178 Marsh Lane, Shepley

Nocturnal Bat Survey Report

HABITAT WORKS

June 2025

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Report Title: 178 Marsh Lane, Shepley
Nocturnal Bat Survey Report

Report to: WHP Architecture
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Version: *V0.1*

Issue Date: June 2025

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Version History	Author	Description	Date
V1.0	Joe Travis	Final Version for Issue	26.06.2025

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Executive Summary

Habitat Works Limited (Habitat Works) was commissioned in April 2025 by WHP Architecture to undertake further bat surveys of 178 Marsh Lane, Shepley, hereafter referred to as 'the Site'.

The Site contains a residential dwelling, in addition to associated gardens and outbuildings, with plans for reroofing of the dwelling in addition to an extension on the southern side of the building.

The recommendation for further bat surveys was made by Habitat Works Ltd following a Preliminary Roost Assessment (PRA) of the Site, detailed within the report '*178 Marsh Lane, Shepley – Preliminary Roost Assessment (Bats) Survey Report*' dated November 2024 The PRA found that the building had 'Moderate' roosting potential (Collins, 2023; Habitat Works Ltd, 2024).

As the House considered to be of 'Moderate' suitability for roosting bats, a total of two nocturnal surveys have been undertaken to confirm presence/likely absence of roosting bats, with the surveys separated by a minimum of three weeks, in line with good practice guidelines (Collins, 2023). Neither of these two surveys found evidence of roosting bats within the property and as such, it is considered that the House is likely absent of roosting bats.

Bats are highly transient, and as such, there is potential for individuals to utilise the PRFs on the Site in the future, despite the surveys concluding likely absence of bats in the building in line with good practice guidance (Collins, 2023). In the event that bats are found or suspected to be resident within the building during works, works should cease immediately, and an ecologist should be contacted for further advice.

To compensate for the loss of potential summer roosting and winter hibernating features across the Site as per the proposals, it is recommended that bat boxes or bat access roof tiles should be incorporated into the House as part of the development proposals. The model of boxes used should be suitable for crevice dwelling bat species, such as the Schwegler 1FR Bat Tube. The bat boxes should be placed as high as possible above the ground on the House, facing southern aspects to maximise chances of occupation.

1. Introduction

1.1 *Background*

1.1.1 Habitat Works Limited (Habitat Works) was commissioned in April 2025 by WHP Architecture to undertake further bat surveys of 178 Marsh Lane, Shepley (central Ordnance Survey National Grid Reference (OS NGR) SE 18455 09098), hereafter referred to as 'the Site' and as displayed in Figure 1.

1.1.2 The Site contains a residential dwelling, in addition to associated gardens and outbuildings, with plans for reroofing of the dwelling in addition to an extension on the southern side of the building.

1.1.3 The recommendation for further bat surveys was made by Habitat Works Ltd following a Preliminary Roost Assessment (PRA) of the Site, detailed within the report '*178 Marsh Lane, Shepley – Preliminary Roost Assessment (Bats) Survey Report*' dated November 2024 The PRA found that the building had 'Moderate' roosting potential (Collins, 2023; Habitat Works Ltd, 2024).

1.1.4 This report details the findings of the further bat surveys, comprising emergence surveys undertaken throughout 2025. Methodologies employed during the surveys are described along with the survey findings, evaluation, assessment and recommendations for any further survey work and/or mitigation/enhancement as required.

1.1.5 Recommendations are made in terms of impacts of the proposed development through habitat losses/potential gains on the Site post-development and the retention and protection of key ecological features.

2. Methodology

2.1 *Nocturnal Bat Surveys*

2.1.1 As the building is considered to be 'Moderate' suitability for roosting bats, a total of two of emergence surveys are required to confirm the presence/likely absence of roosting bats from the building in line with good practice guidance (Collins, 2023). The surveys were led by a suitably qualified and experienced ecologist and assisted by experienced bat surveyors positioned to ensure coverage of all aspects of the building which displayed suitability for roosting bats.

