

82 Manchester Road, Slaithwaite

Bat Survey Report

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1. Summary

- 1.1.1 A bat survey of a dwelling and garage at 82 Manchester Road, Slaithwaite was commissioned by C Pickering on 15th April 2024. The survey was undertaken to inform the demolition of the garage and construction of an extension to the dwelling.
- 1.1.2 The preliminary roost assessment was conducted on 29th April 2024. The survey aimed to determine the presence or likely absence of roosting bats and, if present, the roost locations, potential access points, species present, and the level of use, where possible.
- 1.1.3 The two-storey, semi-detached, stone dwelling had a hipped two-pitched roof. The single storey garage was constructed from prefabricated concrete panels and had a shallow two pitched roof covered with corrugated cement boards.
- 1.1.4 The dwelling had potential bat access features below the hipped ridge and beneath a slightly raised slate. The building had no roofing felt and a lack of bat evidence within the roof void. Overall, the potential roost features present within the dwelling were considered to have negligible suitability to be used by roosting bats.
- 1.1.5 The garage had gaps between the corrugated cement boards and the top of the prefabricated concrete walls. These gaps were not considered to comprise a roost feature in their own right, but they did allow access into the interior of the garage. The lack of evidence within the garage suggested that the building was not used by roosting bats.
- 1.1.6 The survey undertaken was considered sufficient to determine the likely absence of roosting bats within both buildings.
- 1.1.7 No further bat or bird survey is required. Although the features present are considered to have negligible suitability for use by roosting bats, a single bat can occasionally roost almost anywhere and vigilance should be taken when removing the ridge tiles on the hips of the roof. If bats are recorded at any time during works, work in that area should cease and advice sought from Middleton Bell Ecology.
- 1.1.8 Although there is no requirement to use a bat safe roofing felt, it should be considered during the construction of any new roof, or reroofing project. Additional information on roofing membranes and the risk they pose to bats is included as an appendix to this report.
- 1.1.9 Bat and bird box enhancement measures were suggested to the client but they asked that they were not included in this instance due to the homeowner's phobia of bats, however, recommendations on external lighting have been proposed. Any changes which result in a reduction, or more appropriate use of external lighting would result in a small net benefit to the nocturnal wildlife in the area.
- 1.1.10 The recommendations included in this report are considered valid for 24 months from the survey date.

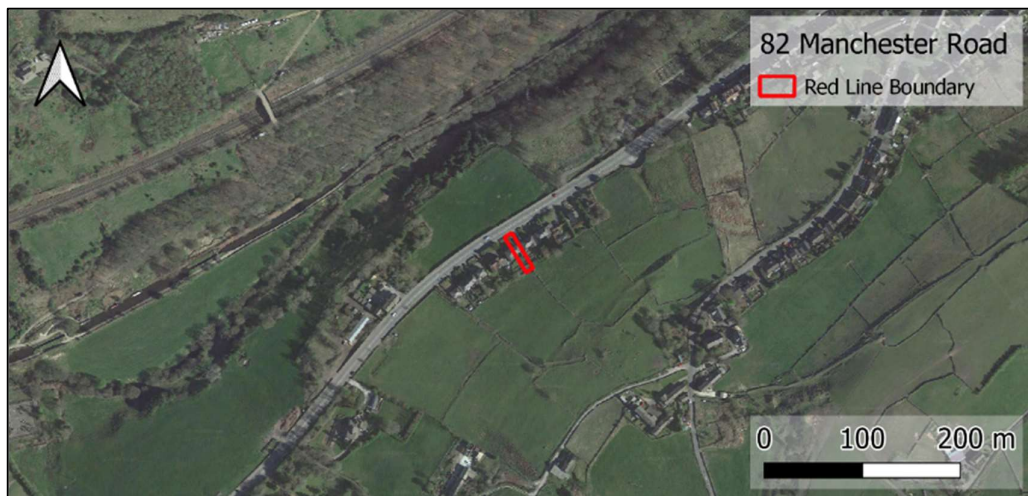
2. Introduction

- 2.1.1 A bat survey of a dwelling and garage at 82 Manchester Road, Slaithwaite was commissioned by C Pickering on 15th April 2024. The survey was undertaken to inform the demolition of the garage and construction of an extension to the dwelling. The preliminary roost assessment was conducted on 29th April 2024.
- 2.1.2 The legislative context to the survey and assessment reported here is included in Appendix 1.

