

Yew Tree Lane, Holmbridge

Bat Survey Report

18th June 2025



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1. Summary

- 1.1.1 Nocturnal surveys of the barn and outbuilding off Yew Tree Lane, Holmbridge were commissioned by the clients Wendy and Tim Yates on 16th March 2025.
- 1.1.2 The survey was undertaken to inform proposals to re-develop the existing buildings as a dwelling.
- 1.1.3 This report should be read in conjunction with the Preliminary Ecological Appraisal Report for the site, written by JCA Arboricultural and Ecological Consultants in 2024 (JCA, 2024). During the survey undertaken to inform the Preliminary Ecological Appraisal Report, no evidence of bat roosting was recorded, however, the main barn was considered to display a moderate level of bat roosting suitability, with the outbuilding considered to display a low level of suitability. As such, two further emergence surveys were recommended in relation to the main barn, with one further emergence survey in relation to the small outbuilding.
- 1.1.4 Two dusk emergence surveys were undertaken, covering both buildings, on 7th May and 10th June 2025.
- 1.1.5 Bat survey works undertaken have confirmed the presence of one common pipistrelle day roost within the barn, which will be lost during re-development.
- 1.1.6 A bat mitigation licence will be required to permit the proposed scheme, with a mitigation plan proposed. Recommended roost mitigation comprises installation of three building-integrated bat boxes and the use of a bat safe roofing membrane. It is also recommended that new external lighting should be avoided where possible and sensitively designed, where necessary. If the licence is to be applied for after May 2026, then an update nocturnal survey will be required.

2. Introduction

- 2.1.1 Further nocturnal surveys of the barn and outbuilding off Yew Trees Lane, Holmbridge were commissioned by the clients Wendy and Tim Yates on 16th March 2025.
- 2.1.2 The survey was undertaken to inform proposals to re-develop the existing buildings as a dwelling.
- 2.1.3 This report should be read in conjunction with the Preliminary Ecological Appraisal Report for the site, written by JCA Arboricultural and Ecological Consultants in 2024 (JCA, 2024). During the survey undertaken to inform the Preliminary Ecological Appraisal Report, no evidence of bat roosting was recorded, however, the main barn (B1, Figure 2) was considered to display a moderate level of bat roosting suitability, with the outbuilding (B2) considered to display a low level of suitability. As such, two further emergence surveys were recommended in relation to the main barn, with one further emergence survey in relation to the outbuilding.
- 2.1.4 The site was accessed from Yew Tree Lane, adjacent to a number of houses approximately 2.1 km southwest of the centre of the town of Holmfirth.

