



**Fenswood  
Ecology**

**Newmead Cottage  
Bat & Breeding Bird Assessment Survey Report  
October 2023**

Prepared by:  
Fenswood Ecology,  
Fenswood Farm,  
Says Lane,  
Langford,  
Bristol,  
North Somerset  
BS40 5DZ

[fenswoodecology@gmail.com](mailto:fenswoodecology@gmail.com)

Newmead Cottage Bat and Breeding Bird Assessment Survey Report

**Report prepared for:** Mr. Richard Mead

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**Originated by:** Jamie Edmonds MSc BSc (Hons) October 2023  
MCIEEM PIEMA (Ecologist)

**Reviewed by:** Grace Temlett BSc (Hons) ACIEEM/ October 2023  
(Ecologist)

Prepared by:  
Fenswood Ecology,  
Fenswood Farm,  
Says Lane,  
Langford,  
Bristol,  
North Somerset  
BS40 5DZ

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## Summary

Fenswood Ecology was commissioned by Mr. Richard Mead to undertake a Bat and Breeding Bird Assessment on a building referred to as Newmead Cottage, Littleton (centred around Ordnance Survey Grid Reference: ST 55060 64635). The dwelling was assessed and determined to have moderate bat roost potential in August 2023. Following this a series of three bat dusk activity surveys with support from a night vision aid (NVA) were completed in August and September 2023.

The three emergence/dusk surveys completed identified an occasional day roost for soprano pipistrelle (*Pipistrellus pygmaeus*) bats (up to three bats).

The assessment identified that the proposed development could retain the bat roost and proceed with minimal ecological impact, providing that a suitable Precautionary Working Method Statement (PWMS) is adhered to. Providing the wooden cladding on the southern section of the building is retained in its current state, it is considered that a Natural England Bat Mitigation Licence is not necessary. As such, works to the main roof of the building will follow this PWMS (See appendix 4):

- A toolbox talk will be provided by a suitably experienced ecologist;
- The wooden cladding on the southern section which supports the soprano pipistrelle day roost will be retained in its current condition;
- The proposed works for the extension will avoid the main bat hibernation period (November to February inclusive). If this is not possible, works will only be undertaken after suitable weather conditions;
- Soft demolition techniques will be adopted during works to the main roof;
- Procedure for unexpectedly encountering bats during the works;
- Avoidance of new external lighting, or design of a bat sensitive lighting scheme if necessary;

The lean-to attached to the dwelling has **moderate** nesting bird potential, and its demolition should be completed outside of the nesting bird season. If this cannot be done, then a nesting bird check by a suitably experienced ecologist should be undertaken immediately prior to works commencing. If a nesting bird is identified, then works will be postponed until the ecologist is satisfied that the chicks have fledged, or the nest has become naturally abandoned.

Recommendations for post development ecological enhancement measures are provided where relevant.

## Introduction

Fenswood Ecology was commissioned by Mr. Richard Mead to undertake a Bat and Breeding Bird Assessment on a building referred to as Newmead Cottage, Littleton (centred around Ordnance Survey Grid Reference: ST 55060 64635). The building was assessed and determined to have moderate bat roost potential in August 2023. Following this a series of three bat dusk activity surveys with support from a night vision aid (NVA) were completed in August and September 2023.

Three emergence/ activity surveys were completed to ascertain if bats were roosting in the building and to better understand how bats were using the features within the site and surrounding area.

Bats are protected and considered to be of primary importance under UK legislation, namely the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Natural Environment and Rural Communities Act 2006.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) against destruction of the nest during the bird nesting season, which falls between March and August, inclusive.

This report details the findings of the survey work and subsequent assessment. Methodologies employed are described including site surveys and evaluation and the need for any further survey work and/or mitigation measures are included, where appropriate.

## Methodology

### **Bats**

The dwelling was inspected to assess its potential to support roosting bats, in accordance with current best practice guidelines (Collins, 2016).

The dwelling was also inspected to assess its potential to support nesting birds.

An internal and external inspection of the dwelling was undertaken during daylight to determine the suitability for bats and breeding birds and establish if bats and breeding birds are using the building or have been using the building in the past.

All accessible parts of the dwelling were inspected, to look for bats and breeding birds and signs of the presence of the species, including:

- Droppings.
- Feeding remains including moth and butterfly wings.
- Staining from urine or oils near crevices or holes or on timber (such as roof beams), walls, chimney breasts etc.

- Scratch marks on walls and timber.
- Squeaking or chattering calls.
- Bird nests or signs of nesting (i.e eggshell, feathers, faeces)
- Owl Pellets

The systematic search inside the dwelling included inspection of the ceiling, walls, floors and surfaces. Potential access into the building was also inspected by searching for holes in walls, the roof and any light penetration into the interior from the outside.

The assessment outside the dwelling included inspection of all walls, any boarding and a search for any crevices, and any other potential bat roost opportunities.

An individual tree or building may have several features of potential interest to roosting bats. It is not always possible to confirm usage of a feature by bats as often the animals may be present on one day and no evidence of occupation may be found on the next. Consequently, it is normal practice when undertaking such surveys to assign each feature to a defined category of roosting potential as follows:

**Negligible:** This category is usually used where a feature appears initially to have significant bat roost potential but is considered on closer inspection to have no or very limited potential to support roosting bats. It is usually used during surveys to confirm that inspection of a feature has been carried out and has found that the feature is not considered to comprise suitable habitat for roosting bats.

