Leigh Ecology Ltd

Protected Species and Habitat Surveys

**Maes Derwen,**
**Higher Lane,**
**Wrexham.**

Prepared for Mr. Ken Povey

# Bat Presence/Absence Survey Report

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| Report Number | MAED/26-002 |
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# Important Information to Readers

This report has been prepared for Mr. Ken Povey 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.

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# 1. Introduction

Leigh Ecology Ltd was commissioned by Mr. Ken Povey to undertake a dusk bat presence/absence survey of Maes Derwen, Higher Lane, in support of a proposed redevelopment of the property.

A Preliminary Bat Roost Assessment (PBRA) undertaken in June 2026 identified the dwelling as having low bat roost potential, owing to the presence of a small number of Potential Roost Features (PRFs) associated with deterioration to the wooden panelling, fascias and framing. In accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th Edition, 2023), a single dusk emergence survey was subsequently undertaken to determine the presence or likely absence of a bat roost.

Bats and their roosts are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). The purpose of the survey was to determine whether the building supports a bat roost and to identify any ecological constraints associated with the proposed renovation

This report presents the survey methodology, survey results, an assessment of the findings and recommendations to inform the proposed application.


Location of target building named Maes Derwen

# 2. Site Context

## 2.1 Site Location

The survey relates to a small building dwelling named “Maes Derwen”; The property is a detached wooden, brick and historic train carriage building located near to the village Rossett. The property is currently unoccupied and is proposed to be renovated. The site ite is surrounded by overgrown tall, mostly other neutral grassland within the site boundary. The wider landscape is predominantly rural in character, comprising agricultural fields, mature hedgerows, scattered trees and some residential properties, providing good connectivity for commuting and foraging bats.

## 2.2 Building Description

Maes Derwen comprises a mainly wooden boarded, mixed material dwelling comprising a historic train carriage comprising a section of the building. The remainder of the building is mostly brick based, with corrugated sheet roof panelling. The condition of the mostly wooden train carriage section is fairly deteriorated, with damage to external wooden panelling and some rotting evident. The remainder of the building is of brick base, which is in good condition and chimney stacks externally that are in good condition also.

## 2.3 Surrounding Habitat

The building features atop a site that has been unmanaged for a fair period of time, with tall ruderal and other neutral grassland abundant surrounding the building, which is ideal bat foraging habitat. The surrounding environment is typical rural landscape, with typical connecting hedgerows, tree clusters and woodland copses and richer habitats.

# 3. Survey Methodology

## 3.1 Survey Objectives

The survey was undertaken to determine the presence or likely absence of roosting bats within Maes Derwen and to identify any bat emergence or re-entry points associated with the building.

The findings are intended to establish whether bats present a constraint to the proposed renovation of the existing building, and to inform any mitigation or licensing requirements necessary to support the planning application.

## 3.2 Survey Guidance

The survey was undertaken with reference to the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 4th Edition (Collins, 2023), including the amendments published by the Bat Conservation Trust in March 2024.

The guidelines provide a framework for professional bat survey work but recognise that survey design should also be informed by professional judgement and the specific characteristics of the building and proposed works.

## 3.3 Survey Rationale

A Preliminary Bat Roost Assessment (PBRA) undertaken on 22nd June 2026 identified a small number of Potential Roost Features (PRFs) associated with mostly damaged wooden panelling across the building.

Taking account of the limited suitability of the identified features, the condition of the internal roof space and the surrounding habitat, the building was assessed as having Low Roost Potential. A single dusk emergence survey was therefore undertaken in accordance with current Bat Conservation Trust guidance.

## 3.4 Survey Method

One dusk emergence survey was undertaken during the active bat season. Surveyors were positioned to provide clear visual coverage of the roof elevations and the Potential Roost Features identified during the Preliminary Bat Roost Assessment.

Particular attention was paid to the PRF's identified during the Preliminary Assessment, that could provide access for crevice-dwelling bats.

The survey commenced at least 15 minutes before sunset and continued until at least 90 minutes after sunset. During this period, surveyors recorded:

- any bats emerging from or returning to the building;
- the location and nature of any emergence or re-entry point;
- bat species and numbers;
- direction of flight;
- commuting and foraging activity around the building; and
- the time of each relevant observation.

Thermal imaging equipment was used to supplement direct visual observation and assist in distinguishing genuine emergence from bats passing close to the building.

