



EXTENDED PHASE 1 ECOLOGICAL AND BAT
ROOST ASSESSMENT

SOAKE FARM, SOAKE ROAD, DENMEAD, WATERLOOVILLE, PO7 6JA

FINAL REPORT

September 2023

Report conditions

<i>Report title</i>	Extended Phase 1 Ecological and Bat Roost Assessment – Soake Farm, Denmead		
<i>Client</i>	Mr G. Byng		
<i>Report status</i>	Final		
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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 proposed demolition, conversion and construction works at Soake Farm, Denmead.
- An extended phase 1 ecological assessment of the application site was undertaken on the 19th April 2023 by Katy Goddard 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 a 1km radius for protected species, priority species and priority habitats.
- The site is considered to support opportunities for protected and priority species including roosting bats and breeding birds.
- The preliminary roost assessment confirmed the presence of high, high and moderate suitability roosting features on the office, warehouse and stables respectively. Evidence of activity was recorded in all three buildings, with the office and warehouse being confirmed roosts.
- In order to confirm the presence/absence of further roosting bats, characterise any bat roosts, assess the extent that they may be affected by the proposed works and develop a proportionate and appropriate mitigation strategy, further survey work in accordance with Natural England standing advice and the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition) was required. The recommended survey effort for structures with moderate and high roost suitability is two and three presence/absence surveys respectively.
- Three presence/absence surveys comprising three dusk emergence surveys were undertaken during August and September 2023.
- The surveys have confirmed that the warehouse supports a common pipistrelle bat maternity roost whilst the stables and offices support common pipistrelle bat day roosts.
- The proposed redevelopment works will result in the loss of the identified roosts. As such, a European Protected Species Mitigation (EPSM) licence will be required to enable the development to proceed lawfully under a derogation from the Habitat Regulations 2017.
- With the implementation of precautionary construction avoidance measures, impacts on other protected and priority species will be avoided.
- Information regarding the length of time the findings of this report are valid for can be found in section 13.1.

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1. Introduction

1.1 Report purpose

This report has been prepared in order to present the extended phase 1 ecological and bat roost assessment undertaken for the proposed works at Soake Farm, Denmead (central grid reference: SU 66868 11181).

1.2 Description of proposal

The current proposals comprise the construction of nine new dwellings following the demolition of the office and the stables, and the conversion of the warehouse into residential use.

1.3 Report context

Mr G. Byng has prepared a planning application for the proposed demolition and construction works at Soake Farm, Denmead. It is anticipated that the planning authority, Winchester City Council, will request that the planning application is accompanied by an ecological assessment. Phillips Ecology have been instructed by the Applicant to undertake this assessment.

1.4 Scope of assessment

An extended phase 1 ecological assessment was carried out on the 19th April 2023. 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 further species specific surveys for bats.

1.5 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 a 1km radius for protected species, priority species and priority habitats.

1.6 Weather conditions

Weather during the extended phase 1 ecological assessment survey can be described as: dry, 5% cloud cover, breezy, and 12°C. The weather conditions did not hinder the ecologist's ability to carry out the survey effectively.

1.7 Limitations

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

2. Data search

2.1 Methodology

A desk-based assessment was undertaken by Phillips Ecology on the 25th April 2023 with Multi-Agency Geographic Information for the Countryside (MAGIC). The MAGIC database was consulted for records of statutory designated sites and priority habitats for the application site and 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

No statutory designated sites are located within a 2km radius of the site.

2.3.2 Ancient woodlands

One compartment of non-statutory ancient woodland is located within a 1km radius of the application site. This is detailed in table 1, below.

Table 1 Ancient woodlands within 1km of the application site

Woodland Name	Approx. distance and direction from the site	Reason for designation
<i>Unnamed compartment</i>	0.43km SSW	This 1.9ha site is designated for its ancient and semi-natural woodland.

2.3.3 Priority habitats

The data search revealed the following priority habitats within 1km of the application site:

- Coastal and floodplain coastal grazing marsh, 0.34km ENE (closest)
- Good quality semi-improved grassland, 0.56km NNE
- Lowland meadows, 0.39km NNW
- Broadleaved deciduous woodland, 0.13km E (closest)

2.3.4 Protected Species

The data search revealed three records of a protected species licences being granted within a 1km radius of the site, the details are as follows:

- Bat: Common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *P.pygmaeus* – 2015 – 0.49km NNW
- Bat: Common pipistrelle and soprano pipistrelle– 2012 – 0.77km SSE
- Bat: Common pipistrelle and soprano pipistrelle – 2010 – 0.89km SSE

3. Habitats

3.1 Methodology

A field survey was carried out on the 19th April 2023 by Katy Goddard of Phillips Ecology. During the survey, all broad habitat types were identified, and a list was compiled of characteristic plant species within each habitat type. These habitats are described below in accordance with Phase 1 habitat terminology.

3.2 Limitations

The habitat survey was carried out during April which shoulders the optimal period for recording vascular plant species. Whilst certain species would not have been evident if present, it was possible to identify vegetation to effectively classify habitat types in accordance with Phase 1 habitat terminology.

3.3 Existing records

The data search revealed that priority habitats are present with the local landscape within 1km of the site. These are detailed in Section 2.3.3 above. The closest priority habitat is broadleaved deciduous woodland, 0.13km east.