2.1.2 Surveyors used a combination of visual assessment and detection using industry-standard recordable ultrasonic bat detectors and night vision aids (NVAs), comprising infrared NightFox cameras utilising inbuilt and supplementary infrared lighting as required. Surveyors recorded the species and number of bats using any roost features within the buildings (where present) and recorded incidental bat activity observed in the locality during the survey period. The dusk emergence surveys commenced 15 minutes prior to sunset and finished 1.5 hours after sunset. The surveys were conducted during a period where the weather conditions were predominantly dry, with relatively low winds and temperatures in excess of 10°C.

2.1.3 The nocturnal surveys were digitally recorded to allow bat echolocation calls to be analysed using Kaleidoscope sound analysis software, with species identification confirmed with reference to bat call parameters presented in '*British Bat Calls: A Guide to Species Identification*' (Russ, 2021) as required. Video recordings were also taken to give greater confidence in the results of the surveys, allowing the option to view the footage post survey to review key moments or any events flagged by the surveyor during the survey. Darkest point photographs of the NVAs are provided within Appendix 1 as per good practice guidance.

2.1.4 Survey details are shown in Table 1 below, with surveyor locations and bat activity findings illustrated in Figures 1.1 – 1.2.

Table 1 – Nocturnal Bat Survey Details

Date/Time	Surveyors	Air Temp (°C)	General Conditions	Detector Type
15/05/2025 20:46 – 22:31 hrs Sunset: 21:01 hrs	AS, CB, EC, WK	Start: 12 End: 10	Dry, 100% cloud cover, light breeze (Beaufort Scale (BS): 2)	Echo Meter Touch 2 Pro
19/06/2025 21:25 – 23:10 hrs Sunset: 21:40 hrs	**JT**, MB, AS, WK	Start: 19 End: 17	Dry, 10% cloud cover, light breeze (BS: 2)	Echo Meter Touch 2 Pro

*Surveyors (Licenced bat surveyors in bold): **JT – Joe Travis ACIEEM (Bat Licence Ref. 2024-11983-CL18-BAT);** CB – Chris Birkinshaw; MB - Mick Birkinshaw; EC – Ellie Collier; WK – Wojciech Kaim; AS – Alice Shaw.

2.2 *Assumptions and Limitations*

2.2.1 In line with CIEEM guidance, this report is valid for a period of 12 months. In the event that works have not been commenced by June 2026, an update assessment should be undertaken.

2.2.2 During each survey, some of the NVAs failed. The first survey saw one of the cameras fail to record entirely, while some cameras during both the first and second emergence survey saw some NVAs failed to record

the survey with infra-red vision function on the camera, instead just the natural light present during the survey. Due to the position of the surveyors across the Site, the view of these NVAs were partially covered by the NVAs located on either side, which recorded the survey aided by the infra-red settings. Given the coverage of much of the NVA's line of view by the adjacent NVAs, in conjunction with the amount of artificial light that was present during the survey associated with the House, it is not considered that this was a significant impact to the survey, and the findings of the survey are considered to be robust and valid.

3. Findings and Evaluation

3.1 *Site Description*

3.1.1 The Site is located southwest of Shepley, West Yorkshire and comprises a residential dwelling, in addition to associated gardens and outbuildings.

3.1.2 The Site is immediately bounded by pastoral farmland, with drystone walls and hedgerows present across much of the landscape. In the wider environment, the land is dominated by agricultural land, while pockets of woodland and watercourses are present within 2 km of the Site.

3.1.3 The House itself is a single storey, stone-built bungalow with a pitched slate roof. The roof contains a series of gable ends, with an additional section that is hipped. The ridges of the roof are constructed with clay ridge tiles. The House contains PVC window and door frames, in addition to a glass porch on the southeastern aspect. The House contains wooden soffit boxes beneath the eaves.

3.1.4 The roof void of the building has been converted, with the void within the main pitch having been removed to add height to the ceilings beneath, while the section within the hipped area of the roof has undergone a loft conversion, including the installation of VELUX windows. Some sections within this conversion have been kept as a void for storage, in which these areas are fitted with roofing felt

3.2 *Nocturnal Bat Surveys*

Survey 1 – 15th June 2025

3.2.1 No roosting bats were recorded within the Site during the first survey (Figure 1.1).

3.2.2 The earliest bat recorded was a noctule *Nyctalus noctula* at 20:59 (2 minutes prior to sunset), which was recorded by one surveyor however it was not observed in flight. Common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and noctule were recorded throughout the survey. The individuals observed in flight by the surveyors were most regularly seen associated with the vegetated edges of the Site, commuting along the hedgerows and foraging over the larger, denser areas of vegetation. The final bat was recorded at 22:14 (73 minutes after sunset), pertaining to a common pipistrelle that was not seen in flight by the surveyors.