## 3.5 Survey Equipment

The survey was undertaken using a combination of full-spectrum acoustic bat detectors and thermal imaging equipment.

Surveyors were equipped with:

- Wildlife Acoustics Echo Meter Touch;
- Apple iPad Air

- Pixfra ARC Series PFI-A613 thermal imaging camera;





Acoustic detectors were used to record and assist with the identification of bat species present during the survey. Thermal imaging equipment provided additional visual coverage of the building and supported the assessment of bat flight paths and possible emergence behaviour.

## 3.6 Survey Conditions

The survey was undertaken under weather conditions suitable for bat activity. The survey was not affected by persistent or heavy rainfall, strong winds, unusually low temperatures or other environmental conditions likely to materially reduce the effectiveness of the survey.

The survey date, sunset time, survey period, personnel, temperature, wind conditions, cloud cover and precipitation are *summarised in Table 3.1 below*.

## 3.7 Survey Limitations

All elevations and Potential Roost Features identified during the Preliminary Bat Roost Assessment were visible from the survey positions, and no significant constraints to observation were encountered.

As with any dusk emergence survey, the assessment represents bat activity recorded during a single survey visit. However, the survey effort was proportionate to the building's previous classification as having low bat roost potential and was undertaken during the appropriate seasonal period and under suitable weather conditions.

The survey is therefore considered sufficient to determine the presence or likely absence of a bat roost within the building for the purposes of the current planning application.

**Table 3.1** Survey details and weather conditions

| Parameter | Details |
|---|---|
| Survey Date | 4th August 2026 |
| Survey Type | Dusk emergence survey |
| Sunset Time | 21:01 |
| Survey Period | 15 minutes before sunset until 90 minutes after sunset *(in accordance with Bat Conservation Trust guidance – 4th edition)* |
| Personnel | **Roy Leigh ACIEEM** (Bat Class Licence No. 2025-85633-CL18-BAT) – 25+ years' professional experience.<br><br>**Cara Evans, BSc (Hons),** 5+ years' professional experience. |
| Temperature | 21°C |
| Wind Conditions | Light wind |
| Cloud Cover | 0% |
| Precipitation | None |



**Figure 1**; Surveyor and Thermal Imaging Camera Positions

# 4. Use of Thermal Imaging Cameras

A Pixfra ARC Series PFI-A613 thermal imaging camera was utilised during the dusk emergence survey in accordance with the recommendations contained within *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Bat Conservation Trust, 4th Edition, 2023).

The thermal imaging camera was used to assist in the detection of bat emergence activity from the building, particularly during periods of low light when visual observations alone become less effective. The equipment also enhanced the surveyor's ability to monitor bat flight paths around the building and distinguish activity associated with the building from wider commuting and foraging activity within the surrounding landscape.

Thermal observations were undertaken alongside static visual observations and acoustic monitoring throughout the survey period. Where possible, thermal observations were cross-referenced with acoustic recordings to assist species identification and interpretation of bat behaviour.

The use of thermal imaging equipment increased confidence in the survey by improving the detection of bats under low light conditions and ensuring comprehensive coverage of the identified Potential Roost Features.

Representative thermal images are provided in Appendix A.

# 5. Survey Findings (in brief):

No bats were observed emerging from or re-entering Maes Derwen during the dusk emergence survey. The survey therefore found no evidence to indicate that the building was supporting a bat roost at the time of survey.

Very low levels of bat activity were recorded within the surrounding landscape. Common pipistrelle (*Pipistrellus pipistrellus*) was observed flying over the building amid foraging activity, and foraging within the adjacent field and along the surrounding hedgerow network, whilst a small number of high-altitude noctule (*Nyctalus noctula*) passes was also recorded. None of these observations were associated with the building, and no bats were seen investigating or interacting with the identified Potential Roost Features.

The survey findings indicate that, although the surrounding landscape provides suitable commuting and foraging habitat for bats, Maes Derwen was not being used as a roost at the time of survey. This is consistent with the findings of the Preliminary Bat Roost Assessment, which identified only a limited number of Potential Roost Features and no evidence of current or historic bat use within the accessible roof space.

The proposed renovation of the building is therefore considered unlikely to result in the loss of a bat roost, subject to the recommendations set out in Section 7.

