Bat Emergence Survey

Heather Berwick

Tanners Farm,

Mayes Lane,

Horsham,

RH12 3SG

Reference: Q15337

Prepared by
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Credentials

Jason Harker has 25 years of horticultural, arboricultural and ecological experience, is a member of CIEEM, a Certified Surveyor of Japanese Knotweed, accredited by the Property Care Association and has attended multiple tree surveying courses by the Arboricultural Association and LANTRA. Additionally, he is an experienced bat surveyor, conducting 30 – 35 surveys each year and has undertaken a number of bat surveying training courses *(Ecology Training UK)*.

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Summary

ProHort Ltd were commissioned to assess bat roosting activity at Tanners Farm, Mayes Lane, Horsham, RH12 3SG. The current proposal for the site involves converting an agricultural building on the east of the Site into a 2 storey, 4 bedroom residential dwelling. The existing onsite building and 1 tree was assessed as having negligible potential for roosting bats, by Prohort, in February 2025. However, due to an out-of-date report conducted in 2023 by Arbtech, which found the building supported a day roost, Horsham, Council have requested more information. Therefore, one Bat Emergence Survey was undertaken on the 16/06/2025.

Key Findings:

- No bats were seen emerging from either building during the bat emergence surveys
- Roosting bats are considered unlikely to be present and no further surveys are recommended.

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1. Introduction

1.1. Background

This report has been instructed by Heather Berwick to conduct one Bat Emergence Survey on one building at (Tanners Farm, Mayes Lane, Horsham, RH12 3SG) (grid reference:TQ15563533). One building was assessed as having negligible potential for or roosting bats due to a lack of bat roosting provisions and potential access points.

Roosting bats are not considered to not be impacted as part of the proposed works as the structures to be affected are not suitable for roosting bats, but Horsham council have requested more information so a Bat emergence survey has been undertaken.

1.2. Site Description

The site is located at (Tanners Farm, Mayes Lane, Horsham, RH12 3SG) (grid reference:TQ15563533). It is approximately 630m² in size and comprises of one commercial building (B1 See Figure 1).



Figure 1 – The site layout
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Table 1 – Description of all onsite buildings

Building name	Description
Barn to be demolished (B1) Image 1-3 in Appendix 4	B1 was a disused barn building located in the centre of the Site. This building is due to be demolished, with a 2 storey residential dwelling built in its footprint. The roof was pitched, comprising of corrugated metal sheeting, whilst the walls were comprised of wooden panelling and corrugated metal sheeting. B1 was assessed internally and externally for signs of bats and nesting birds, and no signs were found. There were several areas of damage to the walls of the barn which would allow entry of bats to the barn, but there were no suitable potential roosting features either externally or internally. Additionally, the gaps in the walls of the building made the internal aspect quite exposed and draughty, which is unsuitable for bats.

The general surrounding area has high suitability for commuting and foraging bats, due to the abundance of blocks of woodland, watercourses and lines of trees within the surrounding area. Licence records show that brown long-eared bats, soprano pipistrelles, Daubenton's bats and common pipistrelles are present within 2km of the Site.

1.3. Previous Ecological Surveys

A Preliminary Ecological Appraisal had been prepared by Prohort (February 2025), which included an assessment of the building. The assessment identified B1 as having negligible potential for roosting bats. However, due to an out-of-date report conducted in 2023 by Arbtech, which found the building supported a day roost, our client has requested 1 Bat Emergence Survey to be carried out during the active bat survey season (May to September) to determine the likely absence or confirmed presence of roosting bats.

2. Methods

2.1. Aims and Objectives of the Surveys

The aim of the surveys is to collect sufficient data to draw conclusions about the use of the buildings by roosting bats, primarily by observation of bats leaving the building at dusk.

The objectives of the surveys are as follows:

- To ascertain presence or likely absence of roosting bats within the onsite buildings.
- If bats are found to be present, to determine species, number of individuals and the nature of the roosts within the building
- Assess the value of the structures to bats and provide recommendations for further surveys, mitigation, compensation and enhancement measures and licensing requirements.

2.2. Legislation

All species of Bats found in the UK receive a high level of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations, 2019. In summary, it is an offence:

- To kill, injure or handle a bat.
- To damage, destroy or obstruct access to any place that a bat uses for shelter or protection (known as a roost).
- To disturb any wild bat while it is occupying a structure or place used for protection.
- To possess a bat (living or dead).
- To sell or offer a bat for sale without a licence.

2.3. Bat Emergence Survey Methods

One bat emergence survey was undertaken on the 16th June 2025, at dusk, on B1. Survey methodology followed the Bat Conservation Trust's *Bat Surveys for Professional Ecologists* (Collins, 2023). These surveys fall within the optimal period of bat emergence activity. To provide the ultimate coverage of the potential roosting features and access points, two surveyor positions were identified (see Figure 2 for locations).