3.4 Results

The site is located within Denmead Gap, an area of open country separating Denmead to the west and Waterlooville to the east. Soake Road is surrounded by mature hedgerows, lines of trees, blocks of woodland, streams, permanent pasture and arable fields, with a small number of residential properties and businesses located off of it.

The following Phase 1 habitat types were recorded within the survey site. See Appendix 2 for the Phase 1 habitat map.

3.4.1 *Amenity grassland (J1.2)*

The northernmost section of the site supports an area of amenity grassland that is well managed to a short uniform sward (Figure 1). The grass species recorded include perennial rye *Lolium perenne* with interspersing herbaceous species dominated by daisy *Bellis perennis*, with ragwort *Jacobaea vulgaris*, forget-me-not *Myosotis sp.*, dandelion *Taraxacum sp.* and cat's-ear *Hypochaeris radicata* also occasionally recorded. Two ornamental trees are present within the lawn.



Figure 1 – grassland in the northernmost section of the site, with immature scattered trees

3.4.2 *Introduced shrub (J1.4)*

Raised flower beds are present against the southern elevation of Building 1 (Figure 2) and the northern elevation of Building 2. The species present include *Cotoneaster sp.*, bramble *Rubus fruticosus*, ivy *Hedera helix* and adria bellflower *Campanula portenschlagiana*.



Figure 2 – raised bed with shrubs in front of Building 1

3.4.3 *Boundaries (J2)*

Species poor defunct hedgerow (J2.2.2) forms the northernmost sections of the western and eastern elevations (Figure 3). The species include *Leylandii sp.* and cherry laurel *Prunus laurocerasus*, with common nettle *Urtica dioica*, ivy, lords-and-ladies *Arum maculatum*, bindweed *Convolvulus sp.* and nipplewort *Lapsana communis*.

The south-eastern boundary is formed by Soake Road. Around the remainder of the site, there is no physical boundary between the application site and the wider site within the client's ownership.



Figure 3 – short length of hedgerow in the northern section of the site

3.4.4 *Hardstanding (J5)*

Excluding the built structures, the majority of the site comprises hardstanding. Concrete and tarmac areas lead from the access gate to a central yard area, behind Building 2 and join a driveway of the adjacent dwelling behind Building 1.

3.4.5 *Buildings (J3.6)*

The application site supports three built structures: Building 1 - the office, Building 2 - the warehouse and Building 3 - the stables. These are detailed in section 5.

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 following protected and priority species have been considered further within this report:

- Bats
- Badger
- Hazel dormouse
- Hedgehog
- Reptiles
- Great crested newt
- 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
<i>Negligible</i>	Site is entirely unsuitable for species. Presence of species highly unlikely.
<i>Low</i>	Minimal suitable habitat present or, if present, highly degraded/fragmented. Minimal linkage to suitable habitat beyond site. Presence of species unlikely.
<i>Moderate</i>	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.
<i>High</i>	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.
<i>Confirmed presence</i>	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. Preliminary roost assessment

5.1 Methodology

The survey did not depart from the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd 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 external features of the buildings 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.

The interiors of the buildings were inspected in order to identify potential or actual access points and roosting places and to record any evidence of bat activity or bats themselves.

5.2 Survey equipment

Survey equipment comprised:

- High-powered torch
- Camera
- Ladders
- Binoculars

5.3 Limitations

The western end of the void within Building 1 was not accessed due to safety reasons. Due to the proximity to Building 3 and a cottage adjacent to the western boundary, the view of the south-western corner of Building 2 was restricted. Despite these limitations, it is still considered that a robust assessment of the buildings' suitability for supporting roosting bats has been undertaken.

5.4 Assessment methodology

The suitability of the buildings 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
<i>Negligible</i>	Structure has no reasonable likelihood of supporting roosting bats i.e. no suitable roosting features present.
<i>Low</i>	A structure 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.
<i>Moderate</i>	A structure 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.
<i>High</i>	A structure which is obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time.

5.5 Existing records

The data search revealed three records of mitigation licences regarding bats within a 1km radius of the site. These were in relation to common pipistrelle and soprano pipistrelle bats, the closest being 0.49km NNW.

5.6 Results

5.6.1 Building 1 - The office

The office comprises a long single-storey wooden framed structure which rises to a pitched and gable end design roof clad with corrugated tin roofing sheets (Figures 4 & 5). The building is oriented south to north. The roof extends beyond the wall plate and the eaves are enclosed with wooden underboards and fascias, closely adjoined to plastic guttering on the southern elevation. The elevations are clad with wooden weatherboarding on top of bitumen felt. The southern elevation supports windows set in wooden frames, which are tight fitting to the surrounding woodwork. A small mono-pitched extension extends from the western elevation. As with the main structure, the extension is clad with corrugated tin roofing sheets and wooden weatherboarding.

Internally, the office supports a single roof void (Figure 6), accessed via a hatch in the eastern end of the building. The roof is unlined with the underside of the roofing sheets visible. Timber beams support the roof, with a ridge beam set down from the roof cladding. Bitumen lining and wooden boards are present at the gable ends. The void is part boarded. Heavy cobwebbing was present.