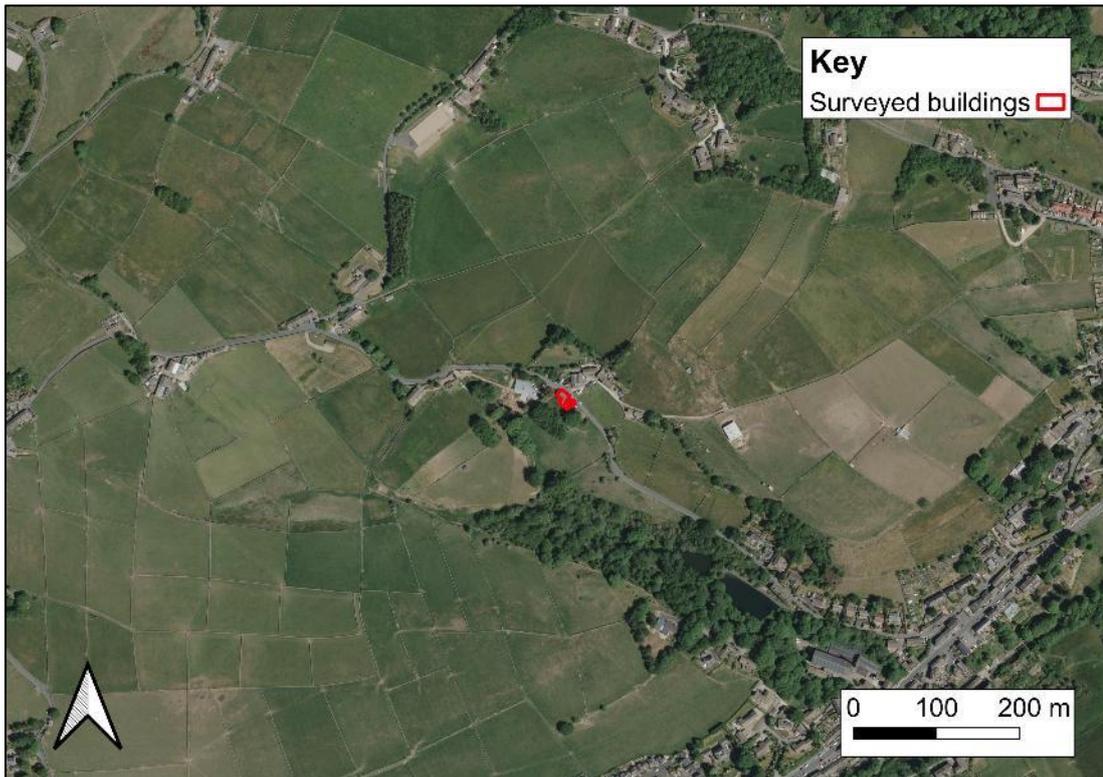
3. Habitat Assessment

- 3.1.1 The surveyed buildings were located in an elevated position, however, the tree line to the southwest provided some shelter from wind. Tree lines in the local area comprised high quality bat foraging habitat with more extensive areas of prime foraging habitat present in the valley bottom, including mill ponds, woodland and the River Holme.
- 3.1.2 The buildings were sited in an area with no artificial lighting to the south and the local area was expected to support an above average density of foraging bats belonging to a variety of species.

Table 1. Location and habitat table

Name and address: Yew Tree Lane, Holmbridge, Holmfirth, HD9 2NR			
OS Grid Ref. SE 12190 07450		Altitude. 240 m	
Local Planning Authority: Kirklees Council			
Features on site and adjacent to site			
Feature	On site	Adjacent	Comments
Buildings	✓	✓	Located adjacent to several dwellings.
River			River Holme 550 m southeast of site.
Standing water			Two former mill ponds 200 m southeast of site.
Bridges tunnels and culverts			Associated with River Holme.
Trees	✓	✓	Trees adjacent to surveyed buildings.
Woodland			Broadleaved woodland 80 m south of site.
Grassland	✓	✓	Modified grassland adjacent to barn.

Figure 1. Site location, with buildings outlined in red



3.2 Aims

3.2.1 The survey was conducted to help determine the following:

- The presence/absence of roosting bats.
- Bat roosting areas and access/egress points into the structures.
- The number and species of bat roosting within the structures.
- Identify further survey work or mitigation requirements.

4. Methodology

4.1 Field Survey

Nocturnal Surveys

4.1.1 The following personnel conducted both nocturnal surveys:

- Robert Bell (MCIEEM; Bat Survey Class License WML-A34-Level 4, 2016-25236-CLS-CLS)
- Amanda Murphy)(QualCIEEM; Bat license WML-A34-Level 2, 2020-47913-CLS-CLS)