Surveyors used the following equipment to conduct the survey:

- Anabat Walkabout and Anabat Express Static Bat detectors.
- Nightfox Corsac 2 Digital Infrared Night Vision goggles
- Darkbeam Infrared torch
- Video camcorder with infrared night vision.
- Echo Meter Touch 2 active Bat detector
- 8mm Dual Lens Cavity Camera and Endoscope with 4.5 inch HD IPS Colour Screen



Figure 2 – The equipment used on site.

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Figure 3 – The site layout and locations of surveyors (yellow circles)

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The emergence surveys were carried out from at least 15 minutes before sunset until at least 90 minutes after sunset.

Both surveys were led by an experienced bat surveyor: Jason Harker. The location, appearance, flight characteristics and time of sightings or bats were noted on recording forms during the surveys. Infrared cameras were used to supplement human surveyors.

Weather conditions during the surveys are outlined in Table 1 below.

Table 1 – Dates and weather conditions of the two emergence surveys

Date	Survey type	Sunset/sunrise time	Survey start	Survey end	Cloud cover (%)	Precipitation	Wind (Beaufort)	Temperate (°C)
16/06/2025	Dusk	21:18	21:03	22:50	0	No	0	22

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2.4. Limitations

- The one emergence survey only provides a snapshot of the presence of bats within the site as individual bats move between roosts throughout the year and changes to the building structure can alter the number and quality of potential roosting sites. Therefore, the results of the emergence surveys can only be considered valid for 12 months from the survey dates, after which time it is recommended an updated assessment is undertaken.
- In sites where a high number of potential roost features exist, there remains some possibility of bats roosting within features not identified as roosts during the surveys. As such, mitigation measures should include a precautionary approach to features with high potential to be used by bats, even where their presence was not recorded during surveys.
- The lower amplitude of calls of species such as brown long-eared or barbastelle are more difficult to detect. Therefore, passes by these species may be under-recorded.
- Surveyor 1 noticed artificial light pointing from south to north came on at 22:30. Artificial light can impact bats ability to forage successfully, so they tend to avoid illuminated areas.

3. Results

3.1. Roosting Bats

During the dusk emergence surveys, no bats were seen to emerge from any part of the building.

3.2. Non-Roosting Bat Activity

During the dusk emergence surveys, levels of bat activity were low. Calls of common pipistrelle (*Pipistrellus pipistrellus*) and noctule (*Nyctalus noctule*) were recorded during the surveys and common pipistrelles were observed foraging and commuting around the site.

4. Conclusion

The surveys found that bats utilize the site for foraging and commuting, however they were not found to be roosting within either of the onsite buildings.

No further surveys are required; however, mitigation practices should be followed during the work. Specifically, a light mitigation strategy should be adhered to at all times for works that are to be undertaken after sunset/ before sunrise (see section 4.1). In the unlikely event bat(s) are encountered at any stage, work will cease, and Natural England or a suitably qualified licensed bat ecologist must be sought for advice by the applicant/landowner. The applicant must be aware of the severe penalties associated with bat crimes and their legal obligations to report this information.

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be considered valid for 12 months from the survey dates, after which time it is recommended an updated assessment is undertaken.

4.1. Mitigation

All the following measures should be adhered to throughout the proposed works to protect bats:

- Before commencing works, one bat box suitable for crevice-dwelling species will be installed on a nearby linear feature. This should provide suitable roosting opportunities for any bats exiting the building or being removed from the building during the works. This box should be 1FW Schwegler Bat Hibernation Boxes (available at nhbs.com) or of a similar standard and be mounted at least 4m from the ground. The boxes should face north and should remain unobstructed.
- All workers on the project will be provided with information that outlines the legislation that protects bats, an introduction to species, indicators of bat presence, precautions to take during work and instructions on what to do in the event a bat is observed.
- A soft strip demolition will be undertaken on the roof tiles.
- In the situation where a bat is encountered during work, all work must stop, and a suitable ecologist should be consulted before continuing.
- Any on-site lighting will be in-line with the BCT lighting guidelines (Bat Conservation Trust 2023). Lighting will be directed away from any roosting locations or linear features. All lights will be downwardly deflected and low level.

4.2. Artificial Lighting Strategy

Artificial lighting can impact local bats as it can impede their ability to forage successfully and can deter bats from commuting across the property. Therefore, to ensure any lighting disturbance on bats is minimised, the following strategy for artificial lighting around the property will be adhered to:

- Where lighting is required for health and safety purposes only, any external lighting required as part of the scheme (e.g. security lighting) will be motion triggered, set on timers (1 minute or less) and directional towards the ground to avoid upward light spill.
- Any light spill must be directed away from the roof and from surrounding tree canopies and vegetation.
- All luminaires used will lack UV elements when manufactured. Metal halide, fluorescent sources will not be used.
- LED luminaires will be used due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700 Kelvin) must be adopted to reduce blue light component.
- Luminaires must feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill.