Figure 4 – the office southern elevation



Figure 5 – the office northern elevation



Figure 6 – the office roof void

Table 4 – The office recoded features

<i>Suitability</i>	<i>Evidence</i>
Exterior	<p>The following suitable access/egress and roosting features were recorded externally during the survey:</p> <ul style="list-style-type: none"> - Lifted weatherboarding. <p>The following evidence of roosting activity was recorded on externally during the survey:</p> <ul style="list-style-type: none"> - A single <i>Pipistrellus</i> bat was recorded roosting under weatherboarding on the eastern elevation.
Interior	<p>No suitable access/egress and roosting features were recorded internally during the survey.</p> <p>No evidence of roosting activity was recorded internally during the survey.</p>

5.6.2 *Building 2 - The warehouse*

The warehouse comprises a large brick-built structure which rises to a shallow pitched and gable end design roof clad with metal roofing sheets, and ridge and verge caps (Figures 7 & 8). The building is oriented east to west. The eastern elevation supports two single metal doors and one large recessed metal roller door, with metal sheets cladding the sides of the recess. The northern and western elevations support two windows and one window set in wooden frames respectively; the windows are tight fitting to the surrounding brickwork. A corrugated plastic shelter extends from low down on the southern elevation and connects to the roof of Building 3, creating a covered shelter between the two buildings (Figure 9).

Internally, the warehouse does not support a roof void (Figure 10). The elevations are double-skinned, with blockwork walls internally. The building is supported by a metal frame. A mezzanine level is present around the northern, western and southern elevations. The warehouse was disused at the time of survey.



Figure 7 – the warehouse eastern elevation



Figure 8 – the warehouse northern elevation



Figure 9 – covered shelter between buildings 2 and 3



Figure 10 – internal space of the warehouse

Table 5 – The warehouse recoded features

<i>Suitability</i>	<i>Evidence</i>
<p>Exterior The following suitable access/egress and roosting features were recorded externally during the survey:</p> <ul style="list-style-type: none"> - The edge caps sit away from the elevation on the eastern, southern and western elevations. 	<p>No evidence of roosting activity was recorded externally during the survey.</p>
<p>Interior The following suitable access/egress and roosting features were recorded internally during the survey:</p> <ul style="list-style-type: none"> - Gaps above the top of the wall plate (Figure 11), potentially leading to the wall cavity. 	<p>The following evidence of roosting activity was recorded internally during the survey:</p> <ul style="list-style-type: none"> - Hundreds of pipistrelle bat type droppings were recorded internally (Figure 12). The droppings were largely in two clusters, at the eastern and western ends of the southern elevation. The droppings were on the floor and the walls, leading to the

Suitability

Evidence

	gaps above the wall plate. Further droppings were also scattered throughout the building. The number of droppings and the size of some of droppings suggest it is a maternity roost.
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Figure 11 - gaps above the wall plate within the warehouse with pipistrelle droppings



Figure 12 – hundreds of pipistrelle type droppings within the warehouse

5.6.3 Building 3 - The stables

The stables comprises a long brick-built stable block which rises to a shallow mono-pitched roof design clad with asbestos type corrugated roofing sheets (Figures 13 & 14). The building is oriented north to south. The northern elevation is rendered and painted and supports wooden stable doors. The southern elevation forms the boundary of the site with Soake Road; the top of the elevation supports wooden weatherboarding while the bottom section is also rendered and painted. The western elevation adjoins to a cottage outside the application site. A blockwork extension extends from the eastern elevation. The roof of the extension is clad with corrugated tin roofing sheets and the elevations remain as exposed blockwork. A corrugated plastic shelter extends from northern elevation and connects to the southern elevation of Building 2, creating a covered shelter between the two buildings (see Figure 9, above).

Internally, the easternmost stables have been converted into storage rooms with a false ceiling installed and the elevations clad with wooden sheets (Figure 15). The westernmost stables are open to each other, separated with three-quarter height walls (Figure 16). Access above the eastern false ceiling is present from the centre stable.



Figure 13 – the stables northern and eastern elevations



Figure 14 – the stables southern elevation



Figure 15 – internal view of the eastern stables



Figure 16 – internal view of the western stables

Table 6 – The stables recorded features

	<i>Suitability</i>	<i>Evidence</i>
Exterior	<p>The following suitable access/egress and roosting features were recorded externally during the survey:</p> <ul style="list-style-type: none"> - Crevices in the brickwork at the eastern end (Figure 17). 	<p>No evidence of roosting activity was recorded externally during the survey.</p>
Interior	<p>The following suitable access/egress and roosting features were recorded internally during the survey:</p> <ul style="list-style-type: none"> - Open access above the false ceiling. 	<p>The following evidence of roosting activity was recorded internally during the survey:</p> <ul style="list-style-type: none"> - A small number (approx. 3) pipistrelle bat type droppings were recorded in a western stable.



Figure 17 – crevices in the brickwork on the eastern end of the stables

5.6.4 *Site grounds description relevant to bats*

The site supports habitats with minimal resources for foraging and commuting bats. However, it is in close proximity to highly suitable habitats, with ponds, long grassland, blocks of woodland and mature hedgerows all surrounding the site. Due to this, it is likely that bats will commute and forage through the site.

