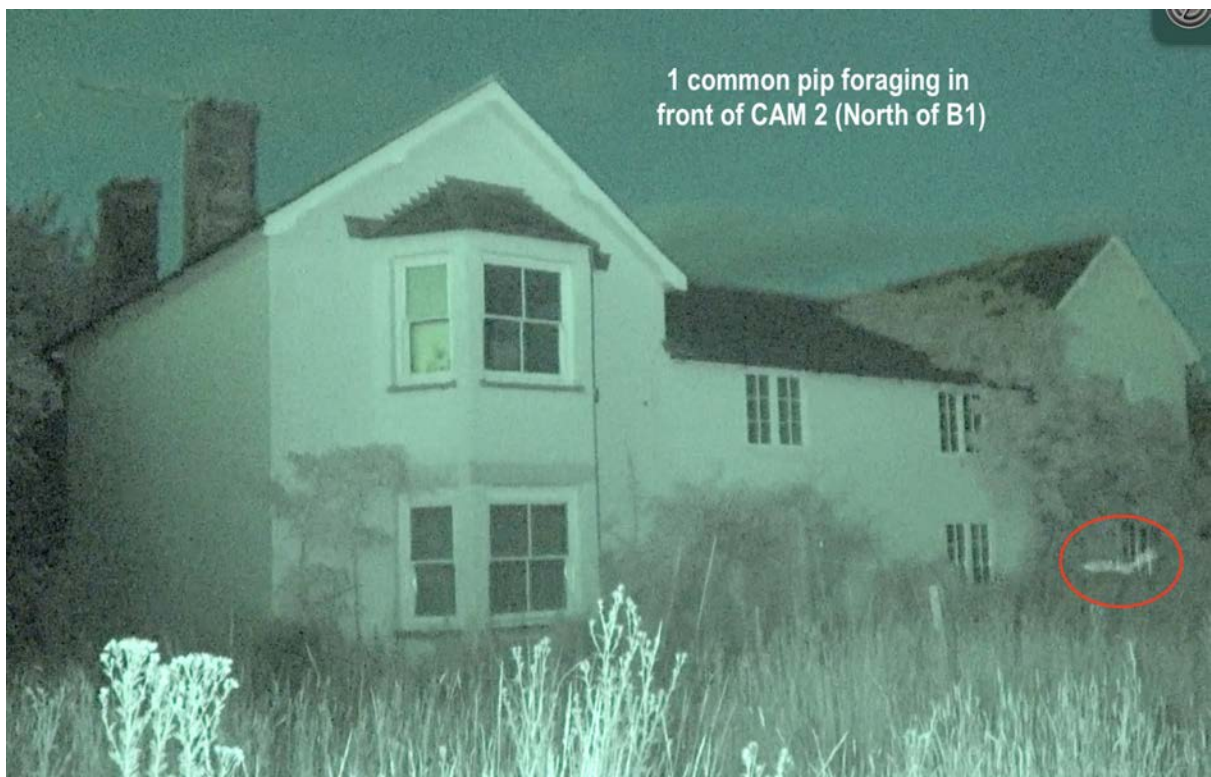




ROAVR | GROUP

Project: 23_BAT2_06_01
Site: Mill House, Laxfield, IP13 8DN
Client: David Nicholson



Project Number:	23_BAT2_06_01
Report Type:	Nocturnal Emergence Bat Surveys
Site Address:	Mill House, Laxfield, Woodbridge, IP13 8DN

Author / Surveyor.

Name:	Role	Date
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Connor Harmsworth (Surveyor)	Ecological Surveyor	25/07/2023
(Reviewers)	Matt Harmsworth - Lead Consultant	25/07/2023

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Approved by:	Signature	Date:	Version:
Matt Harmsworth	MWH	25/07/2023	1.0

Summary:

We were appointed by David Nicholson to undertake an appraisal of Mill House in order to assess the potential ecological constraints to a planning proposal to renovate and alter the property.

It is proposed to redevelop the site with the reduction of the Mill House to its original design as an ancillary dwelling.

During the Preliminary Bat Roost Assessment walkover carried out on 19th May 2023, all buildings underwent full internal and external inspection. Full details are outlined in the Preliminary Roost Assessment Report 23_PEA_04_38 (ROAVR GROUP). The main house was classed as low potential to support roosting bats therefore a further bat survey was recommended.

All UK bat species are legally protected species and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included. This section also provides some brief information on the ecology of British bat species.

An emergence was carried out on the 12th July 2023. With the use of night vision aids and surveyors, the building was monitored and no bats were seen emerging from the building. Foraging and Commuting activity was picked up by both surveyors from Common and Soprano Pipistrelle species.

Recommendations:

R1: In accordance with best practice guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species.