Survey 2 – 19th June 2025

3.2.3 No roosting bats were recorded within the property during the second survey (Figure 1.2).

3.2.4 The earliest bat recorded was a common pipistrelle at 22:07 (27 minutes after sunset), which was recorded by one surveyor however it was not observed in flight. Common pipistrelle and whiskered/Brandt's bat *Myotis mystacinus/Brandtii* were recorded throughout the survey. The individuals observed in flight by the surveyors were most regularly seen associated with the vegetated edges of the Site, commuting along the hedgerows and foraging over the larger, denser areas of vegetation, particularly to the east of the Site, where two common pipistrelle were observed foraging at the same time around a tree. The final bat was recorded at 23:09 (79 minutes after sunset), pertaining to a common pipistrelle that was not seen in flight by the surveyors.

4. Impact Assessment and Enhancements

4.1 *Proposals*

4.1.1 Proposals for the Site comprise the extension and reroofing the residential dwelling.

4.2 *Legislation*

4.2.1 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Under regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).

4.2.2 All UK bats are also included on Schedule 5 of the WCA 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

4.2.3 Barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, brown long-eared bat *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule and soprano pipistrelle bats are included as priority species under Section 41 of the NERC Act 2006.

4.3 *Assessment*

4.3.1 As the House considered to be of 'Moderate' suitability for roosting bats, a total of two nocturnal surveys have been undertaken to confirm presence/likely absence of roosting bats, with the surveys separated by a minimum of three weeks, in line with good practice guidelines (Collins, 2023). Neither of these two surveys found evidence of roosting bats within the property and as such, it is considered that the House is likely absent of roosting bats.

4.3.2 Bats are highly transient, and as such, there is potential for individuals to utilise the PRFs on the Site in the future, despite the surveys concluding likely absence of bats in the building in line with good practice guidance (Collins, 2023). In the event that bats are found or suspected to be resident within the building during works, works should cease immediately, and an ecologist should be contacted for further advice.

4.3.3 To compensate for the loss of potential summer roosting and winter hibernating features across the Site as per the proposals, it is recommended that bat boxes or bat access roof tiles should be incorporated into the House as part of the development proposals. The model of boxes used should be suitable for crevice dwelling bat species, such as the Schwegler 1FR Bat Tube. The bat boxes should be placed as high as possible above the ground on the House, facing southern aspects to maximise chances of occupation.