**Low:** This category is used to describe a feature that may have some superficial interest to roosting bats but is considered suboptimal to the extent that bats are not considered likely to use the feature for shelter. A cavity that is open at the top allowing access to wind and rain may be considered to be of low bat roost potential.

**Moderate:** This category is used to describe a feature that has some potential to support roosting bats but is considered to be less than ideal in some way. For example, the feature may be occupied by other animals, such as birds or squirrel; it may be subject to disturbance or have sub-optimal connectivity with navigational features.

**High:** This category is used to describe an optimal feature considered to be ideally suitable for use by roosting bats where no evidence of occupation by bats has been found. Features considered to be of high bat roost potential may include upwards-leading cavities of appropriate dimensions and height from the ground, with no obstructions below the cavity entrance. The tree may be particularly prominent within the landscape and is likely to have good connectivity with navigational features and sufficient suitable foraging habitat in the vicinity.

**Confirmed:** This category is used where positive evidence of bats usage has been recorded from a feature. For example, bats or bat droppings may be present, or existing bat records may be associated with the feature. A licence from Natural England is likely to be required if the bat roost is to be disturbed by the development.

The habitats around site were also assessed for their potential to be used by foraging and commuting bats.

The onsite building offered moderate bat roosting potential which was identified in August 2023 during the site assessment completed by Grace Temlett, Fenswood Ecology. Two emergence/dusk surveys were recommended and then an additional third emergence/dusk survey was added when roosting bats were confirmed during the second survey. Surveys were led by Jamie Edmonds, holder of a Natural England Level 1 Bat Licence (CL17), with support from suitably experienced ecologists (See Table 1 below for details). The methodology adopted for the surveys followed current best practice guidelines (Collins, 2016), beginning the survey 15 minutes prior to sunset, and continuing to record bat activity for an hour and half after sunset (dusk). Surveyors used Echo Meter Touch 2 Pro bat detectors to record activity. Any flight lines were then recorded onto a map to track any significant behaviours. The emergence surveys were all supported with one HD 4K night vision aid (NVA) for further data collection on key features.

Table 1; Survey Descriptions

Bat survey type	Date	Survey conditions
Emergence survey	28/08/2023	Dry and clear, 16°C. Sunset 20.06pm, survey start time 19.52 and survey end time 21.37.
Emergence survey	13/09/2023	Dry and clear, 15°C. Sunset 19.31pm. survey start time 19.16 and survey end time 21.01.
Emergence survey	29/09/2023	Dry and overcast. 15°C. Sunset 18.53. survey start time 18.38 and survey end time 20.23.

### Limitations to Survey

Access to the full application site was provided.

The survey was undertaken within the optimal survey season, and it is considered that a robust evaluation of bat activity within and around the site character has been made.

## Findings and Evaluation

### Site Description

The dwelling is a semi-detached property with converted loft space and wooden clad on the upper parts. The western end of the building has an attached lean-to which is used for storage and a log store. The dwelling is set in the rural hamlet of Littleton, which is situated between the villages of Chew Magna and Winford. The hamlet has a scattering of houses and farm buildings but is mostly surrounded by pasture and arable land, which is dissected by a matrix of hedgerows and streams.

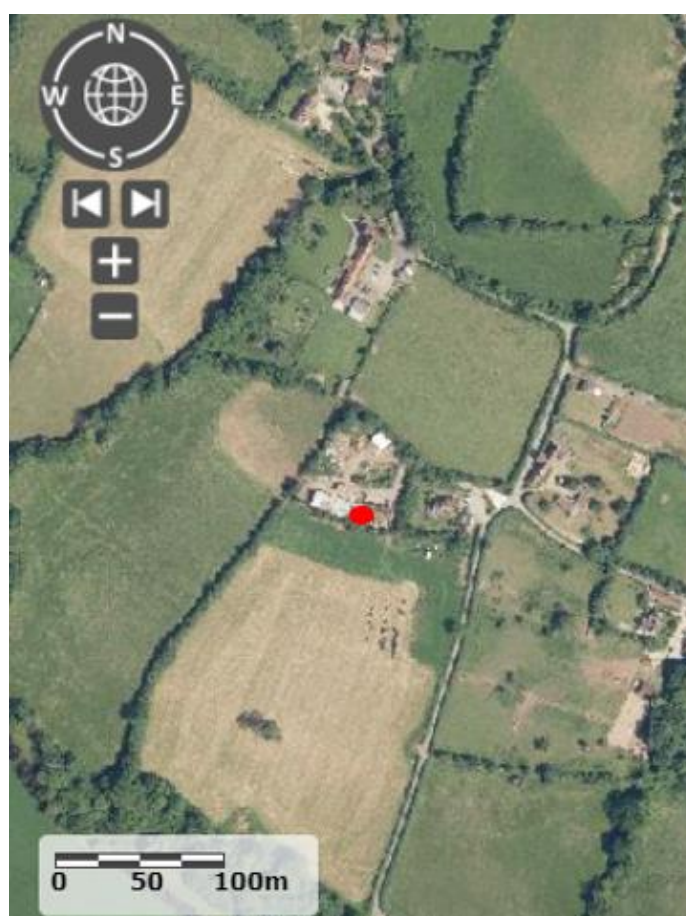


Figure 1. Site Location

Please see photos in Appendix 1.