R2: It is recommended to install two bat boxes on-site. If possible, the box should be incorporated into the proposed built footprint to ensure that a permanent roosting feature is created on-site. The box should be suitable for crevice dwelling species which are most likely to utilise existing PRFs. The box should be positioned 3-5 metres above ground level, orientated southwards. There should be a clear path to the entrance thus creating a net gain in bat roosting habitat.

Matt Harmsworth
Lead Consultant
ROAVR Group.

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Appendix 1: Nocturnal Emergence Bat Survey Results Map

1. Introduction

Brief and Site Location

This report presents the findings of one nocturnal emergence survey of a detached house located at Mill House, Laxfield, Woodbridge, IP13 8DN.

The survey site covers an area of approximately 3.9 hectares and is centred on 'TM29437274'.

Proposed Works

The site is to be redeveloped with the reduction of wing extensions to the current Mill House and renovation of the property into a residential dwelling house.

Legislation and Planning Policy

Bats

All UK species of bat are protected species. Their breeding sites or resting places¹ (roosts) are fully protected under the Wildlife and Countryside Act 1981² (as amended) and the Conservation of Habitats and Species Regulations 2017³ which continues to apply in UK law through the Conservation of Habitats and Species (Amendment) (EU Exit) ['CHSAEU'] Regulations 2019⁴. Works affecting bats are subject to licensing procedures by Natural England (NE). The legal protection and licensing procedures are summarised in Appendix 1.

Survey Scope

In line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) and Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment of dawn surveys (Bat Conservation Trust, 2022)⁵, one separate bat survey was carried out consisting of one nocturnal emergence bat survey with the aid of infrared cameras. The aim of this survey was to detect whether bats are roosting within the barn, and to enable a profile of site utilisation by bats to be compiled.

¹<https://www.legislation.gov.uk/ukpga/1981/69>

²<https://www.legislation.gov.uk/ukpga/1981/69>

³<https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

⁴<https://www.legislation.gov.uk/ukdsi/2019/9780111176573>

⁵<https://cdn.bats.org.uk/uploads/pdf/Interim-guidance-note-on-NVAs-May-2022-FINAL.pdf?v=1653399882>

Reporting

This report aims to:

- Outline the survey methodology used;
- Present the results of the survey;
- Provide an interpretation of the survey results;
- Determine the need for further targeted surveys; and
- Provide suitable recommendations in line with planning policy and wildlife law, including potential licensing requirements, mitigation, compensation and enhancement measures.

2. Methods

Field Study

Nocturnal Emergence Survey

In line with the specifications detailed in Bat Surveys: Good Practice Guidelines (Collins, 2016), the nocturnal surveys commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. The nocturnal emergence survey was conducted using electronic bat detectors (EchoMeter Touch for IOS plugged into Iphone 13 Max pro x2) to facilitate the detection of bats and to aid in the determination of species of bat using the site. Audio files were analysed using Kaleidoscope Pro Analysis Software to identify bat species through call frequencies post-survey.

Due to the difficulty in detecting late emerging bats, two Sony camcorders (AX53) with infrared recording capability, with two supplementary infrared illuminators (Nightfox Torches) were also used during the survey to assist in detecting late emerging bats. The camcorder footage was later analysed using FCPX video slow and fast speed ramp software to allow slowing down the video in line with the recorded bat call to ensure the location of bat movement was captured to conclude if the bat emerged from potential roosting features associated with the site. The location of the infrared camcorders remained the same during the survey to ensure a full coverage of the areas of the building to be affected by the proposals.

Constraints

General Temporal Constraints An ecological survey can only identify what is present on site at the time it is conducted. However, habitat usage by species can change over time.

3. Survey Results

Surveyors' Experience

The lead surveyor for the bat surveys was Matt Harmsworth. Matt is a member of the British Ecological Society (BES), The Arboricultural Association (AA) and The Institute of Chartered Foresters (ICFor). Matt Harmsworth has 5 years' experience (within the last 5 years) and gained a wide range of ecological skills through academic and professional experiences. He has worked in ecological consultancy during several survey seasons and has experience undertaking protected species surveys under the supervision and support of a wide range of ecologists. Matthew Harmsworth is Lead Consultant and Director at ROAVR Group. Matthew has over 15-years continuous arboricultural experience and five years continuous ecological experience. Matthew has an HND in Countryside Recreation and a Foundation Degree in Arboricultural. Matthew has a Diploma in Rural Studies and has gained a wide range of ecological and arboricultural skills and knowledge through a combination of academic and practical experience. Matthew has 3-years experience undertaking Phase 2 Protected Species Surveys in particular with bats and badgers. Matthew is currently continuing study through Ecology Training UK.

Max Shaw is a graduate ecologist with one-years experience working in ecology undertaking desktop studies, assisting with report writing and carrying out supported field work. Max holds a BSc (Hons) Environmental Science from Sheffield Hallam University.

