Leigh Ecology Ltd

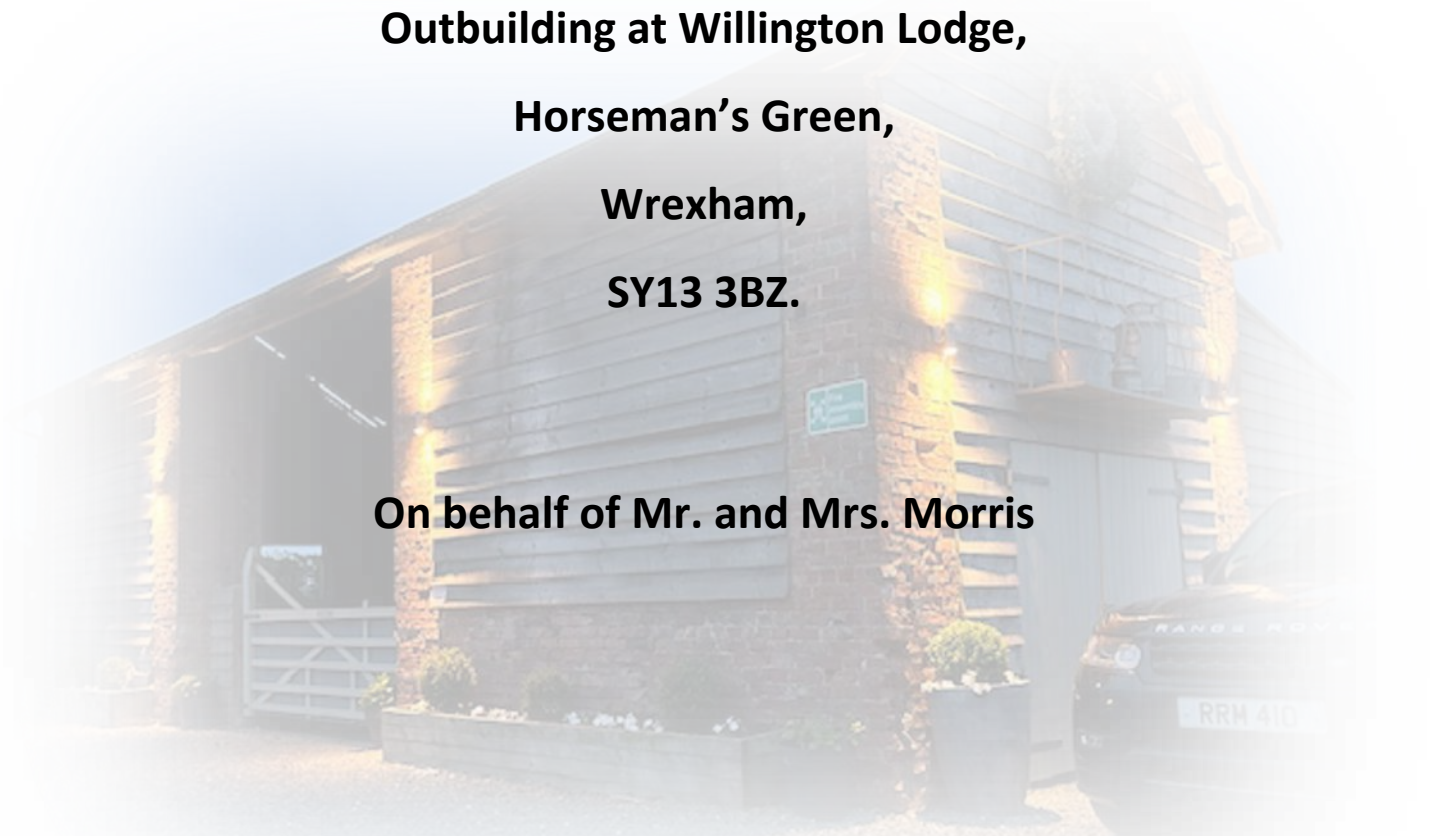
Protected Species and Habitat Surveys

Outbuilding at Willington Lodge,

Horseman's Green,

Wrexham,

SY13 3BZ.