## Bat Survey Results

### Desk Top Survey

#### Designated Sites

MAGIC Maps provided information on designated sites and showed there were two statutory designated sites within 2km. Barns Batch Spinney SSSI is 1.5km northeast of the site and Dundry Main Rd South Quarry SSSI is 1.8km northeast of the site. Both sites were designated for geological importance.

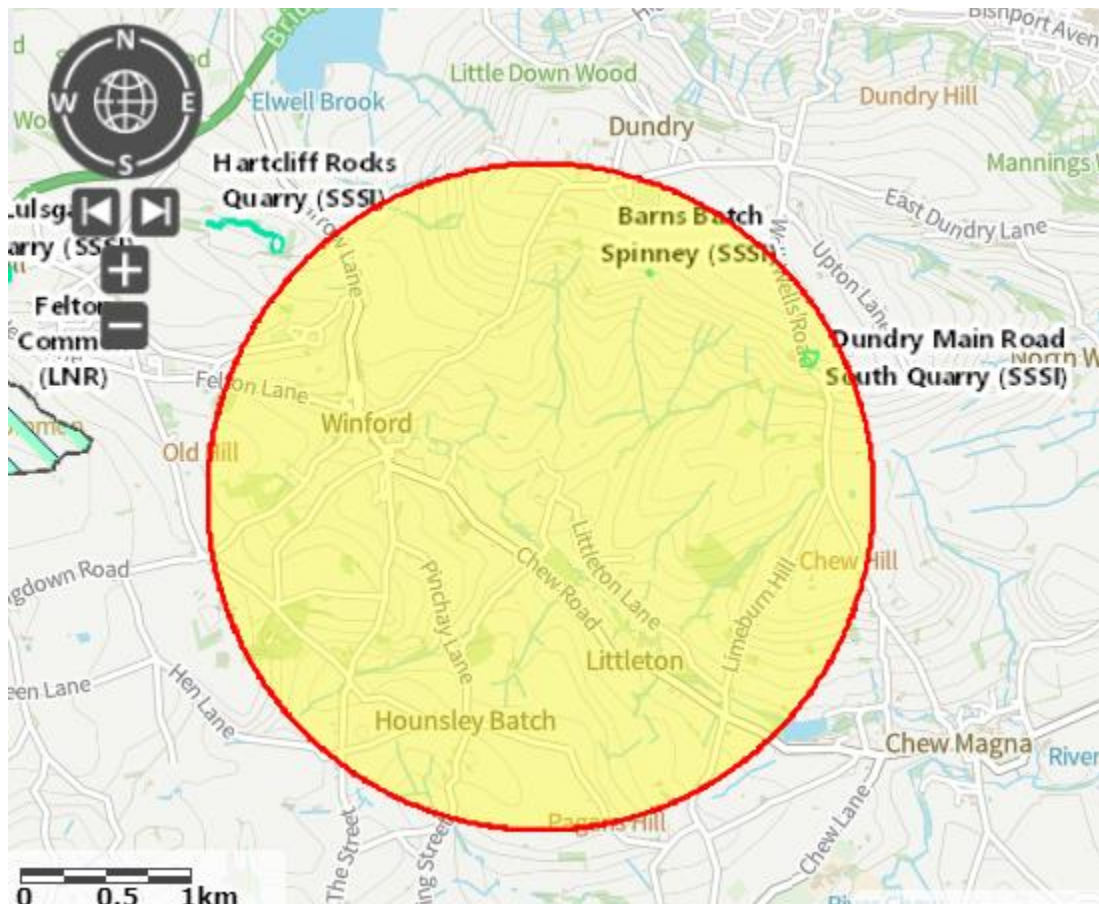


Figure 2. Designated Site Map (2km radius)

#### EPSM licenses

MAGIC Maps provided information on three previously applied for European protected species (EPS) mitigation licenses within 2km of the site. There are numerous bat EPS mitigation license records within the wider landscape (over 2km) suggesting bats are prevalent in this area.

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Table 2; Bat Mitigation Licences within 2km of the site.

Case Reference	Species	Start of Licence	End of Licence	Distance from Site	Impact
2019-42661-EPS-BDX	Soprano pipistrelle	01/10/2019	31/10/2019	2km SW	Destruction of a breeding site & resting place
EPSM2010-2305	Brown long eared & Serotine	06/10/2010	05/10/2012	1.3km NW	Destruction of a breeding site & resting place
2020-44409-EPS-MIT	Brown long eared & Serotine	06/02/2020	31/01/2030	1.6km N	Damage of a breeding site & resting place