5.7 **Assessment**

When considered in view of the criteria set out in Table 3, The Stables is considered to support moderate roosting suitability, i.e. “a structure which could be used by bats but is not likely to support a roost of high conservation status (e.g. maternity roost)”. Both The Office and The Warehouse are considered to support high roosting suitability - i.e. “a structure which is obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time”, and are both confirmed roosts.

In the context of the wider landscape, the habitats within the application site are considered unexceptional for foraging and commuting bats but it is highly likely that bats will commute and forage through the site as a component of their wider foraging range due to the highly suitable habitats surrounding the site.

6. Bat Emergence Surveys

6.1 **Methodology**

The emergence surveys were undertaken in accordance with the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). A total of nine surveyors were positioned in order to provide sufficient coverage of the suitable roost features on all three structures when stationary. In addition, infra-red illuminators and nightvision video cameras and thermal imaging cameras were used to improve visibility. All emergences, re-entries and general activity were recorded during the course of each survey. Recordings were later analysed using Sonobat bat call analysis software to confirm species identification.

6.2 Surveyor/s

The surveys were led by Connor Hill, Richard Codlin and Ellie Gollop with suitably experienced bat surveyors Laura Baynes, Frankie Hart, Sophy Barnett, Sarah Perryman, Chris Drake, Lucie Poole, Ethan Taylor and Ben Wilkie.

6.3 Survey area

The survey area comprised all elevations of the warehouse, stables and office. This enabled survey coverage of all suitable access/egress and roosting features which were recorded during the preliminary bat roost assessment.

6.4 Survey date

The date and timings of the emergence surveys are presented in Table 6. The emergence surveys commenced 15 minutes prior to sunset and continued for at least 1.5 hours.

Table 6 survey dates and timings

<i>Survey type</i>	<i>Surveyed structures</i>	<i>Date</i>	<i>Start</i>	<i>Finish</i>	<i>Sunset/ sunrise</i>
<i>Emergence</i>	Warehouse and office.	14/08/2023	20:12	21:57	20:27
<i>Emergence</i>	Warehouse, office and stables.	28/08/2023	19:51	21:36	20:06
<i>Emergence</i>	Warehouse, office and stables.	13/09/2023	19:08	20:53	19:23

6.5 Survey equipment

Survey equipment comprised:

- Pettersson D240X bat detector
- Anabat Walkabout
- Sony FDR-AX53 (nightshot mode)
- Canon XA11 (nightshot mode)
- Elekon Batlogger M detector
- Echometer Touch
- Infrared illuminators

6.6 Weather conditions

Weather conditions during the surveys are provided in Table 7:

Table 7 emergence surveys weather conditions

Survey	Date	Precipitation		Temperature		Wind		Cloud Cover	
		Start	Finish	Start	Finish	Start	Finish	Start	Finish
Emergence	14/08/2023	Nil	Nil	17.0 °C	15.0 °C	BF 1	BF 0	70%	50%
Emergence	28/08/2023	Nil	Nil	17.0 °C	15.0 °C	BF 1	BF 0	100%	10%
Emergence	13/09/2023	Nil	Nil	18.0 °C	17.0 °C	BF 0	BF 0	30%	0%

6.7 Results

6.7.1 14th August 2023 – Dusk Emergence Survey

The Warehouse

During the dusk emergence survey carried out on the 14th August 2023, a total of 11 bats were recorded emerging from the warehouse. These comprised 11 common pipistrelle bats which emerged from the fascia boards on the eastern (four) and western (seven) elevations between 20:43 and 21:16.

The Office

During the dusk emergence survey carried out on the 14th August 2023, a total of two bats were recorded emerging from the office. These comprised two common pipistrelle bats which emerged from weatherboarding on the southern and northern elevations at 20:45 and 21:03, respectively.

General activity

The first recorded bat comprised the first common pipistrelle bat to emerge from the warehouse at 20:43. Following this, up to three common pipistrelle bats were recorded foraging close to the ditch and associated habitat to the west of the warehouse with occasional foraging passes into the courtyard. Activity was near constant for the entire survey.

6.7.2 28th August 2023 – Dusk Emergence Survey

The Warehouse

During the dusk emergence survey carried out on the 28th August 2023, a total of four bats were recorded emerging from the warehouse. These comprised four common pipistrelle bats which emerged from the fascia boards on the eastern (one) and western (three) elevations between 20:12 and 20:13.

The Office

During the dusk emergence survey carried out on the 28th August 2023, a total of two bats were recorded emerging from the office. These comprised two common pipistrelle bats which emerged from weatherboarding on the southern elevation at 20:07 and 20:09.

The Stables

During the dusk emergence survey carried out on the 28th August 2023, one bat was recorded emerging from the stables. This comprised a single common pipistrelle bat which emerged from the fascia board on the southern elevation of the stables at 20:41.

General activity

The first recorded bat comprised the first common pipistrelle bat to emerge from the office at 20:07. Following this, up to two common pipistrelle bats were recorded foraging close to the ditch and associated habitat to the west of the warehouse with occasional foraging passes into the courtyard. Activity was near constant for the entire survey. In addition, a single noctule *Nyctalus noctula* bat was recorded foraging high over the site at 20:14 and 20:25. At 21:07, a long-eared *Plecotus* species bat was recorded foraging close to the office building. Several foraging passes were recorded up until the end of the survey.