On behalf of Mr. and Mrs. Morris

Bat Emergence Survey Report

Report Number	WILL/01-2025
Author	R. Leigh
Date	20th June 2025
First Check	J. Leigh
Final Technical Check	C. Evans

Office 01606892032 Mobile 07815711678
Directors R S Leigh & J J Leigh. 8 Hall Drive, Marston, Northwich, Cheshire CW9 6DT

Important Information to Readers

This report has been prepared for Mr and Mrs Morris in accordance with the terms and conditions of appointment for a bat emergence survey.

Leigh Ecology Ltd cannot accept any responsibility for the use of or reliance on the content of this report by any third party.

The advice contained in this report is based on the information available and/or collected during the period of study. We cannot completely eliminate the possibility of important ecological features being found through further investigation and/or by survey at different times of the year or in different years.

Surveys and assessments are undertaken on the understanding that nothing in our reports will be omitted, amended or misrepresented by the client or any other interested party.

Please be aware the information contained within this report is valid for a period not exceeding two years. After this time, data contained within will require updating.

Introduction

Leigh Ecology Ltd was commissioned by Mr. and Mrs Morris of Willington Lodge, Wrexham (hereafter referred to as "the site") to conduct an updated bat emergence survey. The purpose of this survey was to determine whether the bat activity and condition of the building had changed since the original emergence survey carried out in June 2023. This update supports a planning application for proposed renovation works.

An initial Preliminary Bat Roost Assessment (PBRA) was undertaken by Leigh Ecology in April 2023 (Report Ref: WILL/23-001), followed by a single bat emergence survey in June 2023 (Report Ref: WILL-02/23). At that time, the building was found to be in reasonable repair, but containing bat roost potential. No bats were recorded emerging.

Given that two years have passed since those surveys, a new PBRA was necessary to evaluate current conditions. The building was again assessed as having low bat roost suitability, in line with Bat Conservation Trust (BCT) guidelines. Consequently, a single follow-up nocturnal emergence survey was recommended to further assess the building's potential use by bats.

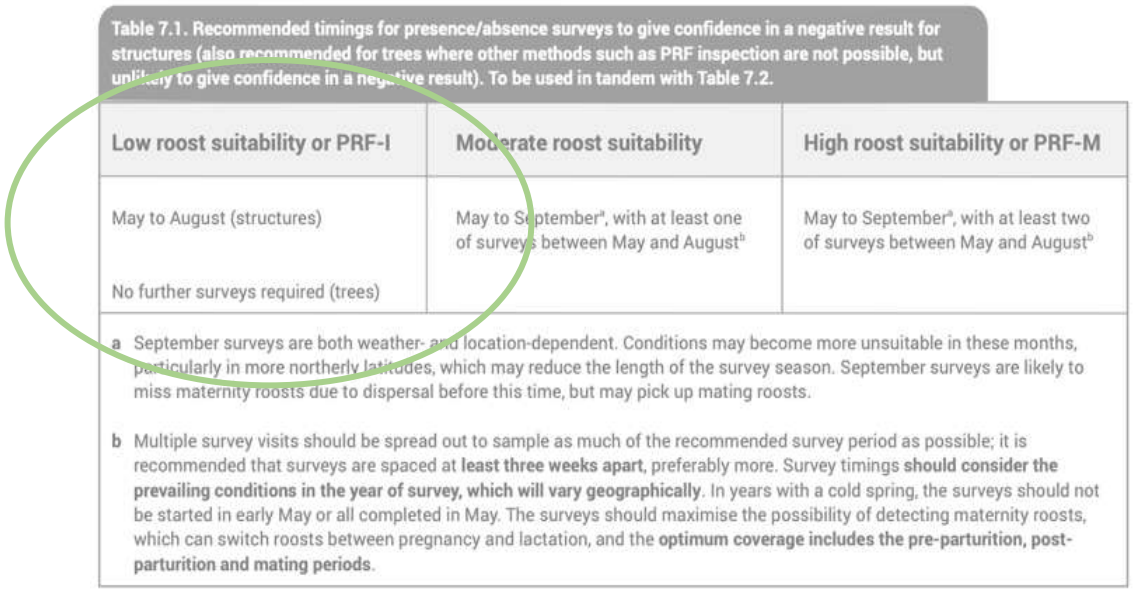


Table 7.1. Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures) No further surveys required (trees)	May to September[a], with at least one of surveys between May and August[b]	May to September[a], with at least two of surveys between May and August[b]

a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may pick up mating roosts.

b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at **least three weeks apart**, preferably more. Survey timings **should consider the prevailing conditions in the year of survey, which will vary geographically**. In years with a cold spring, the surveys should not be started in early May or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the **optimum coverage includes the pre-parturition, post-parturition and mating periods**.