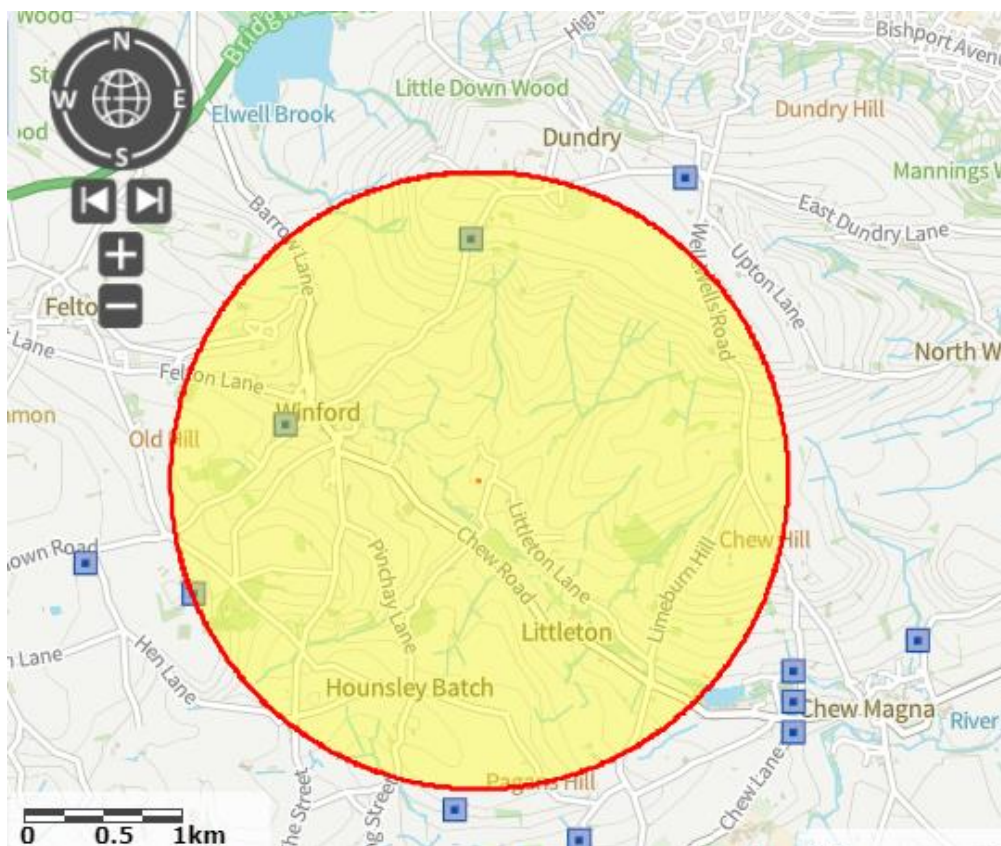


Figure 3. Granted EPS Licence Map (2km radius)

## **Field Surveys**

### **Bat Activity Survey Results**

The three emergence/dusk surveys completed identified an occasional day roost for soprano pipistrelle (*Pipistrellus pygmaeus*) bats (up to three bats).

The soprano pipistrelles were observed on survey 2 and 3 and emerged on both surveys from behind the wooden cladding on the southern elevation.



Photo 1. Emergence location



Photo 2. Close-up of Emergence Location



The above photograph identifies the specific emergence point of the bats observed. The above behaviour was supported by the recording taken on the NVA present at this location on survey 3.

Overall, the foraging and commuting levels surrounding the building varied from low on surveys 1 and 2 to moderate on survey 3. Species recorded included noctule (*Nyctalus noctule*), soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), serotine (*Eptesicus serotinus*), lesser horseshoe (*Rhinolophus hipposideros*), Daubenton's (*Myotis daubentonii*) and brown long eared bat (*Plecotus auritus*).

For the full data records, please see Appendix 2.

## Ecological Assessment and Mitigation

### The Scheme

Proposals for the site is to remove the existing lean-to and extend the dwelling to the west. Please refer to drawing 2066/23/07 by I S Ford Building Surveying & Planning Ltd (August 2023). The current design allows for the bat roost feature to be retained and undisturbed during construction.

### Bats

All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Under Regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).

All UK bats are also included on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*R. hipposideros*), noctule (*Nyctalus noctula*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats are included as priority species within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

The bat surveys found that the dwelling supports an occasional soprano pipistrelle day roost used by up to three individuals, located within the wooden cladding on southern elevation adjacent to the kitchen window.

Overall, the site is considered to have a low conservation significance in relation to roosting bats due to the presence of a day roost of a common species. Therefore, the bat roost is considered to be important at the site level only and is of negligible importance at the local and county levels.

To avoid damage and destruction of the bat roost, and injury to any bats present, the proposed works include the retention of the existing wooden cladding on the southern section. Therefore, no direct impacts to the bat roost or individual bats are expected.

There may be some temporary minor disturbance to bats through noise and vibration during the proposed works. However, this is not considered to negatively impact the soprano pipistrelle day roost providing suitable mitigation measures are adopted (See PMWS – Appendix 4). Therefore, a Natural England Bat Mitigation Licence is not considered to be necessary to complete the proposed development.

New external lighting should be avoided if possible. If any new external lighting is necessary, it should follow the advice set out by the Institution of Lighting Professionals (ILP) (ILP, 2018) (see appendix 3). If the lighting is shown to be minimal, utilise LEDs with a warm-white spectrum, be downward facing, pointing away from any bat roost entrances, and controlled by short timers triggered by motion sensors, then impacts will be reduced. Prior to the installation of new external lighting, the proposed light specification should be reviewed by a suitably experienced ecologist to ensure there will be no negative impacts to bats.

### ***Birds***

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) against destruction of the nest during the bird nesting season, which falls between March and August, inclusive.

The lean-to attached to the dwelling has **moderate** nesting bird potential, and its demolition should be completed outside of the nesting bird season. If this cannot be done, then a nesting bird check by a competent ecologist should be undertaken immediately prior to works commencing. If a nesting bird is identified, then works will be postponed until the ecologist is satisfied that the chicks have fledged, or the nest has become naturally abandoned.

