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Project Name

18 Lower St. Helens Road, Hedge End, SO30 0LW
Bat Roost Survey

Project No

EC2106

Client

Linkert Homes Ltd.

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The advice which we have prepared and provided is true to the best of our knowledge and utilises information available at the time. The advice has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct.

Quality check completed by:

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Date

June 2024

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Summary

Following the Preliminary Ecological Appraisal carried out by enims in January 2024, it was considered necessary that bat roost surveys be carried out in order to establish whether bats species were roosting on site in the annex (B1) at 18 Lower St. Helens Road, Hedge End, SO30 0LW.

Bat roost surveys were completed in May and June 2024 for B1 which will be impacted by the proposals. As the building was concluded to have moderate potential, it was subject to two survey visits. Surveyors were positioned around B1 to detect if any bats emerged from, or re-entered, the building. Bat detectors and infra-red/thermal imaging cameras were used to record bat activity to establish both the species of bats utilising the area, and bat behaviour. All surveys were carried out in strict accordance with Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023).

No bats were seen emerging or re-entering B1 confirming likely absence of active bat roosts. Limited bat activity was noted overhead and in the surrounding area.

It is predicted that no negative impact to protected bat species, or their local conservation status, will be sustained as a result of the proposed works.

1.1 Further Survey Effort/Ecology Requirements

No further survey is required.

1 Introduction

1.1 Context and Survey Objectives

Enims Ltd were commissioned in March 2024 to undertake further bat survey work following a Preliminary Roost Assessment carried out in January 2024, which had identified the building as having moderate potential to support roosting bats.

As all native bat species are material planning considerations, which must be accounted for before a planning decision is made, it is important to establish their presence or likely absence prior to the demolishing of the annex at site which may potentially act as a bat roost. For this reason, a bat roost survey was conducted in order to identify if bats were roosting and, if so, the species and type of roost present. This information is required to fully assess the potential impacts of the proposed development and to recommend appropriate mitigation measures.

1.2 Site Description

The site is in the centre of Hedge End in a residential area and falls under the administrative authority of Eastleigh Borough Council. The immediate surrounding landscape is residential towards the north, south, east and west of the site. The wider landscape beyond supports a mosaic of grassland and tree habitats.

There were three buildings on site (B1-B3). B1 was a converted garage being used for living accommodation and B2 was a plastic shed, both within the back garden of the main dwelling (B3) at 18 Lower St Helens Road, SO30 0LW.



Figure 1. Location of application site and surrounding landscape
(map data: QGIS 3.10, Google 2024)

1.3 Project Overview

The buildings B1 and B2 (see Figure 1) will be demolished and replaced with a bungalow. B3, the main dwelling, will not be impacted by the works.

1.4 Legislation and Planning Policy

All native bat species are fully protected by nature conservation legislation. Protection is afforded by Section 9 of the Wildlife and Countryside Act 1981 (as amended) through the species' inclusion under Schedule 5. All native bat species are also defined as European Protected Species (EPS) through inclusion in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended), the UK implementation of the EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora.

In England, these legislative instruments make it an offence to deliberately capture, injure, or kill any bat. Bat roosts are protected from damage or destruction, even when occurring accidentally, and from the deliberate or reckless obstruction of access for bats. Furthermore, it is an offence to deliberately or recklessly disturb a bat, whether roosting or otherwise.

The following native bats are adopted as Species of Principal Importance in England under Section 41 of the Natural Environment and Rural Communities Act 2006:

- Barbastelle bat - *Barbastella barbastellus*
- Bechstein's bat - *Myotis bechsteinii*
- Noctule - *Nyctalus noctula*
- Soprano pipistrelle - *Pipistrellus pygmaeus*
- Brown long-eared bat - *Plecotus auritus*
- Greater horseshoe bat - *Rhinolophus ferrumequinum*
- Lesser horseshoe bat - *Rhinolophus hipposideros*

The National Planning Policy Framework (DfCLG 2023) requires local authorities to avoid and minimise impacts on biodiversity and, where possible, to provide net gains in biodiversity when making planning decisions. Paragraph 174 states that: "*Planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geographical value and soils*". Paragraph 180 sets out the principles that local planning authorities should apply when determining planning application and states that: "*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity*".