Leigh Ecology Ltd was commissioned to undertake the recommended phase 2 survey.

Survey Methodology and Results

A single dusk emergence survey was conducted on the 27th of May 2025, in accordance with the *Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition, 2023).

The survey was led by Roy Leigh ACIEEM, NRW licence 58580-OTH CSAB -2014. To ensure full coverage of all potential access points, **four surveyors were positioned at strategic points around the site, with clear views of all elevations and roof lines of the main dwelling**.





This setup allowed for simultaneous monitoring of all potential roost features. Surveyor locations are shown in the accompanying plan (*see Figure 1 – Surveyor Location Plan below*).

The survey commenced 30 minutes prior to local sunset and continued for 90 minutes post-dusk, adhering to best practice guidance for dusk emergence surveys.



Surveyors were equipped with:

- Wildlife Acoustics EchoMeter (iPad 4 compatible)
- EMT Pro bat detectors
- Pulsar Axion Compact XGH35 thermal imaging camera

The combined use of acoustic and thermal detection ensured a robust assessment of bat activity and potential emergence.







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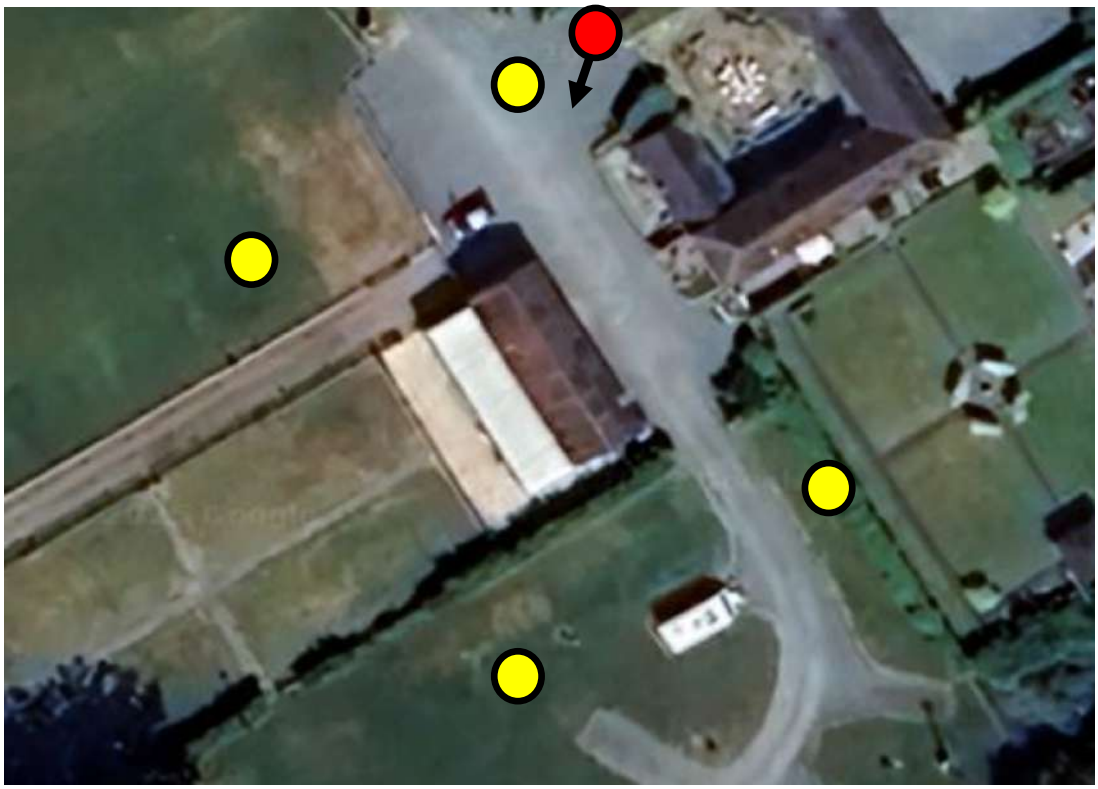


Figure 1; Surveyor and Thermal Imaging Camera Positions

Survey Findings (in brief):

- No bats were observed emerging from the building.
- Foraging activity was recorded with a passing bat to the northwest, including:

    ⇒ Up to one Soprano Pipistrelle (*Pipistrellus pygmaeus*)

This bat, whilst recorded around the site, and had showed no signs of roosting within the building.