# 6. Survey Results

**Table 6.1** Bat Activity Recorded During Survey

| Species | Activity Recorded |
|---|---|
| Common Pipistrelle (*Pipistrellus pipistrellus*) | Noted foraging over the building amid foraging activity within supporting grassland, bat noted foraging along hedgerow at road side. |
| Noctule (*Nyctalus noctula*) | A small number of high-altitude commuting passes recorded. No activity associated with the building. |

Low levels of bat activity were recorded within the site area, mostly using the supporting grassland as foraging space. Activity was limited to occasional foraging by common pipistrelle, and a small number of high-altitude noctule passes. No bats were observed investigating, emerging from or re-entering the building, and no behaviour indicative of roost use was recorded.

The surrounding hedgerows, mature trees and nearby linear habitat features provide suitable commuting and foraging habitat for bats and are likely to account for the activity recorded during the survey. However, all bat activity was associated with the nearby grassland and wider landscape rather than the building itself.

No evidence was obtained to indicate that Maes Derwen was supporting a bat roost at the time of survey. The survey findings are consistent with the Preliminary Bat Roost Assessment, which identified only a limited number of Potential Roost Features and no evidence of bat use within the property.

# 7. Conclusions and Recommendations

## 7.1 Assessment

The Preliminary Bat Roost Assessment undertaken in June 2026 identified a small number of Potential Roost Features (PRFs) associated with damaged timber cladding and wooden panels (especially concentrated at the train carriage). An internal inspection of the roof space found no evidence of current or historic bat use. Consequently, a single dusk emergence survey was recommended in accordance with current Bat Conservation Trust guidance.

The dusk emergence survey found no evidence of bats emerging from or re-entering the building, and no bats were observed investigating the identified Potential Roost Features. Very low levels of bat activity were recorded within the supporting grassland area and the surrounding landscape, comprising occasional foraging by common pipistrelle (*Pipistrellus pipistrellus*), three high-altitude passes by noctule (*Nyctalus noctula*).

Taken together, the findings of the Preliminary Bat Roost Assessment and dusk emergence survey provide no evidence that Maes Derwen was supporting a bat roost at the time of survey. The survey effort is considered proportionate to the building's assessed Low Roost Potential and is sufficient to inform the proposed redevelopment.

## 7.2 Recommendations

Based on the findings, no further bat presence/absence surveys are considered necessary in relation to the proposed renovation of the building.

Although no evidence of bat roosting was identified, all species of bat and their roosts remain protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Consequently, the following precautionary measures are recommended during renovation:

- A brief toolbox talk should be delivered to contractors prior to the commencement of renovation works to ensure site personnel are aware of their legal responsibilities should bats be encountered.

- Renovation should proceed in a careful and progressive manner, with roof coverings and timber fascia removed systematically rather than by indiscriminate mechanical renovation.
- Should a bat be discovered at any stage during the works, all works in the immediate vicinity should cease immediately, and a suitably qualified ecologist should be contacted for advice before works recommence.

As no bat roost was identified during either the Preliminary Bat Roost Assessment or the dusk emergence survey, **a European Protected Species Licence is not considered necessary for the proposed works.**

Although no bat roost was identified, the incorporation of integrated bat roost features within the completed development represents a proportionate biodiversity enhancement and is recommended where practicable. **It is therefore recommended that the development includes the installation of a number of integrated bat roost features (such as bat bricks or bat boxes suitable for crevice-dwelling species) within the completed development.** These should be positioned at an appropriate height on suitable elevations and retained for the lifetime of the development.

## 7.3 Precautionary Working Method

Whilst no evidence of bat roosting was identified, there remains a remote possibility that an individual bat could occupy a minor crevice within the building between the completion of the survey and the commencement of renovation.

**Accordingly, the initial removal of roof coverings and timber fascia should be undertaken carefully to allow any concealed bat to escape unharmed.** If a bat is encountered, works should stop immediately within the affected area, and advice should be sought from a suitably qualified ecologist before works continue.

The implementation of these precautionary measures will ensure that the risk of committing an offence under wildlife legislation remains negligible.

# Appendix A: Surveyor & Thermal Imaging Pictures








# Appendix B: Detailed Survey Observations

| Time | Species | Observation |
|---|---|---|
| 21:16 | C PIP | Foraging within grassland supporting. |
| 21:00<br>21:37<br>21:45 | Noctule | High altitude passes |
| 21:28-21:49 | C PIP | Constant foraging along hedgerow buffer and across grassland supporting building. |