- The use of specialist bollard or low level downward directional luminaires to reduce upwards lighting spill can be considered, however, should be used as a final resort.
- Column heights should be carefully considered to minimise light spill. Only luminaires with an upward light ratio of 0% and with good optical control must be used.
- Luminaires will always be mounted on the horizontal, i.e., no upward tilt

Appendix 1 Reference List and Useful Sources

- **Collins, J. (ed.) (2023)** Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
- **HMSO (1981)** Wildlife and Countryside Act 1981 [online]. Available at: http://www.legislation.gov.uk/ukpga/1981/69
- **HMSO (2017)** Conservation of Habitats and Species Regulations 2017 [online]. Available at: http://www.legislation.gov.uk/uksi/2017/1012/contents/made
- **Reason, P.F. & Wray, S. (2023)** UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Ampfield, CIEEM.
- **Bat Conservation Trust (2023)** Bats and Artificial Lighting At Night [online]. Available at: Guidance Note 8 Bats and Artificial Lighting | Institution of Lighting Professionals (theilp.org.uk)

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Appendix 2 Bat Sonograms

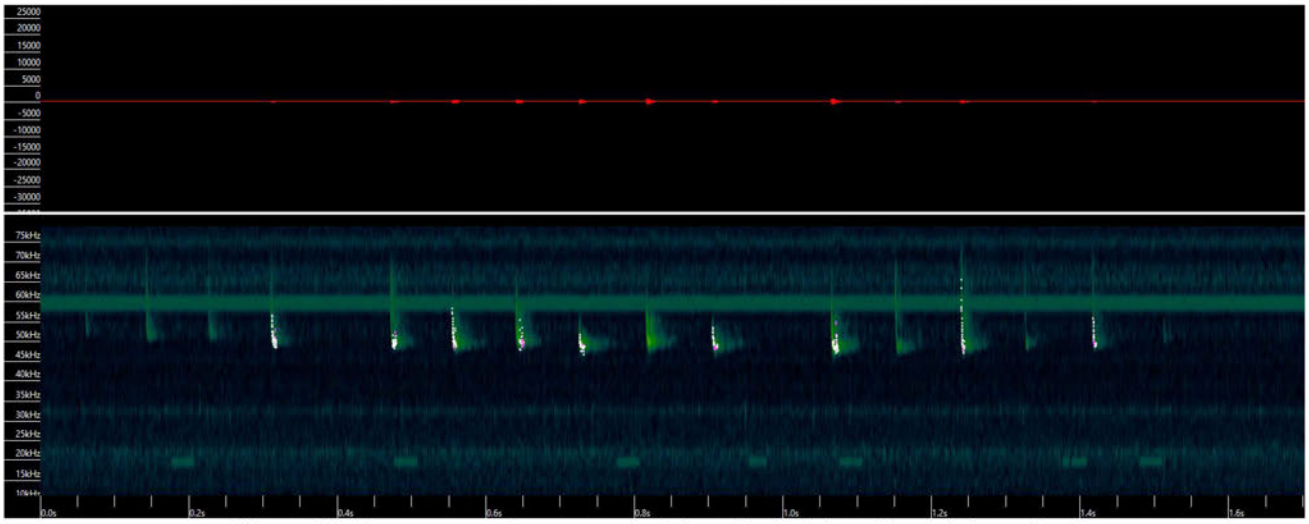

Figure 3 – Sonogram of common pipistrelle (*Pipistrellus pipistrellus)*

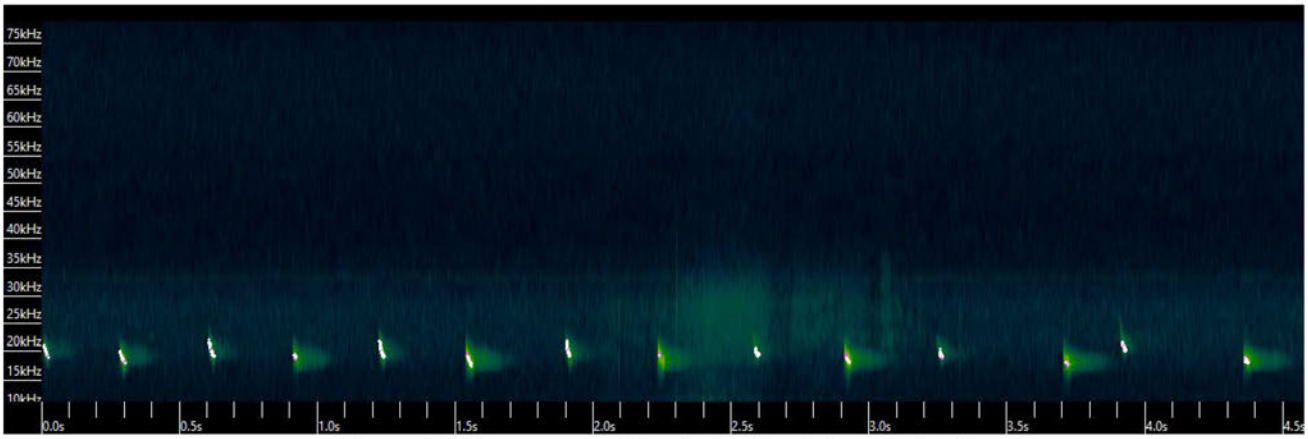

Figure 4 – Sonogram of Noctule *(Nyctalus noctule)*

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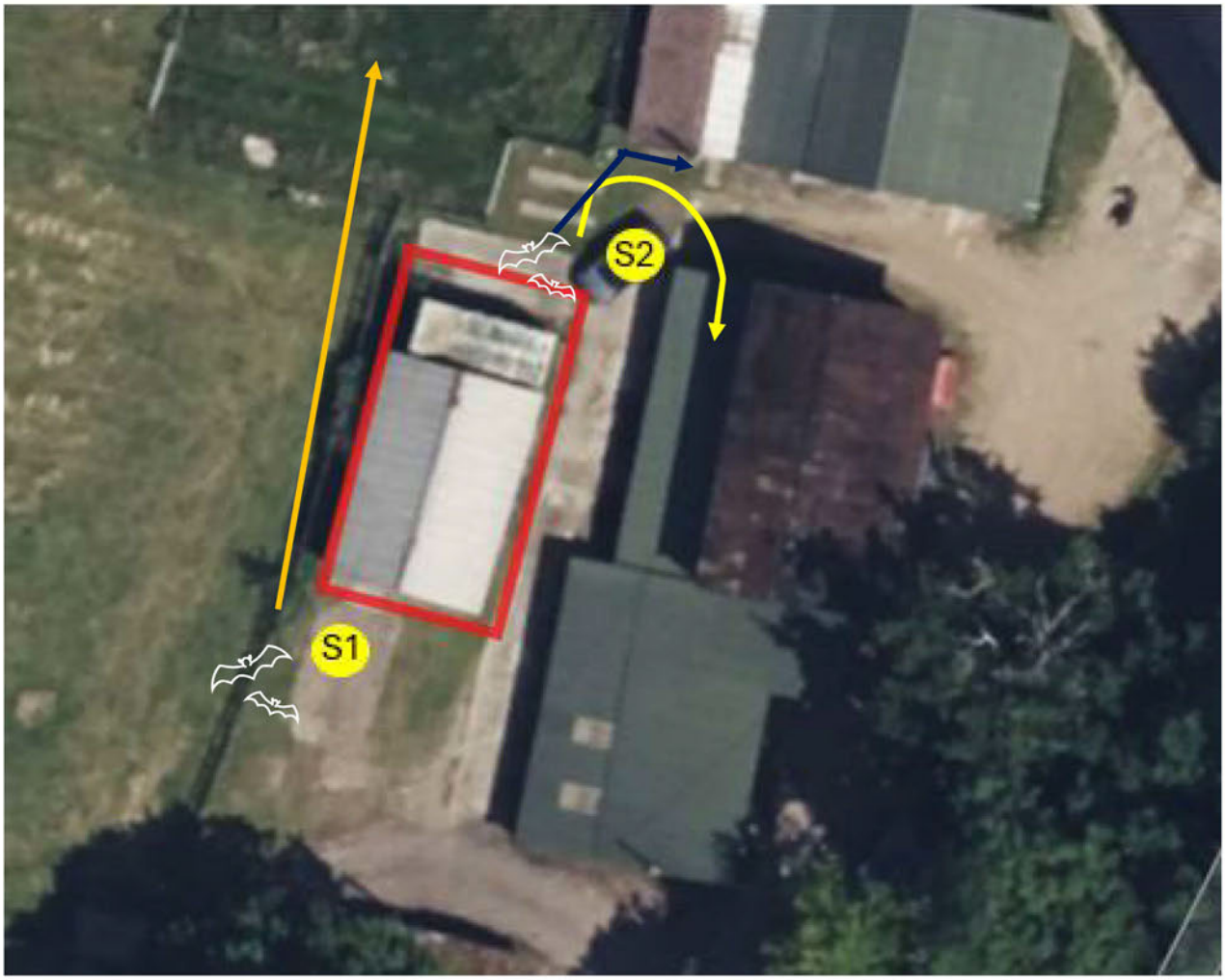
Appendix 3 Bat Flight Activity



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Appendix 4 – Images







Images 1 – 3 – B1

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