3. Habitat Assessment

- 3.1.1 The immediate surrounding area consisted of adjacent dwellings and gardens along the southern edge of Manchester Road, surrounding by pasture. The site was located on a north facing valley slope. Woodland and the River Colne was present in the bottom of the valley (Figure 1).

Figure 1. Site location, outlined red



- 3.1.2 Although the site was relatively rural, street lighting was present along the northern edge of Manchester Road, and the location was fairly exposed. The habitat within the site and the immediate surrounding area was considered to be broadly average in terms of its suitability for use by foraging and commuting bats with considerably better habitat located closer to the valley bottom.
- 3.1.3 The diversity of bat species present within the area was considered likely to be slightly below average. Table 1 summarises the habitats present within, and adjacent to the red line boundary.

Table 1. Location and habitat table

Name and address: 82 Manchester Road, Slaithwaite			
OS Grid Ref. SE 07022 13261		Altitude. 175 m	
Local Planning Authority: Kirklees Council			
Features on site and adjacent to site			
Feature	On site	Adjacent	Comments
Buildings	✓	✓	The house, garage, and adjacent dwellings.
Watercourse bordered by trees			The nearest watercourse was The River Colne approximately 100 m north-northwest.
Standing water			None.
Bridges tunnels and culverts			None.
Trees		✓	Some young and semi-mature trees were present in the nearby gardens, approximately 25 – 30 m southeast and southwest of the dwelling.
Woodland			The nearest woodland was approximately 100 m north-northwest.
Grassland	✓	✓	Lawns were located within the garden, and adjacent properties. Pasture was present to the north and south.

3.2 Aims

3.2.1 The survey was conducted to help determine the:

- Presence/absence of roosting bats.
- Potential roosting areas and roost access/egress points.
- Level of bat roost suitability associated with the buildings.
- Current or historic use of the buildings by nesting birds.
- Further survey work or mitigation requirements.

4. Methodology

4.1 Data Consultation

4.1.1 Given the nature and scale of the development and the findings of the fieldwork, no data was requested from the local bat group or local biological records centre.

4.1.2 A search of the Multi-Agency Geographical Information for the Countryside (MAGIC) website was undertaken to identify historic European Protected Species (EPS) licences obtained for locations within 2 km of the site.

4.2 Field Survey

Internal and External Visual Inspection

4.2.1 The survey of the building was conducted on 29th April 2024 by Greg Slack (MCIEEM; Class licence WML-A34-Level 4, 2017-28068-CLS-CLS).

4.2.2 The following activities were carried out during the survey:

- An examination of all parts of the survey area to record structural features and condition, and features that may be suitable for use by roosting bats. Particular attention was paid to any holes, crevices or gaps in walls, lintels, gaps/holes in cladding and soffits and to the possibility of finding droppings stuck to walls, floors or other surfaces (including below any insulation), or insect remains below features.
- Any signs indicative of a bat roost presence including live or dead bats, droppings, feeding remains, scratch marks and staining were recorded.
- An assessment of the building's bat roost suitability (negligible, low, moderate, high or confirmed roost).

4.2.3 The following equipment was used during the survey:

- a Clulite high powered torch;
- binoculars;
- an endoscope; and
- a camera.

4.3 Survey Limitations

4.3.1 Signs of bat presence deposited on the exterior of the buildings during the bat activity survey season would likely have been removed by weather action prior to the survey being undertaken. It is nevertheless an acceptable time to undertake preliminary roost assessments (Collins, 2023) and it is considered that an effective assessment of the building's bat roost potential was possible.

