bat Mitigation Guidelines).	Final importance level following consideration of assemblages and County distribution.
<i>Barbastelle</i>	Day	2	Site/Local/District, dependent on local distribution.	Local – barbastelle is widespread in West Sussex.

The proposals for the site are evolving, however, it is understood that building 1 which supports the maternity roost will be repaired and renovated, whilst the farm buildings will be subject to repairs, renovation, conversion and demolition (of modern structures where necessary). Whilst the proposed retention, renovation and conversion of the structures could be managed to retain the bat populations of the site, without mitigation, the proposals could result in the loss of the identified bat roosts through a combination of loss of roosting sites, loss of access/egress features, loss of functionally linked commuting and foraging habitat, increased disturbance at the site and illumination of roosting and foraging/commuting habitats.

The assessment of the roost characteristics, the nature of the development and the conservation status of the roosts which will be impacted by the proposed development has informed a strategy which will avoid, mitigate and compensate for the identified impacts.

12.6 Badgers

A large active badger sett was located on the site. At least five entrances were located, three from beneath the hedgerow bordering the garden and two within Building 8. From the extent of spoil recorded, it is considered that a significant tunnel network and chambers will be present underground.

Badgers and their setts (tunnels and chambers) are protected under UK law, offences include the following;

- Intentionally capture, kill or injure a badger,
- Damage, destroy or block access to their setts,
- Disturb badger setts.

Activities that could impact badgers, and therefore be in breach of the legislation include,

- destroying and damaging setts,
- noise, vibration and lighting,
- pile driving,
- lighting fires,

- using chemicals,
- ground excavations, and ploughing, and
- construction activities.

Impacts can result from any works within the vicinity of the sett, and a disturbance licence may be required for any works within 30m of the site. Typically, it is considered that a licence will likely be required for the following;

- Use of heavy machinery within 30m of a sett entrance.
- Use of lighter machinery (particularly for digging) within 20m of a sett.
- Use of hand tools, such as hand digging or scrub clearance within 10m of a sett.

Figure 56 provides an indication of the 30m buffer that may be required around the badger sett.

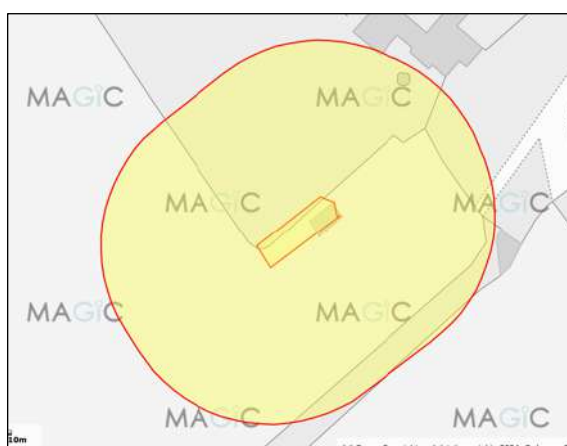


Figure 56: Location of badger sett and 30m buffer.

12.7 Hazel Dormouse

The nearest records identified by the data search are 9km to the north-east, north of the town of Burgess Hill, and 9km to the west, adjacent to the A24. The landscape between these records and the site is largely rural, with fields enclosed by a network of hedgerows and scattered woodland blocks. Given the presence of records either side of the site, it is plausible that the species could be present within suitable habitat on the site, however no evidence of such was recorded.

The site itself is considered to provide low suitability for the hazel dormouse. Impacts will be associated with the removal of any areas of habitat that are considered suitable for the species. These include woody and scrub habitats such as hedgerows, woodland and scrub and tree lines. Hazel dormouse is predominantly an arboreal species, spending much of its time in tree canopies and dense scrub, but they hibernate at or just above ground level.

12.8 **Hedgehog**

No evidence of hedgehog was recorded however the site is considered to provide optimal habitat for the species. Impacts on hedgehog will be associated with the loss of foraging habitats, or if deep excavations are left uncovered during any construction works.