Connor Harmsworth is a field ecologist and arboricultural consultant at ROAVR Group. Connor has 3-years continuous ecology and arboricultural field work experience and one years experience in carrying out desktop assessments. Connor has attended numerous CPD courses including Ecology Training UK studies in bat surveying. Connor has two years protected species surveying experience in relation to bats (just under 100 hrs) 20 hours under supervision from a licensed bat worker.

ROAVR Group is a nationwide arboricultural and ecological consultancy with directly employed staff nationwide supporting those passing through the planning process. Established in 2013 we have ten-years experience conducting survey and reporting work.

Dusk Emergence Survey

The nocturnal emergence survey was undertaken on 12th July 2023 by Connor Harmsworth and Max Shaw. The weather conditions recorded at the time of the survey are detailed in Table 3.1

Parameter	Conditions	
	Start	Finish
Temperature (°C)	17	15
Cloud Cover (%)	70	80
Precipitation	10	5
Wind Speed (Beaufort)	F1	F1

Table 3.1: Weather Conditions During First Nocturnal Emergence Survey

The nocturnal emergence survey commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 21:13 hrs (XCWeather).

Common + Soprano Pipistrelle

Time	Species	Activity	Emergence
21:31	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>Recorded but not seen</i>	No.
21:39	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>Seen NW corner of B1 - possible emergence</i>	<i>No - confirmed through camera review</i>
21:40	<i>Soprano Pipistrelle</i> (<i>Pipistrellus pygmaeus</i>)	<i>Seen commuting N-S over B1 toward pond</i>	No.
21:48	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>Seen foraging in between B1 and B2 (SW)</i>	No.
21:53	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>Same bat seen foraging in between B1 and B2 (SW)</i>	No.
21:59	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>Foraging in front of B2 (North)</i>	No.
22:29	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>2 bats foraging over the pond to the south of B2</i>	No.
22:35	<i>Common Pipistrelle</i> (<i>Pipistrellus pipistrellus</i>)	<i>Same bat seen foraging in between B1 and B2 (SW)</i>	No.

These bat observations were not observed emerging from any features associated with the site.

No other species of bat were detected or observed during this survey. Analysis of the sound and video recordings did not identify any further species of bat.

The survey concluded at 22:50.

4. Conclusion and Required Actions

Given that no bats emerged from the building and only a small amount of bat activity was recorded on site during the survey, it is concluded that there are no bat roosts present in B1 on site. Therefore, the proposed works are not expected to impact roosting bats, and as such the proposed works may proceed as scheduled.

4.1 Licensing Requirements for Bats

No Bat Licensing is required at this stage. In the unlikely event that a bat is found during site works, all works in that area must immediately cease and a suitably qualified ecologist should be contacted.

4.2 Avoidance, Mitigation, Compensation and Enhancement Measures for Bats

No bat roost within the building was identified. Enhancement for bats is encouraged in form of habitat enhancement:

Bat boxes should be installed to provide roosting habitat for species such as pipistrelle. In general, bats seek warm places and for this reason boxes should be located where they will receive full/partial sun, although installing boxes in a variety of orientations will provide a range of climatic conditions. Position boxes at least 4 m above ground to prevent disturbance from people and/or predators. The planting of species which attract night flying insects is encouraged as this will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea* and honeysuckle *Lonicera periclymenum*.

4.3 Longevity of Report

Survey data should ideally be from the last survey season before a planning or licence application is submitted, although the length that survey data remains valid should be decided on a case-by-case basis and is dependent upon several factors⁶ (Collins, 2016). If development works do not begin within eighteen months to two years of the date of this report, an updated survey may be required in accordance with guidance in BS 42020:2013⁷ and CIEEM (2019), to determine if conditions and bat use has changed since described in the current report.

⁶https://cdn.bats.org.uk/uploads/pdf/Resources/Bat_Survey_Guidelines_2016_NON_PRINTABLE.pdf?v=1542281971

⁷<https://www.omegawestdocuments.com/media/documents/43/43.35%20BSI%20Biodiveristy%20Code%20of%20Practice.pdf>

5. Limitations

ROAVR Group has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us.

This Report may not be relied upon by any other party without the prior and express written agreement of ROAVR Group. The assessments made assume that the land use will continue for its current purpose without significant change. ROAVR Group has not independently verified information obtained from third parties.

This report, data tables and raw data remain the copyright of ROAVR until such time as any monies owed are settled in full and the report may be withdrawn at any time.

The ultimate decision to do/not do any work on any structure/tree/feature and any legal consequences of any action taken/not taken lies solely with yourselves and/or your employees/subcontractors. ROAVR Group accepts no liability or responsibility in any way for any actions taken/not taken by you and/or your employees and/or any other person/organisation engaged in carrying out/not carrying out any of the proposed work.

Should you require any further information, please do not hesitate to contact us at any time.