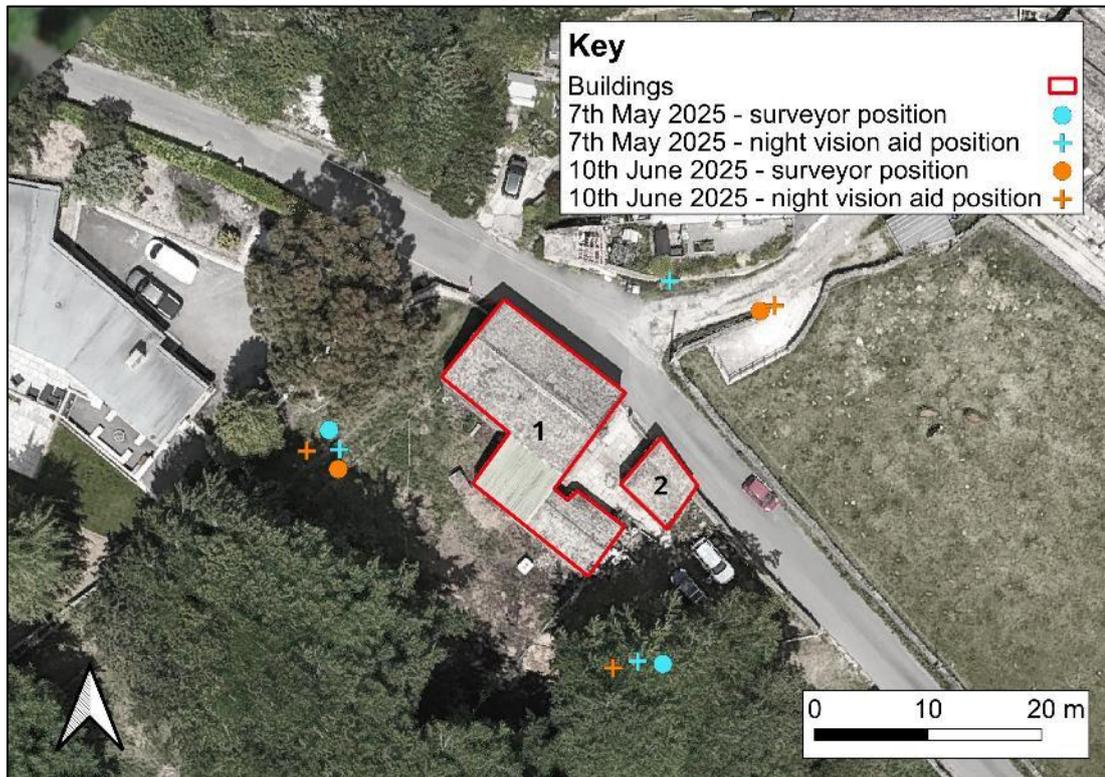
4.1.2 Two nocturnal surveys were undertaken in compliance with relevant Bat Survey Guidelines (Collins 2023). Three surveyor positions were covered during each survey visit, with two manned positions and one unmanned position on each night. The dusk emergence surveys continued from 15 minutes prior to sunset until 1.5 hours after this

time. Nocturnal surveyor positions are shown on Figure 2. Both buildings were covered during both survey visits.

4.1.3 The surveys were undertaken on the following dates:

- Dusk emergence survey on 7th May 2025
- Dusk emergence survey on 10th June 2025

Figure 2. Nocturnal survey plan



4.1.4 The following equipment was used during the surveys:

- Wildlife Acoustics EM Touch bat detectors and iPad/iPod recorders.
- Three night vision aids were used during each visit, comprising a mix of a Guide TK612 thermal sight, a Pixfra A613 thermal sight and Canon XA10 infra-red video cameras (with external floor lights).

4.1.5 Camera footage from the unmanned survey position on the 7th May 2025 was reviewed in its entirety by Robert Bell. Footage from the unmanned survey position on 10th June 2025 was initially analysed by Wildlife Imaging Systems. Their software identified all movement (frame by frame) within the videos and produced a set of images showing the movement traces for each 30 seconds of video. These images were then reviewed by Robert Bell and where the image identified a trace that could potentially have been a bat flight, the relevant section of footage was also reviewed. An example image produced by the software is shown in Plate 1 overleaf. Only sections of footage relating to confirmed or potential bat roosting activity were reviewed from the manned survey position.