12.9 **Reptiles**

Areas of suitable reptile habitat are present where grassland areas are more unmanaged. These include marginal habitats beneath hedgerows, such as along the access drive and where the garden is more unmanaged. At the time of the survey, most of the grassland areas within the curtilage of the dwelling, were mown regularly, with the two meadows the only grassland not mown. The limited species diversity on the meadows, suggests that they are cut, and probably early in the season. Regular cutting of meadows will decrease their suitability for reptiles, since it prevents the development of a tussocky and structure sward required.

The proposal will result in the temporary disturbance of habitat which has potential to support low populations of reptiles. Therefore, the construction phase of the proposed development has the potential to result in killing or injury of reptiles which would be an offence under the Wildlife and Countryside Act 1981 (as amended).

Therefore, there is considered to be potential for impacts upon these species associated with the proposal.

12.10 **Great crested newts**

The proposal will not result in the loss of habitat which is considered to support potential for great crested newts. Therefore, no impacts on great crested newts are anticipated.

12.11 **Breeding birds**

Suitable bird nesting habitat is present across much of the site, including the mature trees, hedgerows and shrub and grassland, and many of the buildings. Active nests, and evidence of previous breeding was recorded, and territorial behaviour was noted for a selection of species.

The removal of any mature habitat, or modifications to buildings where suitable bird nesting habitat exists, has the potential to damage or destroy active bird nests if carried out during the breeding bird season. This is generally seen as extending from March to the end of August, although may extend longer depending on local conditions and particular species. The barn owl is also included on Schedule 1 of the Wildlife and Countryside Act (as amended), making it an offence to disturb the species whilst nesting, in addition to damaging or destroying an active nest. Whilst no barn owl were recorded breeding within the site during 2024, the species could nest within the site in the future given the presence of suitable habitat.

13. Requirement for further surveys

13.1 Introduction

Further surveys are required where there is a reasonable likelihood that a protected species will be present and impacted by the proposed development. An assessment into the requirement for further surveys is presented below.

It is important that planning decisions are informed by the most up-to-date ecological survey information. As a result, there is a limited time frame that phase 1 and phase 2 surveys are valid before becoming outdated. This time frame can vary depending on any changes to the proposed project plans, but it is generally considered that phase 1 ecological surveys are valid for a period of 18 months (CIEEM, 2019). Where projects run for a longer period than 18 months, there may be the requirement to carry out further ecological surveys to ensure planning authorities have the most up-to-date survey information in order that they can make well informed, evidence-based decisions.

Natural England mandates that bat licence applications must be accompanied by survey data from either the current or the preceding survey season. Therefore, to ensure the data remains valid, a licence application must be submitted no later than the end of September 2025. After this date, updated survey work (undertaken between May and August) will be necessary to support the application.

13.2 Designated Sites

No further surveys are considered necessary for statutory designated sites.

13.3 Habitats

No further surveys are considered necessary.

13.4 Bats

The phase 2 bat surveys have provided a detailed understanding of the status of bats within the buildings, and therefore no further surveys are required whilst these surveys remain valid.

If any works are proposed to trees that are or an age and structure considered suitable for supporting bats, further works will be required. Initially, this should take the form of a ground level tree assessment (GLTA), and where potential features are identified, or evidence of bats recorded, further emergence surveys of those trees will be required prior to any management works.

Further surveys are considered unnecessary for understanding impacts on foraging and commuting bats, subject to a review of the proposed lighting plans at the site. Precautionary mitigation measures for lighting at the site are set out in Section 14.

13.5 **Badgers**

No further surveys are considered necessary for understanding impacts upon badgers, however, an updating survey should be undertaken if more than six months elapse between the date of the survey work and the commencement of works given the frequency with which badgers open new setts. This will ensure that any licensing requirements can be met before works commence, given the restrictive period in which works to a badger sett can be undertaken.

13.6 **Hazel Dormouse**

The need for further dormouse surveys will be dependent on the amount of suitable dormouse habitat to be lost to the proposals. The scope of works previously discussed with Phillips Ecology suggests that there are no proposals for works to the hedgerows and trees, and as such dormouse habitat would not be impacted.