It is recommended that at least one small bird nest box is incorporated into the final design externally on the building or on a nearby tree to provide compensation nesting habitat opportunity.

\*\*\*\*\*

## References

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn.)*. Bat Conservation Trust, London

Great Britain. Department for Communities and Local Government (2012) *National Planning Policy Framework*. London: Department for Communities and Local Government.

IEEM (2016) *Guidelines for Ecological Impact Assessment in the United Kingdom*. IEEM, Winchester, UK.

JNCC (2007). *Handbook for Phase 1 habitat survey – A technique for environmental audit*. JNCC. Peterborough.

Multi-Agency Geographical Information for the Countryside, (MAGIC), <http://magic.defra.gov.uk>, accessed October 2023

North Somerset Council (2018) *North Somerset and Mendip Bat SAC guidance supplementary planning document*

## Appendix 1: Site photographs



Photo 3. Northern elevation



Photo 4. Southern elevation



Photo 5. Eastern elevation

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Photo 6. South west corner of dwelling



Photo 7. Lean-to store at western end of dwelling



Photo 8. Loft space of dwelling



## Appendix 2; Bat survey data

### Figure 1; Bat survey location of surveyor

Location of surveyors and NVA during all surveys. Survey 1 denoted by the S1 (28/08/23), survey 2 denoted S2 (13/09/23) and survey 3 denoted by S3 (29/09/23).

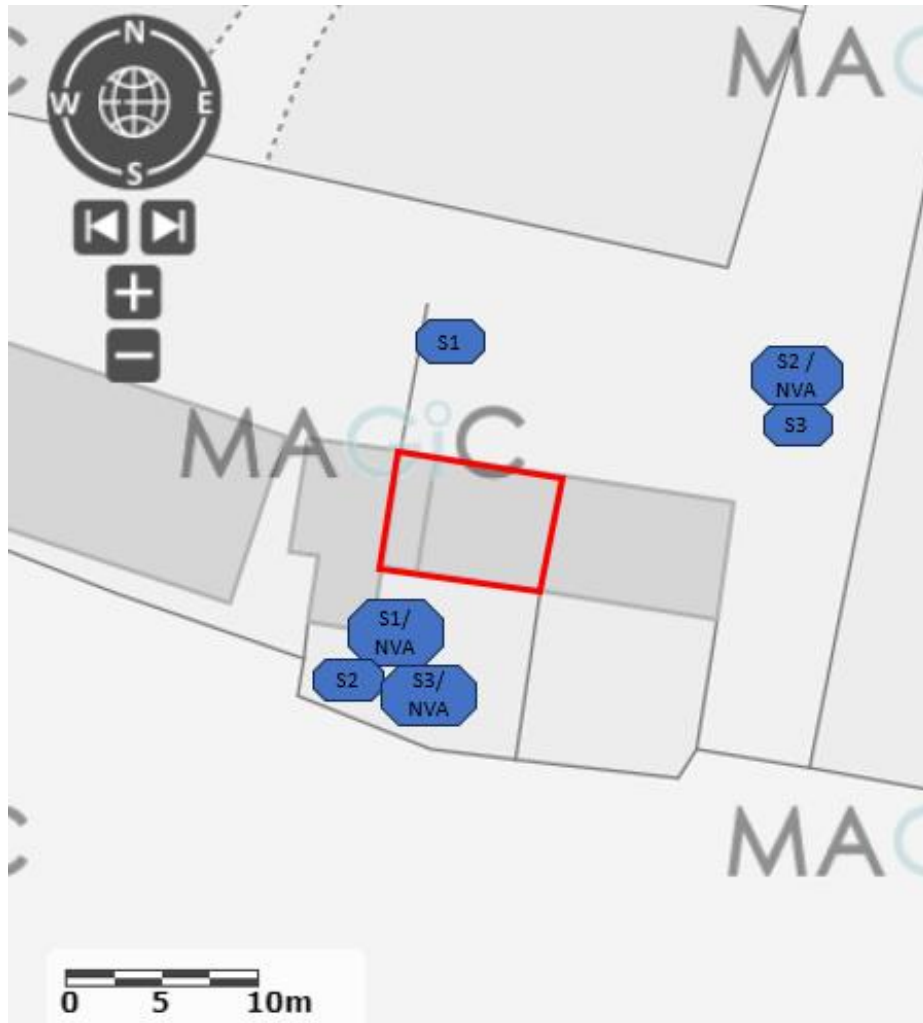


Figure 2. Surveyor locations

## Bat survey data

SURVEY DETAILS					
Date	28/08/2023	Temperature range (°C)	16-15	Precipitation description	None
Sunset time	20.07	Wind range (mph)	1		
Survey duration	19.52/ 21.37	Cloud cover range (%)	100		
OBSERVATIONS OF INTEREST					
Time	Species	No. of bats	Description of observations		
n/a					
SUMMARY					
<ul style="list-style-type: none"> <li>• <b>No roosting activity witnessed.</b></li> <li>• Activity levels were considered to be low, and the survey recorded the following species active around the site: common pipistrelle, soprano pipistrelle, noctule, Daubenton and brown long eared bat. Activity was largely heard and not seen suggesting commuting and foraging behind the hedge and trees to the east and south of site.</li> </ul>					