6.7.3 13th September 2023 – Dusk Emergence Survey

The Warehouse

During the dusk emergence survey carried out on the 13th September 2023, a total of four bats were recorded emerging from the warehouse. These comprised four common pipistrelle bats which emerged from the fascia boards on the eastern (three) and western (one) elevations between 19:48 and 19:58.

The Office

During the dusk emergence survey carried out on the 13th September 2023, no bats were recorded emerging from the office.

The Stables

During the dusk emergence survey carried out on the 13th September 2023, two bats were recorded emerging from the stables. These comprised two common pipistrelle bats which emerged from the stable door on the northern elevation of the stables at 19:47.

General activity

The first recorded bat comprised the first common pipistrelle bat to emerge from the warehouse at 19:48. Following this, up to two common pipistrelle bats were recorded foraging close to the ditch and associated habitat to the west of the warehouse with occasional foraging passes into the courtyard. Activity was near constant for the entire survey. In addition, a single noctule *Nyctalus noctula* bat was recorded foraging high over the site at 20:01.

6.8 **Assessment**

The bat emergence surveys have revealed that the warehouse supports common pipistrelle bat maternity roost whilst the office and stables support common pipistrelle bat day roosts.

A peak count of three common pipistrelle bat was recorded foraging within the site grounds during the course of the surveys. Activity levels for this species were consistent across all three surveys and therefore it is considered that a small number of common

pipistrelle bat use the site for foraging as compartment of their wider sustenance zones. Noctule bats were also recorded on occasion during the survey however this species foraged high over the site.

7. Badgers

7.1 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. Particular emphasis was placed on locating badger setts, paths and signs of territorial activity such as dung piles and latrines.

7.2 Limitations

Limitations were not encountered during the course of the survey.

7.3 Results

No evidence of a badger sett was recorded within the application site. Excluding the amenity grassland which provides a small area of sub-optimal foraging opportunities, the site is considered to be unsuitable for badgers with no habitat available for sett formation. However, suitable habitat for the formation of a sett and foraging is present within local landscape.

7.4 Assessment

Badger setts are considered to be absent from the application site, which provides minimal opportunities for badgers. However, opportunities are present within the wider site therefore it is possible that badgers could commute through the site.

8. Dormice

8.1 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.

8.2 Limitations

Limitations were not encountered during the course of the survey.

8.3 Results

While the site includes hedgerows, they are unsuitable for supporting nesting dormice, lacking species that dormice can utilise for nesting and foraging. The western hedgerow

is isolated from any suitable habitat. The eastern hedgerow is connected to a line of mature trees to the north which is connected to further tree lines, mature hedgerows and small woodland blocks. While this hedgerow is connected, the connection is to the north only with no suitable habitat to the south, removing the likelihood of dormice using the hedgerow for commuting. The remainder of the site is considered wholly unsuitable for supporting dormice because the grassland, buildings and hardstanding do not support the resources that would be required by dormice.

8.4 **Assessment**

The application site is considered to support negligible potential for dormice.

9. Hedgehogs

9.1 **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.

9.2 **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.

9.3 **Results**

The grassland and hedgerow habitat within the site has the potential to support foraging hedgehog although no direct evidence was noted.

9.4 **Assessment**

There is considered to be moderate potential for hedgehog to occur on site.

10. Reptiles

10.1 **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.

10.2 **Limitations**

Limitations were not encountered during the course of the survey.

10.3 **Results**

While an area of grassland is present on site, it is maintained to a short sward with no shelter opportunities present. In addition, the grassland is isolated from suitable habitat, being surrounded by buildings and hardstanding. The hedgerows on site offer sub-optimal opportunities for shelter, although are also isolated from suitable habitat.

10.4 **Assessment**

There is considered to be negligible potential for reptiles to occur on site.

11. Great Crested Newts

11.1 **Methodology**

Great crested newts 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 protected 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).

11.2 **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).

11.3 **Results**

The site does not support any freshwater waterbodies however eight freshwater bodies were identified within 500m of the application site, the closest being approximately 0.07km E.

Three of these ponds, approximately 350m NNE of the site, appear to be within Denmead Aquatic Nursery and are therefore likely to be well managed ornamental ponds, potentially with fish.

Phillips Ecology undertook eDNA surveys on a series of ponds approximately 900m south of the site in 2021, which are connected to the three southern ponds within the 500m radius of the site by suitable habitat. The results were negative for all ponds.

The terrestrial habitat on site does not provide suitable resting places for GCN.

11.4 **Assessment**

While there is a network of ponds within the local area, the network of ponds is small. In addition, there are no suitable terrestrial habitats for GCN on site.

Overall, there is considered to be negligible potential for GCN to occur on site.

12. Breeding birds

12.1 **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.

12.2 **Limitations**

No limitations were encountered during the survey.

12.3 **Results**

The hedgerows, buildings and trees provide nesting opportunities for bird species. Robin *Erithacus rubecula*, common woodpigeon *Columba palumbus*, wren *Troglodytes troglodytes*, pied wagtail *Motacilla alba* and jackdaw *Corvus monedula* were recorded on or over the site during the survey. Inactive bird nests were recorded in Building 3, and bird droppings were visible from under lifted weatherboarding on Building 1.