If works are proposed to suitable dormouse habitat, surveys will be required to follow the survey guidance provided by the Dormouse Conservation Handbook and Standing Advice for Protected Species. This states that surveys should be undertaken between April and November in order to meet the minimum survey requirement (20 total survey points derived from monthly surveys which are weighted accordingly to reflect the suitability of the survey period).

The presence/likely absence survey would comprise the erection of nest tubes within suitable dormouse habitat across the site, including boundary hedgerows. The nest tubes would subsequently be surveyed for evidence, such as nests, of dormouse activity.

13.7 **Hedgehog**

There will be no requirement to carry out hedgehog surveys, however, precautionary mitigation measures, as set out in Section 14, will be required should any works on the site require deep excavations that are left overnight.

13.8 **Reptiles**

There is limited habitat within the application site which is considered suitable for reptiles.

The scope of works previously discussed with Phillips Ecology suggests that there are no proposals for works to grassland habitats besides usual operational works, and therefore reptile habitat would not be impacted, and therefore further surveys will not be required.

13.9 **Great-crested newt**

No further surveys are considered necessary.

13.10 **Breeding birds**

Subject to the precautionary mitigation measures set out in Section 14, no further surveys are considered necessary in respect of most breeding bird species. However, it will be necessary to assess the current status of barn owls prior to any works commencing. Barn owls can have young in the nest in any month of the year, particularly if the winter months are mild.

14. Mitigation recommendations

14.1 Introduction

The overarching aim of the ecological survey and assessment work carried out at the Park Farm site is to inform the planning proposals in order to demonstrate how the development can proceed whilst avoiding or mitigating impacts on ecological receptors. The 'mitigation hierarchy' is an accepted approach which guides this process. The first consideration should always be to design a scheme that avoids the identified impact. Where this is not possible the next step should be to mitigate any impacts that cannot be avoided. The third, which should be used as a last resort, is compensation: this should only be used to off-set any unavoidable impacts.

14.2 Designated sites

No mitigation measures are required

14.3 Bats

14.3.1 Licensing

As this work will result in impacts to bat roosts, an EPSM licence will need to be obtained from Natural England before the proposed redevelopment works commence. A licence can be applied for once planning permission has been obtained. Natural England will grant the relevant licence to allow the developer to legally carry out the work that would otherwise be illegal – i.e. to destroy a bat roost and disturb / take bats. Provided the development accords with other national and local planning policy in terms of being an acceptable development that will provide a modern, energy efficient accommodation and helping the Local Authority meet local needs, the first two tests should be passed.

The Bat Mitigation Strategy set out below will ensure the development passes the third of the derogation tests, that of maintaining the favourable conservation status of bats. This strategy must be updated as the proposals for the site evolve.

14.3.2 Demolition/re-roofing/roof-repairs/internal conversion mitigation strategy

- The destructive searches for Buildings 1, 2 and 3 will be timed to avoid both hibernating and breeding bats therefore they will be carried out during the start or end of the active season i.e. mid-March to April, inclusive or mid-Sept to October, inclusive.
- The destructive search of buildings 4, 7 and 11 will be carried out during the active season i.e. April to late-October.
- A toolbox talk will be given to contractors prior to works that will result in the disturbance of bat roosts commencing (i.e. any works to the external or internal roof structures of the buildings). The toolbox talk will provide an introduction to the legal protection afforded to bats, the status of bats at the site including likely species and roosting locations, evidence to look out for and the protocol which will be followed if a roosting bat is identified. Appropriate signage will be provided and displayed on site to inform contractors of the required protocol when working where a bat roost has been recorded.