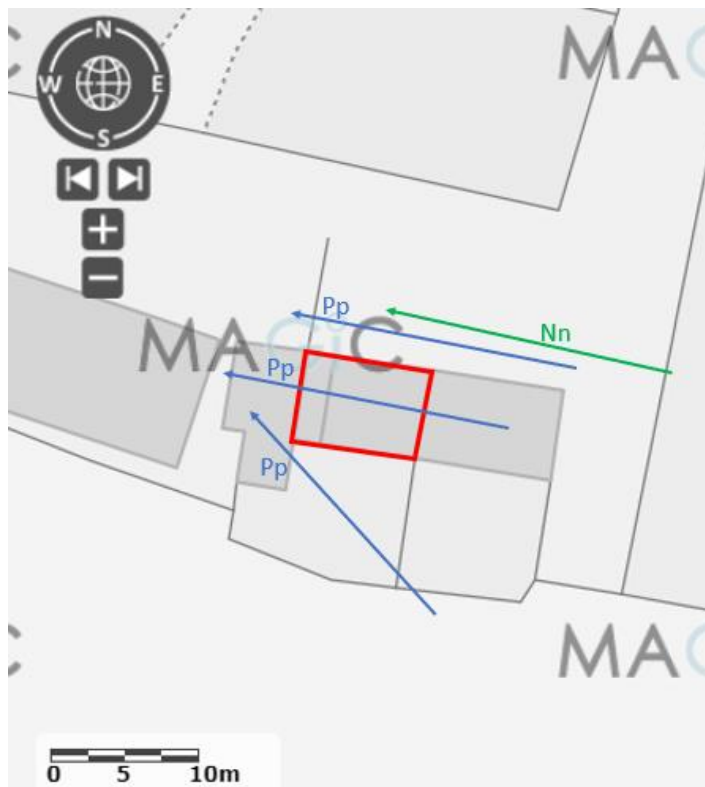


Figure 3. Bat activity map 28/08/23

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SURVEY DETAILS					
Date	13/09/2023	Temperature range (°C)	15	Precipitation description	None
Sunset time	19.31	Wind range (mph)	0		
Survey duration	19.16/ 21.01	Cloud cover range (%)	10		
OBSERVATIONS OF INTEREST					
Time	Species	No. of bats	Description of observations		
19.50	Soprano pipistrelle	1	Emerging from wooden cladding on south elevation by kitchen window		
20.00	Soprano pipistrelle	1	Emerging from wooden cladding on south elevation by kitchen window		
20.03	Soprano pipistrelle	1	Emerging from wooden cladding on south elevation by kitchen window		
SUMMARY					
<ul style="list-style-type: none"> <li>• <b>The survey identified a soprano pipistrelle day roost used by three bats</b></li> <li>• Activity levels were considered to be low, and the survey recorded the following species active around the site: common pipistrelle, soprano pipistrelle, serotine and Daubenton's bat. Limited commuting and foraging activity along the eastern elevation and in the garden to the south. The rest of the records were heard not seen.</li> </ul>					

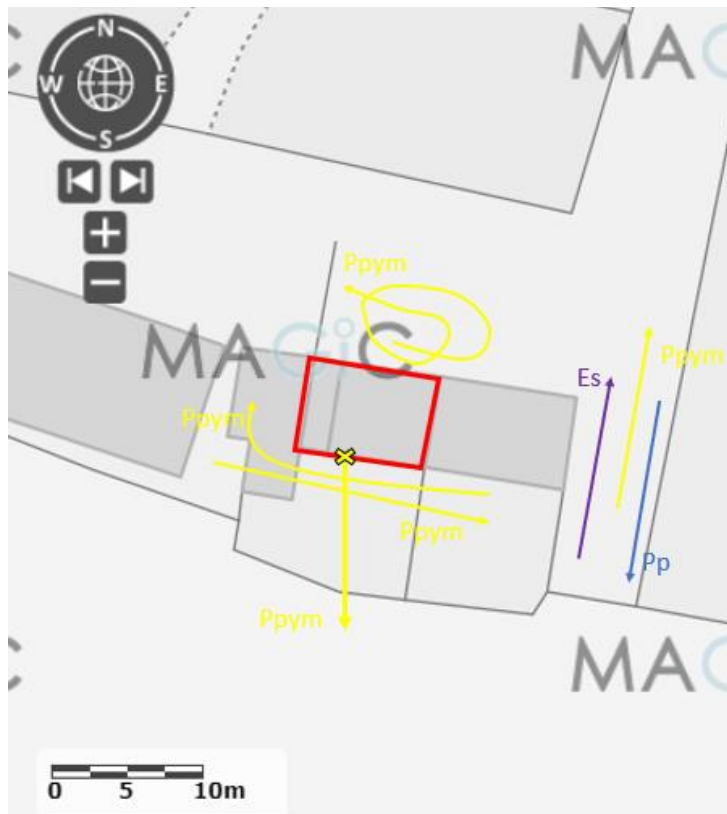


Figure 4. Bat activity map 13/09/23. Emergence point is denoted by yellow X.