Other planning policies at the local level which are of relevance to this development include the Eastleigh Borough Local Plan 2016-2036. Policy DM11 Nature Conservation and Eastleigh Borough Biodiversity Action Plan states it aims "*To identify, protect, maintain, restore and enhance viable populations of priority species*", such as bats.

2 Methodology

2.1 Desk Study

Records of bat species within 2km of the application site were obtained from the Hampshire Bat Group in May 2024.

2.2 Emergence Survey

An emergence survey comprising two site visits was undertaken in accordance with the Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2023). The survey focused on B1, the converted garage annex with moderate potential to support roosting bats. Details of the survey timings and weather conditions are given in Table 1 below.

Table 1. Details of survey

Building number	Date	Sunset time	Start and end times	Temperature at sunset	Weather conditions
B1	07/05/24	20:37	20:22 – 21:52	16°C	0% cloud cover, Wind using Beaufort scale: 1 No rain
B1	03/06/24	21:12	20:57 – 22:42	18°C	20-35% cloud cover, Wind using Beaufort scale: 0 No rain

During the surveys, surveyors were positioned around B1 to look for bats emerging from their roosts. The survey was carried out using Echo Meter Touch (EMT) and Peersonic detectors to listen and record bat calls to aid species identification. Each surveyor was equipped with a night vision aid (NVA), which included an IR camera (Teayoc 1080p 4k camera) and a Thermal camera (Guide Track IR Pro 19mm).

Surveyors were positioned with maximum visibility of potential emergence points for roosting bats. Information was collected on species, number of bats, access points, roosting locations and flightpaths. Supplementary information, such as nearby foraging and commuting behaviour, was also noted in order to develop best possible understanding of how the site is utilised by bats. Figures 2 – 4 below show the position and field of view of surveyors and NVA's around the building.



Figure 2. Building being surveyed and the position of surveyors with night vision equipment
(map data: QGIS 3.10, Google 2024)



Figure 3. Field of view of 1st survey NVA (infra-red camera) on east corner of building. Image taken at darkest point of survey.

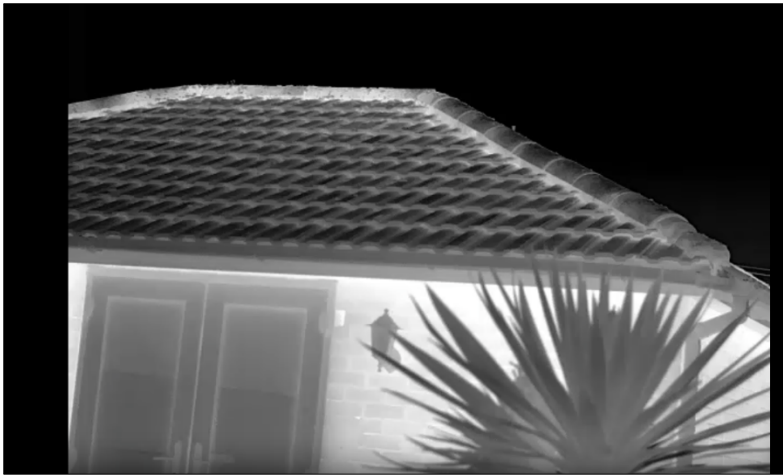


Figure 4. Field of view of 1st survey NVA (thermal camera) on southern corner of building. Image taken at darkest point of survey.



Figure 5. Field of view of 2nd survey NVA (infra-red camera) on east corner of building. Image taken at darkest point of survey.



Figure 6. Field of view of 2nd survey NVA (thermal camera) on southern corner of building. Image taken at darkest point of survey.

Where necessary, post-survey analysis of bat call data was undertaken to identify species/species group using appropriate software including Kaleidoscope by Wildlife Acoustics and the British Trust for Ornithology (BTO) Acoustic Pipeline.

2.2.1 Personnel

The first Survey was led by Rhys Davies a junior ecologist with previous bat survey experience at enims Ltd. and was assisted in the surveys by Joe Murphy from enims Ltd.

The second survey was led by Fraser Gurney a Consultant Ecologist within enims Ltd. Fraser is experienced in bat ecology and field survey techniques and has assisted on ecological supervision of works under bat mitigation licences. Fraser was assisted by Daisy Irons-Small from enims Ltd.