- The destructive search works will be led by a licensed bat worker, accompanied by construction contractors. There will be no disturbance of identified and potential roost features without the supervision of a bat worker. This is because during the proposed roof works bats, if present, may be very difficult to locate and easily be overlooked by inexperienced contractors.
- Immediately prior to any works to the external or internal roof structures of the buildings commencing, inspections of known bat roosting areas and potentially suitable areas within the zone of impact of the proceeding works will be carried out by a licensed bat worker, using an endoscope where required, to check for the presence of roosting bats.
- Prior to works commencing, crevice roost features on the buildings that will be affected will be inspected with an endoscope. If a feature can be inspected exhaustively and it can be certain that no roosting bats are within, the feature will be temporarily blocked with sponge which will remain in place until the works take place. If a feature cannot be inspected exhaustively or a roosting bat is found, a one way-exclusion device will be installed.
- Permanent exclusion will be carried out using techniques specified within the most up-to-date edition of the Bat Workers Manual. One-way exclusion devices (which will allow bats to exit the roost but not re-enter) will be fitted by a licenced bat ecologist and will remain in position for a period of at least five consecutive days / nights throughout a spell of suitable weather conditions (in which bats are likely to leave the roost i.e. suitable survey conditions), or remain longer until these conditions prevail. Exclusion devices include acetate flaps, plastic tubes and plastic funnels.
- Once at least five consecutive days of suitable weather have prevailed, the roost feature will be sealed until the works take place.
- All suitable bat roosting features supported by the buildings that will be affected by the works will be removed by/under the supervision of the licensed bat worker using hand tools. The works will be carried out from a suitably erected scaffold.
- Any bats which are found during the destructive search works will be captured by the licenced bat worker with the use of thin gloves or a hand net. The bat will immediately be transferred to a holding bag before being placed within one of the previously erected bat boxes within the site grounds. Any injured bats will immediately be taken into care.
- Once the licensed bat worker is satisfied that all features that may provide bat roosting opportunities have been safely removed, the contractors can complete the demolition.
- If a bat is found during unsupervised works, all works will cease and the supervising bat worker will be contacted immediately.

14.3.3 *Provision of new roosting sites and retention of existing roosts*

In the first instance, the proposals should seek to retain roosts in existing locations. Where this is not possible, mitigation must entail the provision of alternative roost features which are proportionate to the status of any identified roost. Further details are required on the

proposals for the site to inform a detailed strategy for the retention and/or replacement of the recorded bat roosts.

16.2.1 *Advisory notes:*

Traditional roof membrane - modern breathable membranes can be extremely harmful to bats, causing them to become entangled and die, while the bats make the membrane ineffective as they damage it. Where re-roofing is required, traditional bitumen membrane should be used instead. Natural England will refuse bat licence applications where modern breathable membranes are proposed. See <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes> for more information on the current research into this.

In order to limit any effects on foraging and commuting bats, external lighting should be limited to only that which is absolutely necessary for safety purposes, both during the construction phase and once the proposals are complete. The following lighting measures are required:

- Construction works between March and October should be undertaken during daylight hours only to avoid disturbance to bats that may forage and commute through or near the site.
- Lighting to the completed development should be as low brightness as possible, kept at a low level and directed away from all boundaries and Buildings 5 and 6. Lighting on sensors should not be so sensitive that foraging bats trigger them.
- All lighting must follow the Bat Conservation Trusts and Institute of Lighting Professionals guidance on bats and artificial lighting (BCT, 2023).

14.3.2 *Foraging and commuting bats*

In order to limit any effects on foraging and commuting bats, external lighting should be limited to only that which is absolutely necessary for safety purposes, both during the construction phase and once the proposals are complete. The following lighting measures are required:

- Construction works between March and October should be undertaken during daylight hours only to avoid disturbance to bats that may forage and commute through or near the site.
- Lighting to the completed development should be as low brightness as possible, kept at a low level and directed away from all boundaries including the mature hedgerows and boundary features. Lighting on sensors should not be so sensitive that foraging bats trigger them.

All lighting must follow the Bat Conservation Trusts and Institute of Lighting Professionals guidance on bats and artificial lighting (BCT, 2023).

14.4 **Hazel dormouse**

On the current understanding of the scope of works no mitigation measures are required.