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SURVEY DETAILS					
Date	29/09/2023	Temperature range (°C)	15	Precipitation description	None
Sunset time	18.53	Wind range (mph)	1		
Survey duration	18.38 – 20.23	Cloud cover range (%)	10		
OBSERVATIONS OF INTEREST					
Time	Species	No. of bats	Description of observations		
19.18	Lesser horseshoe	1	Flying under log store canopy		
19.18	Soprano pipistrelle	1	Emerging from wooden cladding on south elevation by kitchen window		
20.20	Lesser horseshoe	1	Flying under log store canopy		
20.23	Lesser horseshoe	1	Flying under log store canopy		
20.29	Lesser horseshoe	1	Flying through log store		
SUMMARY					
<ul style="list-style-type: none"> <li>• <b>The survey identified a common pipistrelle day roost used by one bat.</b></li> <li>• Activity levels were considered to be moderate, and the survey recorded the following species active around the site: common pipistrelle, soprano pipistrelle, noctule, serotine, lesser horseshoe and Daubenton bat. Most activity was bats commuting along the northern elevation and within/ through the log store at the western end of the dwelling. The rest of the records were heard not seen.</li> </ul>					

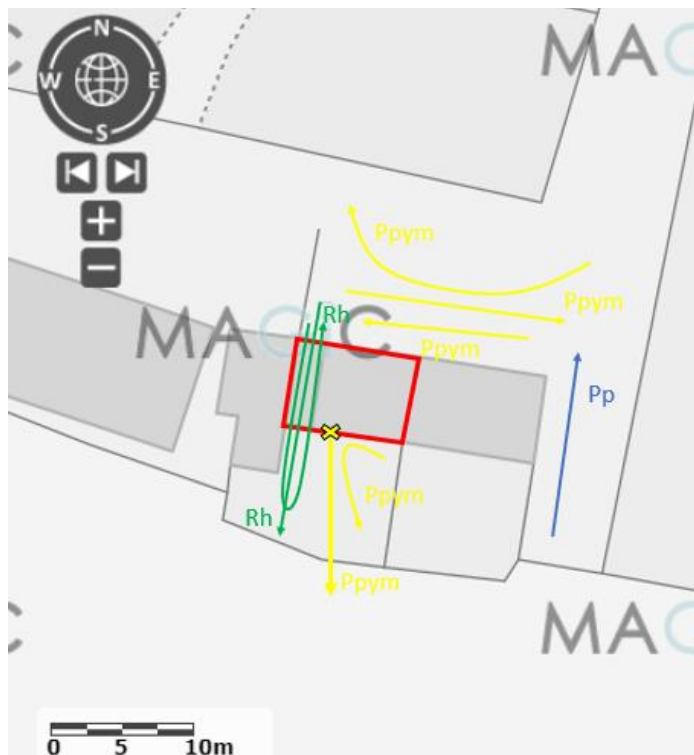


Figure 5. Bat activity map 29/09/23. Emergence point is denoted by yellow X.

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<b>Bat code</b>	<b>Common name</b>
Es	Serotine
Pp	Common pipistrelle
Ppym	Soprano pipistrelle
Pa	Brown Long Eared bat
Nn	Noctule
Rh	Lesser horseshoe
Md	Daubenton's bat

## Appendix 3 Sensitive lighting for bats guidance

### Bats and lighting

Artificial lighting is known to have significant impacts for slower-flying, rarer species, and even for fast-flying species, potentially affecting reproductive, foraging and roosting opportunities. On a population and ecosystem level, impacts may affect the overall genetic pool of bat species and their prey species (BCT, 2018).

Studies have shown that continuous lighting in the landscape, such as along roads or waterways, creates barriers which many bat species cannot cross, especially the slower-flying species (Fure, A. 2012), even at very low light levels. Lesser horseshoe bats have been shown to move their flight paths which link their roosts and foraging grounds to avoid artificial light installed on their usual commuting route. Significant impacts have been recorded from as low as 3.6 lux (Stone *et al* 2012). Furthermore, the average light level on hedgerows most regularly used by this species has been recorded at 0.45 lux (Stone *et al* 2009).

Another group of studies have shown that noctule, Leisler's bat, serotine and pipistrelle bats can congregate around white mercury streetlights (Rydell *et al* 1993, Blake *et al* 1994) and white metal halide lamps (Stone *et al* 2015b) feeding on the insects attracted to the light, but this behaviour is not true for all bat species. The slower flying broad winged species such as long-eared bats, Myotis species (which include Brandt's bat, whiskered, Daubenton's bat, Natterer's bat and Bechstein's bat), barbastelle, and greater and lesser horseshoe bats generally avoid all streetlights (Stone *et al* 2009, 2012, 2015a). Consequently, bat species less tolerant of light are put at a competitive disadvantage and are less able to forage successfully and efficiently. This can have a significant impact upon fitness and breeding success (BCT, 2018)

### Mitigation and lighting design

Bat friendly lighting plans should firstly look to avoid lighting where possible and minimise lighting impacts by adopting the following measures:

- **Lighting curfews or use of PIR sensors.** Lighting curfews can be an effective way of avoiding impacts on bats. These curfews may involve either turning off lighting or dimming light units at specific times of the night, dimming units at key times of the year, providing the luminaire allows for this option via a control unit. Lighting to be triggered by PIR sensors can be expected to be illuminated only when required and for a low proportion of the overall time.
- **Consider no lighting solutions where possible.** Options such as white lining, good signage and LED cats eyes, should be considered as preferable, especially within Zones 1 and 2. Reflective fittings may help make use of headlights to provide any necessary illumination in some areas.
- **Use only high-pressure sodium or warm white LED lamps where possible.** High pressure sodium and warm white LED lamps emit lower proportions of insect attracting UV light than mercury, metal halide lamps and white LED lighting. Generally, lamps should have a lower proportion of white or blue wavelengths, with a colour temperature <4200 kelvin recommended (BCT, 2014).
- **Minimise the spread of light.** Light spread should be kept at or near horizontal in order to ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required.