2.2.2 Survey Limitations

There were no limitations to the survey.

2.3 Evaluation of Importance

The findings of the emergence survey were used to determine the number and type of roost present (maternity, hibernation, occasional etc.). Where multiple locations have been identified within the same building/structure, these were considered to be the same roost where they have the same functional and qualitative characteristics and are used by the same species for the same roosting purpose.

The importance of each roost was assessed at an appropriate spatial scale, based on species distribution, conservation status and current population trends, as set out in the UK Bat Mitigation Guidelines (Reason and Wray, 2023). A level of rarity was assigned to the species present based on the known abundance and distribution across different parts of the UK. The level of rarity was referenced against the roost function to give a level of importance based on the following geographic scale: site, local (the site and close surroundings e.g. Parish), district (local administrative area), county, regional, national and International/European.

2.4 Impact Assessment

In identifying the potential impacts on bats, all stages of the proposed development were considered including any advance works as well as during and after construction. Potential impacts include the loss, damage or modification of a roost, the modification or obstruction of roost access points, mortality, injury or disturbance to bats in roosts and disruption to bat flight paths into roosts.

When assessing the significance of impacts on bats from development operations, the following factors were considered:

- Value of the roost.
- Positive or negative biodiversity outcome.
- Confidence in predictions.
- Magnitude of impact.
- Extent of impact.
- Duration of impact.
- Reversibility of impact.
- Timing and frequency of impact.

2.5 Approach to Mitigation

The approach to mitigation follows the mitigation hierarchy, where measures to avoid impacts are explored in the first instance. When options for avoidance have been exhausted, then measures to reduce the adverse effects must be incorporated and where residual effects remain then these need to be compensated.

Appropriate levels of mitigation in this report were taken from the UK Bat Mitigation Guidelines (Reason and Wray, 2023), as summarised in Table 2 below.

Table 2. Guidelines for proportionate mitigation, taken from the UK Bat Mitigation Guidelines (Reason and Wray, 2023).

Roost category	Value of receptor					
	Site	Local	District	County	Regional	National
Feeding perches; night roosts; individual or very small occasional /transitional/opportunistic roosts	Flexibility of roost type and timing of works					
Non-breeding day roosts						
Mating sites; small numbers of hibernating bats			Like-for like replacement. Bats not to be left without a roost			
Larger transitional roosts			Flexibility of roost type and timing of works			
Hibernation sites			Like-for-like replacement (as close as possible or better). Bats not to be left without a roost		Like-for-like replacement (as close as possible or better). Bats not to be left without a roost and available in relevant seasons before original removed	As for Regional as a minimum, more likely required. Early discussion with statutory body needed.
Autumn swarming sites						
Maternity sites	Flexibility of roost type. Bats not to be left without a roost					

3 Survey Results

3.1 Desk Study Results

Records of 11 species from 1982-2023 were returned from the data search of Hampshire Bat Group: these were brown long-eared bat (*Plecotus auritus*), Bechstein's bat, common pipistrelle (*Pipistrellus pipistrellus*), Leisler's Bat (*Nyctalus leisleri*), Nathusius's pipistrelle (*Pipistrellus nathusii*), Natterer's bat (*Myotis nattereri*), noctule, serotine (*Eptesicus serotinus*), soprano pipistrelle, western barbastelle and whiskered bat (*Myotis mystacinus*).

The data search also returned records of bats unable to be identified to species level, including bat (*Chiroptera*) sp., long-eared bat (*Plecotus*) sp., *Myotis* sp., *Pipistrellus* sp, and whiskered/Brandt's bat (*Myotis mystacinus/brandtii*).

The closest recorded bat roost was for *Pipistrellus* sp. noted approximately 0.1km southwest of the site during a roost visit in 2004.

3.2 Emergence/Re-entry Survey Results

No emerging bats were recorded during the 1st survey visit. No bats were observed or heard during the survey visit.

No emerging bats were recorded during the 2nd survey visit. A few individual common pipistrelle were seen foraging and commuting in the surrounding area. Leisler's/noctule bat and soprano pipistrelle were heard but not seen.