14.5 **Hedgehogs**

In order to avoid harm to hedgehogs during the construction works the following precautionary measures will be employed:

- Any accumulations of brash, including those already existing, will be dismantled by hand in a sensitive and careful manner.
- No bonfires will be made or lit on site.
- All trenches will be left covered at night. They must be checked in the morning before they are filled in.

14.6 **Reptiles**

On the current understanding of the scope of works no mitigation measures are required.

14.7 **Great crested newt**

No mitigation measures are required for GCN.

14.8 **Breeding birds**

In addition to recommendations for barn owls in paragraph 13.10, care should be taken that the development does not disturb/destroy breeding birds. The bird nesting season is taken to be March to August, inclusive. Any works to suitable nesting habitat will either need to be undertaken outside of this period or else checked by an experienced ecologist to ensure that no nesting birds are present within 24 hours of its proposed removal. If occupied nests are present then the nest must not be removed, and clearance can only recommence once the nest becomes unoccupied of its own accord.

15. Enhancements

The delivery of biodiversity enhancement on development sites is promoted by the National Planning Policy Framework (NPPF) and Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006.

Where opportunities exist it is best practice to provide enhancement features which encourage greater biodiversity within development sites in accordance with the NPPF and Local Planning Authority's responsibilities under the NERC Act.

Enhancement measures should look to build on the ecological features of the local area, thereby providing additional habitat for species that are already present in the local area, such as bats and birds.

There are significant opportunities for ecological enhancements at the site, some examples are detailed below:

- The provision of a wildlife pond on the site.
- Additional native tree and shrub planting. Heavy standard trees could be planted within the hedgerows or scattered throughout the large meadow.

- Enhancement of the grassland to develop a more species-rich sward, to provide a source of nectar for the local invertebrate communities.
- The provision of barn owl, little owl *Athene noctua*, tawny owl and/or kestrel nesting boxes on mature trees across the site.
- The provision of bat boxes to be erected on trees or external elevations of the buildings within the site.

16. Conclusion

The extended Phase 1 ecological assessment confirmed that the site provides suitable habitats for various protected species, prompting further surveys to determine their status on-site. The following surveys were conducted:

- Bats – Emergence surveys
- Badger – Camera trap monitoring to confirm the status of the sett
- Birds – Surveys for breeding barn owl

The bat surveys identified roosting, foraging, and commuting activity, with confirmed roosts in several buildings, including maternity, satellite, transitional and day roosts for brown long-eared bats, and day roosts for Natterer's, barbastelle and soprano and common pipistrelle bats.

The site also supports a main badger sett and habitats suitable for breeding birds, including barn owl, though no barn owl breeding activity was recorded within the site during the surveys.

Provided that the avoidance and mitigation measures outlined in this report are implemented as recommended, the planning authority can be assured that the development will comply with relevant planning policy, legislation, and caselaw.

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Appendix 1 – UK habs habitat map

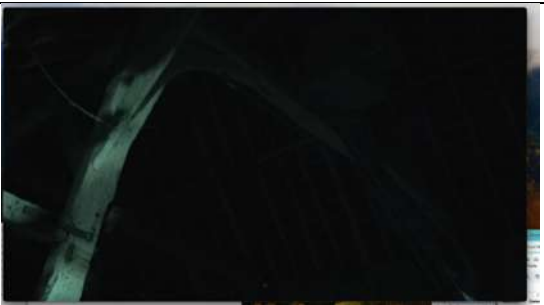
Appendix 2 – Site proposals

Appendix 3 – Phase 2 bat survey screen shots

Building 1	23 rd July 2024	20 th August 2024	24 th September 2024
			
			
			



			
Building 2	17 th July 2024	1 st August 2024	5 th September 2024
			
			

			
			
Building 3	17 th July 2024	8 th September 2024	
			

			
Building 4	4th August 2024		
			
			

Building 7	16 th July 2024	8 th August 2024	
			
			
Building 11	16 th July 2024		
			



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