Mr Matthew Harmsworth
Lead Consultant

Matt Harmsworth

Prepared by: Matt Harmsworth.
Checked by: Max Shaw



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7. Appendix 1

Bat Ecology

There are 17 known breeding species of bat found in the UK, with additional species recorded as migrants or vagrants. All of them are small, nocturnal, flying, insectivorous mammals that are under conservation threat, and many have undergone massive population declines over the last century. Some species, such as common (Pipistrellus pipistrellus) and soprano pipistrelle (Pipistrellus pygmaeus) are relatively common and widespread in the UK, while others, such as greater horseshoe (Rhinolophus ferrumequinum) bats, have an extremely restricted distribution.

Most bats will use a variety of roosts of different types throughout the year. The winter hibernation sites typically have cool, humid conditions with a stable microclimate and low levels of disturbance. Most British bats hibernate in caves or artificial structures that fulfil such requirements, such as mines, tunnels and cellars. Bats emerge from hibernation around late March or early April and move into transition or intermediary roosts. Around early May, female bats gather in colonies to form summer or maternity roosts, and it is here where they will give birth between late May and early July. A colony may consist of many individuals (sometimes hundreds of bats) of mixed age and sex. Roosts occur in a variety of habitat types, including tree-holes, caves, buildings and other secure crevices or internal spaces with appropriate stable temperatures and humidity. Bats may change roost locations many times during a year, and colonies may split up and reform during this period. Males occupy solitary roosts in autumn, to which they attract females for mating.

Legislation

All British bat species and any place used for shelter or protection, or a breeding site or resting place (their roosts) are fully protected under the amended Wildlife and Countryside Act 1981 through inclusion in Schedule 5. The roosts are protected irrespective of whether bats are present at the time. All bats are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) ['CHSAEU'] Regulations 2019.

These pieces of legislation make it illegal to deliberately or recklessly:

- kill, injure or capture bats;
- disturb bats;
- damage, destroy, or obstruct access to bat roosts (including sites that are currently unoccupied);
- possess or transport a bat or any part of a bat unless acquired legally; or
- sell, barter or exchange bats or parts of bats.

Disturbance is defined as any activity that is likely to impair bats ability:

- to survive, to breed or reproduce, or to rear or nurture their young;
- to hibernate or migrate; or
- to significantly affect the local distribution or abundance of the species to which they belong.

Habitats Regulations Licensing

If a European Protected Species will be affected by a development, Natural England (NE) can issue licences under the Habitats Regulations to permit otherwise prohibited acts. Licences for certain activities can be granted providing “three tests” are satisfied, that is:

1. the purposes of “preserving public health or safety, or for reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”;
2. there must be “no satisfactory alternative”; and,
3. the derogation is “not detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

Where Planning regulations apply, NE will only issue a licence after planning consent has been granted.

The licence application will require the production of a detailed method statement, which sets out the activities to be carried out under the licence to minimise the risk of bats being harmed during construction works and ensure that bats will be conserved during the development of the site. This will need to detail the mitigation proposed (such as the replacement or compensation roost), the timescale and schedule of works, the number, size and locations of bat access points to be provided, the type of materials to be used (roofing material, roof lining, fascias, soffits and bargeboards etc.), lighting proposals, action to be taken in the event bats are found during works and a post-development monitoring programme. The method statement will need to be accompanied by scaled plans and maps detailing the bat mitigation features.

A cross-section of the access points and roost space is often required. The method statement must ensure that provision is made for new or continued roosting opportunities after the completion of development works. In some instances, a method statement is requested by Natural England before the planning application is determined.

Natural Environment and Rural Communities (NERC) Act 2006 Under Section 40 of the Natural Environment and Rural Communities Act (2006), Local authorities have a duty to have regard to the conservation of biodiversity in exercising their functions. The duty affects all public authorities and aims to raise the profile and visibility of biodiversity, to clarify existing commitments regarding biodiversity, and to make it a natural and integral part of policy and decision making. Seven of the UK species of bat (soprano pipistrelle, barbastelle, Bechstein's, noctule (*Nyctalus noctule*), brown long-eared, lesser horseshoe and greater horseshoe bats) have been listed on the UK Biodiversity Action Plans (2007) as conservation priorities.

National Planning Policy Framework (2021) and Biodiversity and Geological Conservation Circular 06/2005

The National Planning Policy Framework (2021) and Biodiversity and Geological Conservation–Statutory Obligations and Their Impact within the Planning System Circular (06/2005) state that the presence (or otherwise) of a protected species is a material planning consideration and the extent that they may be affected by the proposed development must be established before planning permission is granted. Otherwise, all relevant considerations may not have been addressed in making the decision.

Appendix 1: Map 1 Nocturnal Emergence Bat Survey Results



Plan showing location of NVAs and surveyors.



Screenshots from NVAs.