Baffles, hoods, louvres and shields should be used where necessary to reduce light spill.

- **Consider the height of lighting column.** Whilst downward facing bollard lighting is often preferable, it should be noted that a lower mounting height does not automatically reduce impacts to bats as bollard lighting can often be designed to provide up-lighting. Where bollard lighting is considered to be the most appropriate system, bollard spacing, or unit density should be kept to a minimum and units should be fitted with the appropriate hoods/deflectors to reduce up-lighting. Column height should be carefully considered to balance task and mitigation measures.
- **Avoid reflective surfaces below lights.** The polarisation of light by shiny surfaces attracts insects increasing bat activity (BCT, 2012). Consequently, surface materials around lighting require consideration.

### References

BCT (2018) *Bats and artificial lighting in the UK* Guidance Note 08/18. Bat Conservation Trust.

BCT (2014) *Artificial lighting and wildlife. Interim Guidance: Recommendations to help minimise the impact of artificial lighting.*

Downs N., Beaton, V., Guest J., Polanski S., Robinson, S. & P. Racey (2003) *The effects of illuminating the roost entrance on the emergence behaviour of Pipistrellus pygmaeus.* Biological Conservation, 111: 247-252.

Fure, A (2012) Bats and Lighting – six years on. The London Naturalist No. 85

Hundt (2012) *Bat Surveys: Good Practice Guidelines, 2<sup>nd</sup> edition.* Bat Conservation Trust.

Stone, E.L., Jones, G., Harris, S. (2009). *Street lighting disturbs commuting bats.* Curr. Biol. 19, 1123–1127.

Stone, E., Jones, G. & S. Harris (2012) *Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats.* Global Change Biology, 18: 2458-2465

## Appendix 4 Precautionary Working Method Statement

### Responsibilities

The client or person(s) who commission the proposed works are responsible for providing this report to all contractors and/or workers involved with the works. The failure of the client, or anyone working under the client's direction, to follow the Precautionary Working Method Statement (PWMS) may result in a breach of the law and leave the client or others open to prosecution.

### Bats

As mitigation to avoid direct harm to bats, and prevent damage or destruction to the soprano pipistrelle day roost, the proposed works will be undertaken according to the following PWMS as a minimum:

- A toolbox talk will be delivered to all workers prior to the proposed works by a suitably experienced ecologist. The toolbox talk will detail the working restrictions, locations where bats may be found within the site, the legislation relevant to bats, the method statement that must be followed to protect bats, and the procedure to follow if a bat is unexpectedly found. A record of the attendees will be kept by the ecologist
- No works will be undertaken to the wooden cladding which supports the soprano pipistrelle day roost, and it will be retained in its current condition
- The proposed works to the lean-to and main roof will avoid the main bat hibernation period (November to February inclusive). If this is not possible, works to the main roof will only be undertaken when temperatures have exceeded 8°C at sunset for a minimum of three consecutive days, and during dry and calm weather conditions
- Given that no known bat roosts are present within the main roof, the risk of encountering bats is considered to be low. As such, the works will not be directly supervised by an ecologist
- Soft demolition techniques will be used to dismantle sections of the main roof. Roof tiles and any other materials will be removed with a lifting motion rather than sliding to avoid injuring any bats beneath them. Roof tiles and other materials will be carefully inspected for the presence of bats prior to discarding them
- If a bat or evidence of bats is unexpectedly discovered, works will cease immediately. If a bat is present and active, it will be left to fly or find cover on its own accord. If the bat is not moving and/or left exposed, it will be



collected using a gloved hand and cloth and placed in a sealed cardboard box with ventilation holes. A suitably experienced ecologist will be contacted immediately. The ecologist will assess the condition of the bat, if it is healthy, it will be placed inside an alternative bat roost or released by hand after sunset on site. If the bat is assessed as in a poor condition or is injured, the bat will be promptly taken into care by an experienced bat carer and later released when it is healthy

- If a bat or evidence of bats is unexpectedly discovered, the ecologist will provide further advice on how to proceed with the works appropriately, and whether a Natural England Bat Mitigation Licence is necessary
- New external lighting will be avoided if possible. If any new external lighting is necessary, it will follow the advice set out by the Institution of Lighting Professionals (ILP) (ILP 2023). If the lighting is shown to be minimal, utilise LEDs with a warm-white spectrum, be downward facing, pointing away from any bat roost entrances, and controlled by short timers triggered by motion sensors, then potential impacts will be reduced. Prior to the instillation of new external lighting, the proposed light specification will be reviewed by a suitably experienced ecologist to ensure there will be no negative impacts to bats.

## **Birds**

The dwelling was considered to have negligible nesting potential for birds but the attached lean-to was considered to have moderate potential and as such demolition of the structure should avoid the bird nesting season where possible (March to August inclusive). If this is not possible then a nesting bird survey must be completed by a competent ecologist 24hrs before work commences. If nesting birds are discovered then works will be delayed until the nestling have fledged or the nest naturally fails.