Plate 1. Example 30 second summary image from camera position on 10th June 2025, with the emerging bat indicated by dotted red-green-blue line on upper image



4.2 Survey Limitations

4.2.1 No significant survey limitations were encountered.

5. Results

Nocturnal Surveys

7th May 2025 – dusk emergence survey

- 5.1.1 The temperature at the beginning of monitoring was 10 °C, with a light breeze (Beaufort Scale Force 2) and seven oktas of cloud cover (7/8 oktas). The temperature dropped to 8 °C, with the wind level remaining the same and cloud cover increasing to eight oktas. The weather was dry throughout.
- 5.1.2 The first bat recorded comprised a common pipistrelle *Pipistrellus pipistrellus* which commuted onto site at 21:04. Common pipistrelle activity was intermittent for the remainder of the survey period with no other bat species recorded.

10th June 2025 – dusk emergence survey

- 5.1.3 The temperature at the beginning of monitoring was 11 °C, with a light air (Force 1) and one okta of cloud cover (1/8 oktas). The temperature dropped to 9 °C during the survey, with the wind level and cloud cover remaining the same. The weather was dry throughout.
- 5.1.4 At 22:07 a common pipistrelle was recorded emerging from a roost location on a southeast facing section of wall top, located beneath corrugated metal sheeting on the barn (Plate 2). This emerging bat can be seen here: <https://youtu.be/ahwAyaiZFrc?si=xKDFH0xqTH8ekTsA> (the clip is unlisted).
- 5.1.5 The first bat recorded comprised a common pipistrelle heard by the surveyor west of the barn at 21:48. Thereafter up to two bats at a time of this species were regularly recorded foraging on site, principally to the south of B1. At 22:37 a bat of a *Myotis* species was observed commuting south of the barn; this bat could not be identified to species level.

Plate 2. Common pipistrelle roost location recorded on 10th June 2025



6. Assessment

6.1 Summary and Evaluation of Findings

- 6.1.1 Nocturnal survey of the barn recorded the presence of a common pipistrelle day roost, used by a peak count of one bat, with the barn (B1). No bats were recorded from the outbuilding (B2) and absence of roosting bats is assumed for this building.
- 6.1.2 Proposals to re-develop the barn will result in the loss of this roost location.

6.2 Legislation and Policy Guidance

Bats

- 6.2.1 Bats receive protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981 (as amended).
- 6.2.2 It is an offence to:
- Deliberately capture (or take), injure or kill a bat.
 - Intentionally or recklessly disturb bats whilst they are occupying a structure or place used for shelter or protection or obstruct access to any such place.
 - Damage or destroy the breeding or resting place (roost) of a bat.
 - Possess a bat (live or dead), or any part of a bat.
 - Intentionally or recklessly obstruct access to a bat roost.
 - Sell (or offer for sale) or exchange bats (dead or alive), or parts of parts.
- 6.2.3 The Convention on Biological Diversity, signed in Rio de Janeiro, Brazil in 1992, requires member states to develop national strategies and to undertake a range of actions aimed at maintaining or restoring biodiversity. The UK Biodiversity Strategy was produced in response to the Convention.
- 6.2.4 In England & Wales, the Natural Environment and Rural Communities (NERC) Act, 2006 imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, “to have due regard, as far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”. It notes that “conserving biodiversity includes restoring or enhancing a population or habitat”. Barbastelle *Barbastella barbastellus*, Bechstein’s *Myotis bechsteinii*, brown long-eared, greater horseshoe *Rhinolophus ferrumequinum*, lesser horseshoe *Rhinolophus hipposideros*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* bats are included as priority species within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. At a more local level there are Local Biodiversity Action Plans for smaller geographical areas which may cover a greater or lesser range of bat species.
- 6.2.5 The National Planning Policy Framework for England was revised in 2023. This document states that plans should ‘promote the conservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity’.