12.4 **Assessment**

Habitats within the site are considered to support nesting opportunities for various bird species. Overall, the site is considered to support high potential for breeding birds.

13. Discussion and Assessment of Impacts

13.1 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.

13.2 Designated sites

No statutory designated sites were identified during the data search. Therefore, the proposal will not result in the direct loss of any statutory designated sites. Nor will it result in the direct loss of any habitat that could be considered functionally linked supporting habitat. The closest designated site to the application site is an ancient woodland located over 0.43km south-west. No direct or indirect impacts are anticipated at this distance given the scale of the proposal.

13.3 Habitats

The main habitats which will be directly impacted by the proposed development are amenity grassland, buildings and hardstanding. As the vegetation to be removed is managed, easily replicable and of low botanical value, it is considered that there will be no impact to habitats of ecological importance such as priority habitats as a result of its loss. The hedgerow vegetation will remain.

13.4 Bats

The preliminary roost assessment confirmed that the office and warehouse support high roost suitability and both structures have been confirmed as roosts. The stables support moderate suitability for roosting bats.

On the basis that the office, warehouse and stables support high, high and moderate suitability for roosting bats respectively, there was considered to be a reasonable likelihood that bats will be present and affected by the proposed demolition, construction and conversion works which will impact the features detailed in Tables 4, 5 & 6.

The emergence surveys have confirmed that the warehouse supports a common pipistrelle maternity roost, whilst the stables and office support common pipistrelle bat day roosts.

The bat mitigation guidelines identify that breeding roosts used by more widespread species such as common pipistrelle are of medium conservation status whilst non-breeding roosts used by common pipistrelle are of low conservation status.

The proposal will result in the loss of the identified roosts and works to demolish the buildings would potentially cause the killing, injury or disturbance to any bats present within roost features when works are undertaken.

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.

13.5 Badgers

The site supports low suitability for transient badger. Therefore, impacts to badgers could occur during construction if trenches are left open. Impacts on badgers associated with loss or damage of setts or foraging opportunities are not anticipated.

13.6 Hazel dormouse

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

13.7 Hedgehog

Impacts on hedgehogs are likely to be associated with the removal of grassland habitat on site and if trenches are left open.

13.8 Reptiles

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

13.9 Great crested newts

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

13.10 Breeding birds

The proposal will result in the loss of suitable breeding bird habitat. The removal of this habitat has the potential to damage or destroy active bird nests if carried out during the breeding bird season which is generally seen as extending from March to the end of August, although may extend longer depending on local conditions. The proposal will also result in a net loss of bird nesting opportunities at the site.

14. Requirement for further surveys

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, however in summary, all further surveys considered necessary have been undertaken.

It is important that planning decisions are informed by current ecological survey data. Due to this, 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 in project circumstances or plans but it is generally considered that phase 1 ecological surveys are valid for a period of 18 months (CIEEM, 2019). Projects that take place over periods longer than 18 months might be required to carry out further ecological surveys to ensure planning authorities have the necessary up-to-date information to make well informed, evidence-based decisions.

14.1 Designations

No further surveys are considered necessary.

14.2 Habitats

No further surveys are considered necessary.

14.3 Bats

In order to provide robust confirmation on the presence and status of bat roosts and the extent that they may be affected by the proposed development as required by Circular 06/2005, further survey work in accordance with Natural England's standing advice and the BCT Good Practice Guidelines was undertaken for the office, stables and warehouse.

In accordance with these guidelines, further survey effort took the form of dusk emergence surveys undertaken during the bat active season. No further surveys in respect of roosting bats are considered necessary.

Given the scale of the proposal, further survey is considered unnecessary for understanding impacts on foraging and commuting bats subject to precautionary avoidance measures including a sensitive lighting scheme.

14.4 Badgers

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

14.5 Hazel dormice

As no impacts to dormice are anticipated, no further recommendations in relation to dormice are considered necessary.

14.6 Hedgehog

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

14.7 Reptiles

As no impacts to reptiles are anticipated, no further recommendations in relation to reptiles are considered necessary.

14.8 Great Crested Newts

As no impacts to GCN are anticipated, no further recommendations in relation to GCN are considered necessary.

14.9 Breeding birds

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

15. Mitigation recommendations

15.1 Bats

Licensing

As this work will result in the destruction of bat roosts, an EPSM licence will need to be obtained from Natural England before the proposed demolition and redevelopment of the stables, office and warehouse. 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 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.

Demolition mitigation strategy

- The destructive search will be carried out during the active season i.e. mid-March to late-October for the office and stables and between mid-March and late April or mid-September to late-October for the warehouse. A toolbox talk will be given to contractors prior to the commencement of works. 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 works period bats, if present, may be very difficult to locate and easily be overlooked.
- Immediately prior to the building and wall stripping works commencing, inspections of known bat roosting areas and potentially suitable areas will be carried out by a licensed bat worker, using an endoscope where required, to check for the presence of roosting bats.
- The works will be carried out from a suitably erected scaffold tower.
- All suitable bat roosting features supported by the office, stables and warehouse buildings will be removed by/under the supervision of the licensed bat worker using hand tools.
- 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.

Provision of new roosting sites

Four Schwegler 2F bat boxes or similar will be installed on the mature trees located within the site grounds. These will provide a temporary alternative roost site whilst the proposed development works are undertaken and will be retained as compensatory roost features post development.