- Occasional high-altitude passes by Noctule (*Nyctalus noctula*) were also noted, consistent with commuting or foraging behaviour.

The results indicate no evidence of a bat roost within the building proposed for renovation.

It is likely that the bat recorded on site is utilising nearby habitat features for roosting, with the surrounding landscape offering suitable foraging and commuting opportunities.

Dusk Emergence Results

- **Survey Date:** 28.05.2025
- **Sunset Time:** 21.22
- **Survey Start Time:** 21:00 – **Survey End Time:** 23:00
- **Wind (0-5):** 0
- **Rain (0-5):** 0
- **Cloud cover (%):** 100
- **Temperature (Degrees Celsius):** 16*

Time First Observed (BST)	Species	Behaviour	Location Observed	Notes
21:08	*Myotis SP*	Commuting/Foraging	High above site	Foraging at heigh above the site *approx. number of bats 1*
21:49	*Pipistrellus* pygmaeus (Soprano Pipistrelle)	Foraging	Passing northwest	Recorded passing/foraging in the northwest, only one recording. *Approx number of bats 1.*
—	—	**NO EMERGENCE**	**All elevations monitored**	**NO bats emerged from building**

No bats were observed emerging from the building during the survey period. All elevations and potential access points were continuously monitored by surveyors and one thermal imaging camera was used throughout the dusk emergence survey.

Bat activity recorded during the survey consisted of low-level foraging by *Pipistrellus* species and occasional high-altitude activity from *Nyctalus noctula*. The first detection occurred at 21:08 BST, when a single Noctule (*Nyctalus noctula*) was observed commuting at height across the site. This was a brief pass, consistent with typical foraging or commuting behaviour for the species.

At 21:49 BST Soprano Pipistrelle (*Pipistrellus pygmaeus*) activity was observed passing to the northwest of the site by two of the surveyors.

Overall, while low levels of foraging activity were recorded, **there was no evidence of bat emergence or roosting within the building.** The bat activity observed is consistent with individuals utilising the surrounding landscape features for foraging, with nearby trees and buildings likely providing more suitable roosting opportunities.

Use of Thermal Imaging Cameras

Thermal imaging camera Pulsar Axion Compact XG35 were employed during the survey in accordance with Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition, 2023). The use of thermal imaging enhances detection capabilities, particularly in low-light conditions or where visual observation is obstructed. It enables surveyors to detect the heat signatures of bats in flight or emerging from potential roost features, allowing for more accurate assessment of presence/absence and behaviour. All thermal observations were conducted by a trained and experienced operator and were cross-referenced with acoustic data for species identification.

Conclusions and Recommendations

The results of the dusk emergence survey indicate that the building at Willington Park, Wrexham, **does not currently support roosting bats**. No emergence activity was observed from the building during the survey period, and all recorded bat activity was limited to low-level foraging by *Pipistrellus* species and occasional high-altitude passes by *Nyctalus noctula*.

Given these findings, **it is considered that the proposed development works can proceed without the need for a European Protected Species Mitigation Licence**, provided that a precautionary approach is followed.

Barn Swallows and Bat Mitigation

Barn swallow and bat mitigation is covered in the separate Green Infrastructure Statement (report number WILL/02-2025).

Lighting Considerations

To minimise potential disturbance to foraging and commuting bats, the site's external lighting on the building should be kept to a minimum, with low wattage and directional lighting, fitted with cowls or shields and timed or motion activated to limit use.

The overall aim is to maintain light levels below 1 Lux along key linear features and vegetated corridors used by bats. The lighting design will follow the principles set out in:

- *The Bat Conservation Trust and ILP Guidance Note 08/18 – Bats and Artificial Lighting in the UK*

- *The Bat Conservation Trust Statement on the Impact and Design of Artificial Light on Bats*

By implementing these reasonable avoidance measures and enhancements, the proposed development will remain compliant with legislation, safeguard local bat populations, and contribute positively to ecological resilience on site.