6.3 Further Survey, Recommendations and Enhancements

Bats

Bat licensing

- 6.3.1 A bat mitigation licence of some form will be required to permit the proposed development works. The site appears to be eligible for registration on either the Bat Mitigation Class Licence or the Earned Recognition Licence. Alternatively, a full European Protected Species licence could be obtained in relation to the scheme. In all instances, a licence cannot be applied for until all required consents have been granted and any nature conservation related planning conditions have been discharged. Depending upon the type of licence, Natural England require between 10 - 30 working days to determine mitigation licence applications.
- 6.3.2 Natural England typically require some nocturnal survey to have been undertaken during the most recent bat activity period. Consequently, if works commence after May 2026, then a further update nocturnal survey would be required.

Works timings

- 6.3.3 Although the barn offers limited potential for use by hibernating bats, pipistrelle bats are known to occupy a variety of roost sites during the winter months. Therefore, it is recommended that roof removal works be scheduled outside the peak hibernation period (December to February) to minimise the risk of impacting a hibernating bat/s.

Avoidance of killing or injuring bats during construction

- 6.3.4 In order to avoid killing or injuring roosting bats during works, removal of the roof will need to be overseen by a licensed bat ecologist, in accordance with the terms of the mitigation licence. The bat ecologist will oversee the removal of roof materials from both the barn and outbuilding. Any bats captured by the ecologist during supervision works should be subject to a health check before being placed in a bat box, to disperse from there.

Long-term roost mitigation

- 6.3.5 Over time bats will often get into renovated buildings. Bats have been shown to regularly become entangled and die in the component filaments of standard modern woven roofing membranes (Appendix 1). There are however now a number of modern roofing membranes which have been shown to be relatively safe for bats. As a result, and given the presence of a bat roost on site, the roof of the new dwelling should be lined with a 'bat safe' membrane.
- 6.3.6 To offset the loss of the identified roost, three new integrated bat boxes (Plates 3-5) should be integrated into, the redeveloped barn. At least two of these boxes should be located on either the southeast or southwest elevations.

Plates 3-5. Build-in bat roost products



Lighting

- 6.3.7 The barn is sited in a mainly dark rural location adjacent to higher quality bat foraging habitat. Consequently, new external lighting should be avoided wherever possible within the proposed development. Where lighting is necessary, then it is strongly recommended this is subject to passive infra-red sensor activation only, in order reduce the times of operation. New lighting must be designed to avoid any illumination of potential roost locations and all decorative lighting must be completely avoided. Any new lighting must be low height, directed downwards, low output and of a warm colour tone (ILP, 2023).

Monitoring surveys

- 6.3.8 No monitoring surveys are considered necessary in relation to this project.

6.4 Conclusions

- 6.4.1 A single common pipistrelle day roost was recorded from the surveyed barn. This roost will be lost during re-roofing.
- 6.4.2 A bat mitigation licence will be required to permit the proposed scheme, with a mitigation plan proposed. Recommended roost mitigation comprises installation of three building-integrated bat boxes and the use of a bat safe roofing membrane. If the licence is to be applied for after May 2026, then an update nocturnal survey will be required.

7. References

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust.

ILP (2023) Guidance Note 08/23: Bats and Artificial Lighting at Night. Institute of Lighting Professionals and Bat Conservation Trust.

JCA (2024) Land at Yew Tree Lane – Preliminary Ecological Appraisal. JCA Arboricultural and Ecological Consultants Ltd.

Appendix 1. Bats and Roofing Membranes

Standard roof membranes can cause the death of significant numbers of bats. Traditional bitumen coated roofing felt is recommended where roosting bats are expected to be present.

The problem

Non-bitumen coated membranes used below roof slates and tiles present a significant problem for bats. Over time, strands are pulled away from the surface of these materials as bats crawl over them. These fuzzy strands are very strong and can tangle and trap bats, sometimes causing the death of bats over multiple years¹.

One example we have encountered comprised a pipistrelle roost which formed in a building extension constructed in 2009. Over the course of just 13 years the roofing felt degraded to the extent that it trapped and killed more than 10 bats. Fortunately, the problem in this roost was identified and remedial work was undertaken to replace the roofing membrane in 2022.