Lighting

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 structures should be as low brightness as possible, kept at a low level and directed away from all boundaries but in particular the western site boundary. 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, 2018).

15.2 **Badgers**

In order to avoid harm to badgers during the construction works, any trenches will either be covered at night or fitted with a soil or plank ramp to enable any badgers which fall in to leave on their own accord.

15.3 **Hedgehogs**

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

- Any trenches will either be covered at night or fitted with a soil or plank ramp to enable any hedgehogs which fall in to leave on their own accord.
- Any accumulations of brash will be dismantled by hand in a sensitive and careful manner.
- Bonfires must not be lit on site.
-

15.4 **Breeding birds**

Care should be taken that the development does not disturb breeding birds. The bird nesting season is taken to be March to August, inclusive. Any removal of suitable nest 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. If occupied nests are present then the nest must not be removed, and works around the nest can only recommence once the nest becomes unoccupied of its own accord.

The provision of alternative nesting opportunities is required. The installation of the following bird boxes would be sufficient:

- Two swift boxes to be installed as high as possible under the eaves of the converted warehouse, away from external illuminations.
- Six open fronted nest boxes erected at eave height on the western elevation of the new structures, away from external illuminations.

16. 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.

Opportunities for enhancement which are proportionate to the scale of the development include:

- The provision of bat boxes. Three boxes installed as high as possible, at least 3m above ground, in sheltered positions on the south-eastern and south-western faces of trees within the wider site would be appropriate.

17. Conclusion

The extended phase 1 ecological assessment has confirmed that the site supports opportunities for a range of protected species including roosting bats, with two confirmed roosts, transient badgers, hedgehogs and breeding birds.

The preliminary roost assessment confirmed that all three structures support suitability for roosting bats. Therefore, further survey effort was undertaken to confirm the presence/absence of further roosts, characterise any bat roost/s, assess the extent bats may be affected by the proposed demolition, conversion and construction works and devise an appropriate mitigation strategy to support the proposed works and address any breaches in the legislation.

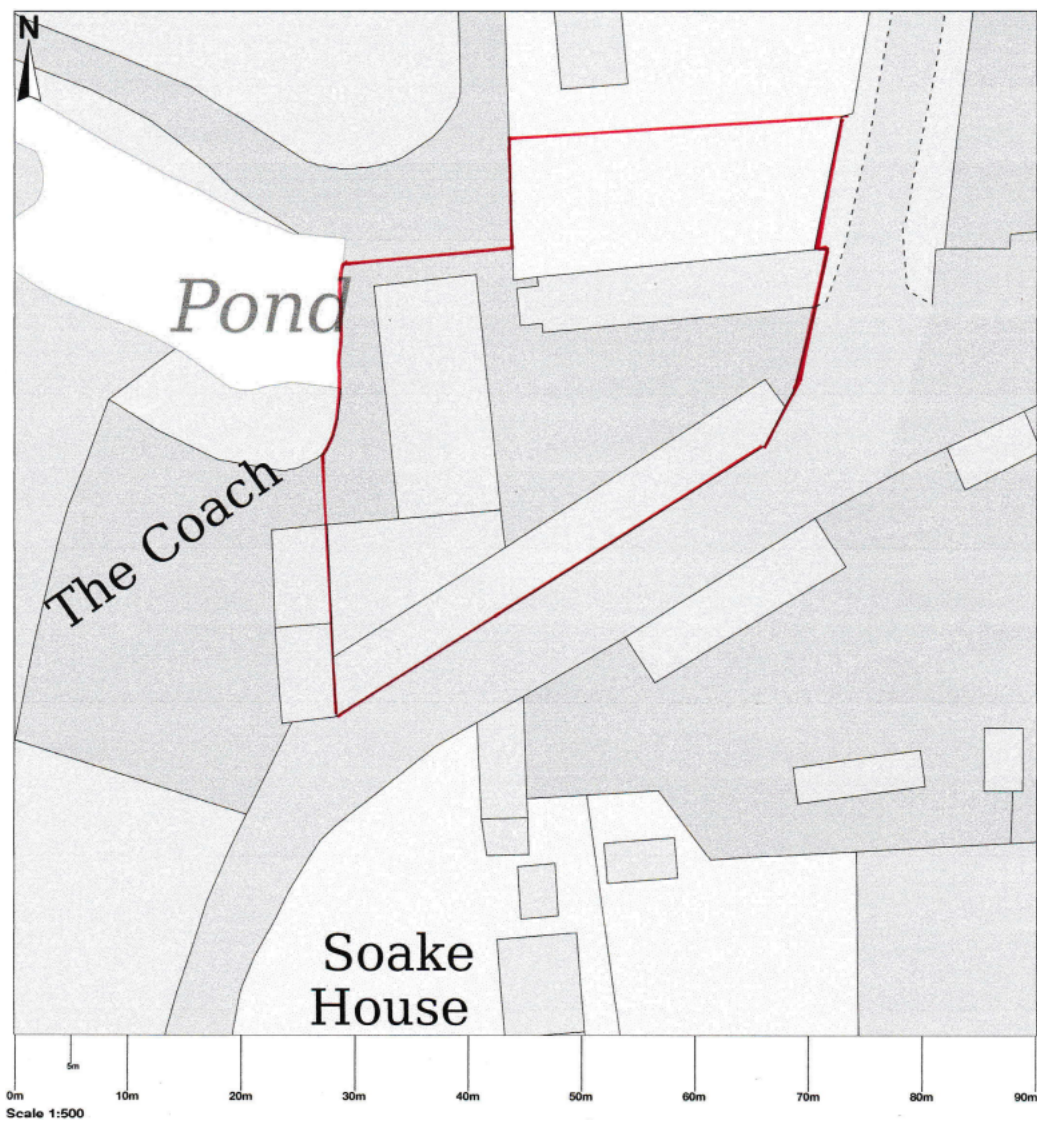
This survey work has confirmed that the warehouse supports a common pipistrelle maternity roost whilst the office and stables support common pipistrelle day roosts. The proposed demolition and redevelopment of the buildings will result in the loss of the identified bat roosts. A mitigation strategy has been designed that would provide alternative roosting opportunities within the development. The mitigation strategy also sets out recommended timings and methods and recommends that a European protected species licence is obtained before any works to the property start.