5. References

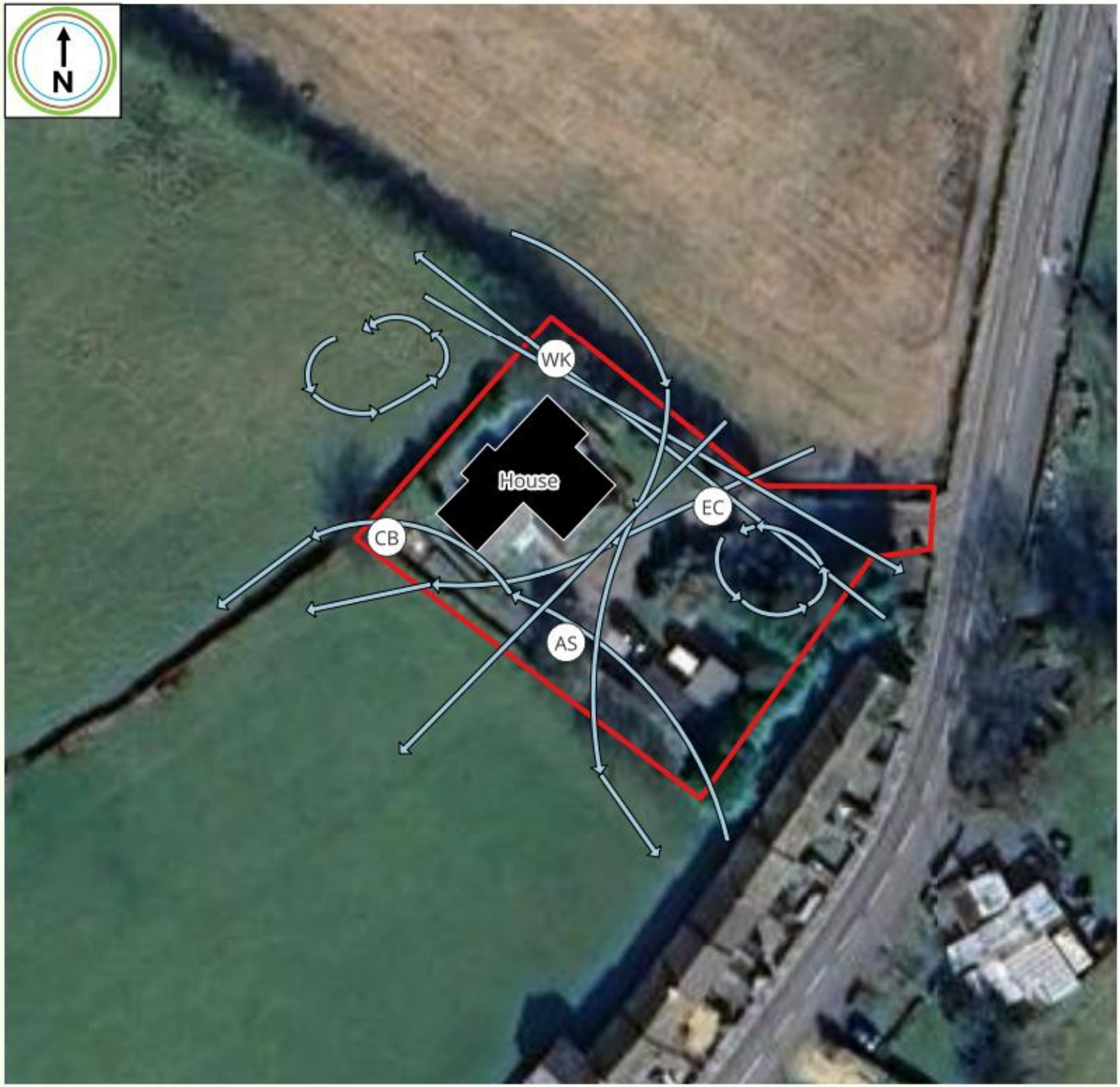
Collins, J. (2023) '*Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn)'. The Bat Conservation Trust, London.

Ecology Services Ltd (2024) '*Whine Lane, Read – Preliminary Roost Assessment (Bats) Survey Report*'.

Reason, P.F. and Wray, S. (2023). '*UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*'. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Russ, J. (2021). '*Bat Calls of Britian and Europe: A Guide to Species Identification*'. Pelagic Publishing, London. ISBN 9781784272258.

Figure 1.1 – 1.2 Nocturnal Bat Survey Results



Legend

- Site Boundary
- Surveyor Locations

Bat Flight Paths

- Common pipistrelle

0 5 10 15 20 m

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Figure 1.1
Survey Results Map 15th May 2025

Basemap: Copyright Google 2025 | June 2025 | Scale - 1: 1000 @ A4 | Drawing Reference: 250620/F1.1/JT

Legend

- Site Boundary
- Surveyor Locations

Bat Flight Paths

- Common pipistrelle

0 5 10 15 20 m

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178 Marsh Lane, Shepley

Figure 1.2
Survey Results Map 19th June 2025

Basemap: Copyright Google 2025

June 2025 | Scale - 1: 1000 @ A4 | Drawing Reference: 250620/F1.2/JT

Appendix 1. Darkest Point Photographs of Night Vision Aids (NVAs)

07/05/2025 – AS Location

07/05/2025 – CB Location

07/05/2025 – EC Location

20/06/2025 – AS Location

20/06/2025 – JT Location

20/06/2025 – MB Location

20/06/2025 – WK Location