Plate A1.1. Four dead pipistrelles tangled in breathable roofing felt



Although a new roof might be considered to lack potential bat access points, that is often not the case. Roofs covered with stone slates almost always have gaps large enough to be accessed by bats, this is often also the case where imitation stone slates are used. On older buildings the uneven roof timbers and/or building design also often results in gaps on wall tops and between slates. Even on new builds it is often possible for bats to access potential roosts via features such as dry verge capping. Some bats can access a space no wider than a biro pen, therefore it is not surprising that they can find their way into most buildings.

Safe roofing membranes (and membranes behind cladding)

The best roofing membrane option for areas where bat roosts are expected is traditional Type 1F bitumen coated hessian backed roofing felt. Bitumen coated roofing felts have been widely and safely used as a secondary weather barrier since approximately the 1950s/1960s. Wooden sarking has also been used for many decades and if appropriately treated, is safe for

¹ Wearing S. Essah E., Gunnel K. & Bonser R. (2013) Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom. *Architecture and Environment*

use in bat roosts, or where bats could be, present. Most commercially available products come pretreated but if required, a list of suitable timber treatment products are listed on the government website². Wooden sarking also has the benefit of adding additional insulation and is usually breathable.

There are breathable membrane products which have passed a test known as the snagging propensity test. The test attempts to replicate the wear and tear which results from bats crawling over the membrane. At the time of writing (to our knowledge) two products have passed the test and are accepted for use in bat roosts by Natural England: SIGA Majcoat 200 SOB Diffusion and TLX BatSafe^{3,4}. Although both have passed this test, it is unclear how they would fair over a long timeframe, and particularly within larger bat roosts. For this reason, we do not recommend that they are used for known bat roosts, and particularly for large (maternity roosts). However, they may provide a much needed option for roofs where future bat use cannot be ruled out, sarking boards are not an option, and a breathable solution is required.

Additional considerations

In recent years a fairly substantial proportion of the lofts we have surveyed which had existing breathable felt, were found to have been damaged by wasps (Plate A2.2). In these situations, the wasps appear to have chewed holes in the felt and formed nests in the holes. This doesn't appear to be a problem associated with the traditional bitumen coated roofing felt. Obviously, any holes within roofing felt would be likely to significantly reduce its functionality as a secondary weather barrier. Where bats or birds do come into contact with breathable roofing membranes, they can damage the membrane causing it to leak and they can also significantly reduce the breathability of the felt in that location.

Plate A1.2. Damage to a breathable roofing membrane adjacent to a wasp nest



Traditional bituminous Type 1F roofing felt is a non-breathable product and therefore ventilation is required. This can be achieved, even in buildings with vaulted ceilings, but requires some consideration during the design stage. Products to increase the ventilation within roofs where bituminous Type 1F felt has already been installed are also available but should not be considered as the primary ventilation option.

² Accessible at: <https://www.gov.uk/government/publications/bat-roosts-insecticides-and-timber-treatments/timber-treatment-products-suitable-for-use-in-or-near-bat-roosts>

³ <https://www.gov.uk/government/publications/bats-apply-for-a-mitigation-licence#full-publication-update-history~:text=Use%20of%20safe%20roofing%20membranes>

⁴ TLX BatSafe requires all joints and cut edges to be taped in order to prevent the fraying of bare edges.

Appendix 2. Bat Records

In accordance with best practice and the requirements of bat licensing, bat records collected during surveys are supplied to the relevant biological record centres and bat groups. The records to be supplied in accordance with this survey are shown below. House names/numbers are not given out by record holding organisations except under very particular circumstances. Please let us know if you object to the distribution of these records.

Date	Species	Site Address	OS Grid Reference	Notes
10/06/2025	Common pipistrelle	Yew Tree Lane, Holmbridge, Holmfirth, HD9 2NR	SE 12190 07450	Day roost – x1 bat
10/06/2025	Unidentified <i>Myotis</i> bat	Yew Tree Lane, Holmbridge, Holmfirth, HD9 2NR	SE 12190 07450	Pass