Given the scale of the proposal, it is possible to deliver the scheme with a range of measures which avoid impacts on the other identified ecological receptors. These include sensitive lighting and timing of the works. Opportunities for ecological enhancement have been suggested for the site.

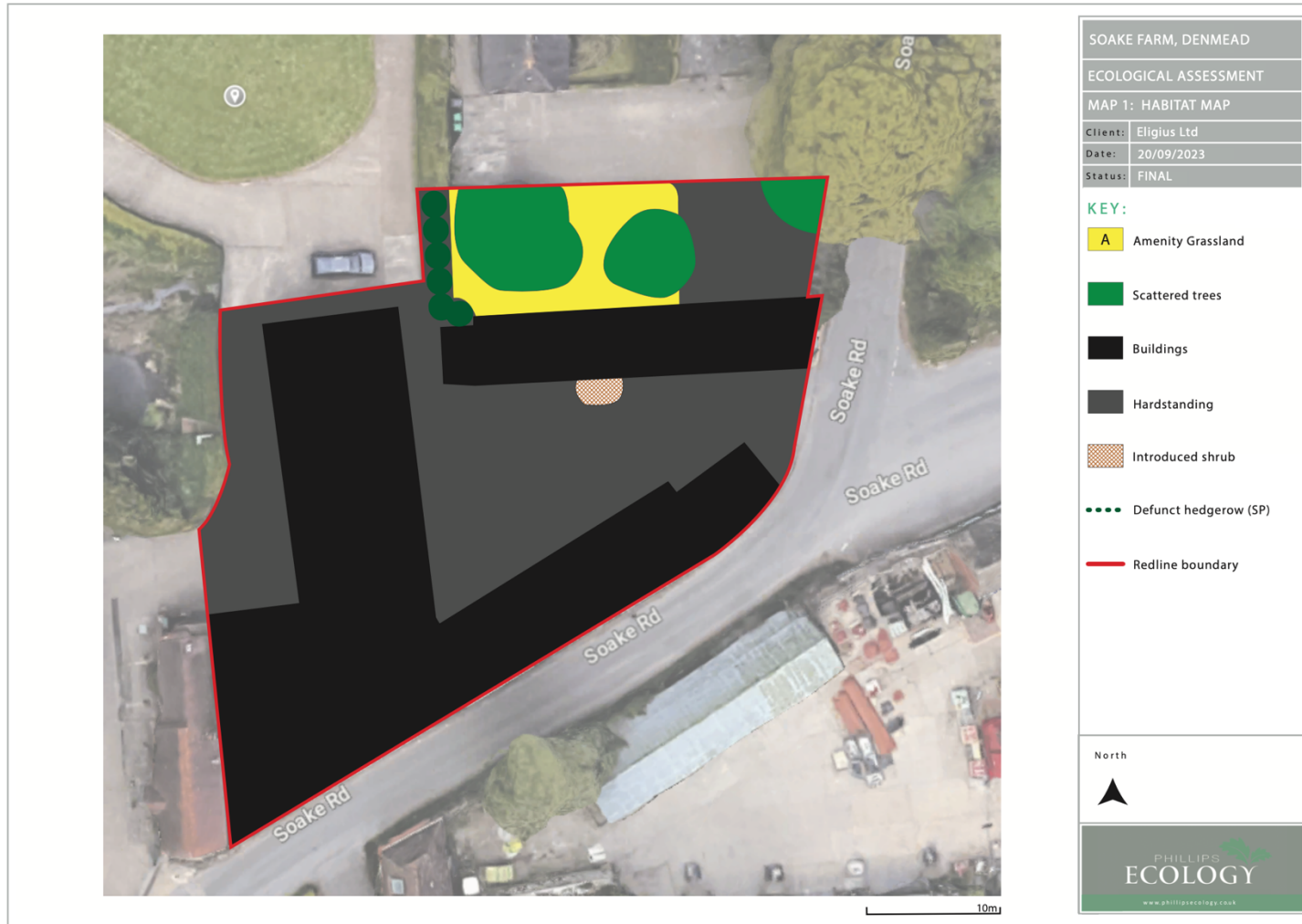
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Appendix 1 – Site Location



Appendix 2 – Phase 1 Map





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