4 Evaluation, Assessment and Recommendations

4.1 Evaluation

No bats were observed roosting in the building during the survey, therefore it is concluded that bats are likely absent. Limited bat activity was observed and heard but not seen, with some foraging and commuting bats present in the surrounding area. The application site was considered to be of value at the site level only for the local population of bats.

4.2 Potential Impacts of Proposed Works

It is predicted that no negative impact to protected bat species, or their local conservation status, will be sustained as a result of the proposed works.

4.3 Mitigation Requirements

External lighting on and around the proposed new bungalow should be avoided. If lighting is necessary, it should be kept to a minimum, directed downwards with no light spill above the horizontal and be a warm light with no/little UV component. Further information can be found in the guidance note Bats and Artificial Lighting at Night (Institute of Lighting Professionals, 2023).

No roosting bats were founding during the survey. However, it should be noted that the building still has roosting potential and as bats are highly mobile species the situation may change in the future. It is important to recognise that in the UK all bat species and their roosts are legally protected, by both domestic and European legislation. This means it is a criminal offence to:

- Deliberately capture, injure or kill a bat.
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time).
- Possess or advertise/sell/exchange a bat (dead or alive), or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.

Should a roosting bat be found during the works, all works must immediately stop, and the governing body Natural England consulted. Contractors should be made aware of this during the site introductions and work briefings.

4.4 Ecological Enhancements

Biodiversity enhancements should be incorporated into development plans from an early stage, as advised by the ecologists. Appropriate examples include:

- Integrating bat boxes and bird boxes into brickwork and/or soffits of new builds.
- Installing insect hotels close to nectar rich plants. A stag beetle (*Lucanus cervus*) was observed flying passed a surveyor during the second survey visit and the provision of a log pile in the garden could provide future habitat for stag beetle larvae.
- Leaving an area of a garden to grow wild all year round.

4.5 Data Constraints

The data is valid for 12 months from the date of the site visit due to the mobile nature of bats.

5 Conclusion

Two bat roost survey visits were completed in May and June 2024 for the annex building (B1) at 18 Lower St. Helens Road, Hedge End, SO30 0LW which will be impacted by the proposals.

No bats were seen emerging or re-entering the annex onsite suggesting that it does not contain any active bat roosts. Limited bat activity was noted overhead and in the surrounding area.

It is predicted that no negative impact to protected bat species, or their local conservation status, will be sustained as a result of the proposed works. No further survey is required.

6 References

Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th ed.). Bat Conservation Trust, London.

DfCLG. (2023). National Planning Policy Framework. Department for Communities and Local Government, London.

enims Ltd. (2024). *EC2106 18 Lower St Helens Road, Hedge End Hampshire Preliminary Roost Assessment*.

Institute of Lighting Professionals. (2023). *GN08/23 Bats and Artificial Lighting at Night*. Institute of Lighting Professionals, Rugby.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.

Appendix A: Bat Roost Survey Data

Location:	B1 18 Lower St. Helens Road	Project No:	EC2106
Weather:	Clear, 0% cloud cover, Light air.		
Start temp:	16°C	End temp:	13°C
Date:	07/05/2024	Sunrise/ sunset times:	20:37
Start time:	20:22	End time:	21:52
Time	Species	Notes (flight path, emerging/ re-entering, location observed, behaviour)	
		No bats observed or heard	

Location:	B1 18 Lower St. Helens Road	Project No:	EC2106
Weather:	Clear, 35% cloud cover, No wind.		
Start temp:	18°C	End temp:	16°C
Date:	03/06/24	Sunrise/ sunset times:	21:12
Start time:	20:57	End time:	22:42
Time	Species	Notes (flight path, emerging/ re-entering, location observed, behaviour)	
21:35	Common pipistrelle	Seen foraging west of B1, southern elevation	
21:36	Common pipistrelle	Two individuals flying east, south of B1	
22:06	Leisler's bat/ Noctule	Heard not seen, southern elevation	
22:08	Common pipistrelle	Seen passing eastern side of property	
22:15	Common pipistrelle	Heard not seen	
22:16	Common pipistrelle	Heard not seen, southern elevation	
22:34	Common pipistrelle	Heard not seen	