5. Results

5.1 Data Consultation

- 5.1.1 A total of five bat EPS mitigation licences had been issued, for two sites within 2 km of the survey area. The details of the licences are given in Table 2 below.

Table 2. Bat EPS mitigation licences within 2 km

Species listed on the licence	Licence start date	Licence end date	What does the licence cover?	Approximate distance (m)	Direction
Common pipistrelle, and soprano pipistrelle	11/03/2014	31/08/2015	Damage and destruction of a resting place.	1080	Northeast
Common pipistrelle, and soprano pipistrelle	01/01/2019	31/12/2020	Destruction of a resting place.	1440	Southwest
Common pipistrelle	09/12/2015	08/12/2020	Destruction of a resting place.	1780	North
Common pipistrelle	18/02/2016	07/12/2020	Destruction of a resting place.	1780	North
Common pipistrelle	22/11/2016	22/11/2016	Destruction of a resting place.	1780	North

5.2 Field Survey

Internal and External Visual Inspection

- 5.2.1 Although potential bat access points into both the dwelling and garage were present there was a lack of any evidence of bat roosting within the buildings. Overall, both buildings were considered to be of negligible suitability for use by roosting bats.

Building description - dwelling

- 5.2.2 The two-storey dwelling had a hipped two-pitched roof covered with Welsh slate (Plate 1 and 2). The walls were constructed from stone and the metal guttering was suspended on stone supports. No fascias or soffit box was present.
- 5.2.3 The windows and doors were predominantly framed with uPVC although a transom window above the front door and a ground-floor window on the east side of the house were framed with wood. A small single-storey open porch was present on the eastern edge of the building (Plate 3). The porch had a wooden frame and lean to-roof which was covered with a bituminous roofing felt.

Plate 1. The dwelling viewed from the north (adjacent properties greyed out)




Plate 2. The dwelling viewed from the southeast



External inspection - dwelling

5.2.4 The only potential bat roost feature present comprised gaps below or between ridge tiles and one gap beneath a raised slate, shown in Table 2 and Figure 2 below.

Table 2. Potential Roost Features (PRF) Recorded

PRF	Photo	Description
A		Section of missing mortar.



PRF	Photo	Description
B		Very slightly raised slate.
C		Small gaps below the angle cap section of the hip ridge tiles.

Figure 2. PRF Locations



- 5.2.5 The potential roost features identified outside the building had marginal suitability to be used by roosting bats. The missing mortar on the hip was located on the north side of the building, the gaps between angle cap ridge tiles were considered likely to be shallow and the raised slate was unlikely to be suitable unless there was a membrane beneath.
- 5.2.6 The rest of the building was well maintained and no other suitable gaps were present. Outside lights were present on the eastern and southern aspects of the building (Plate 3).

Plate 3. The eastern aspect of the building showing the building-mounted lamps



- 5.2.7 No bird nests were present within the building and no potential for use by nesting birds was recorded.

Internal inspection - dwelling

- 5.2.8 The roof was supported by timber purlins, rafters and a ridge beam. No roof lining was present allowing the underside of the slates to be inspected from the void. The roof was supported by timber purlins, rafters and a timber ridge beam, with the purlins resting on the internal brick wall and the rafters supported by the external walls (Plate 4).

Plate 4. The roof structure



- 5.2.9 There was approximately 1500 mm of insulation present and a large amount of dust was visible above the insulation. This was considered likely to be a result of degraded torching on the back of the slates.
- 5.2.10 No bats or signs of bats were present within the roof void. Given the lack of bat signs internally, and the lack of a roofing membrane it was concluded that the potential bat roost features recorded on the exterior of the building were of negligible bat roost suitability.

Building description - garage

5.2.11 The single-storey garage was constructed from prefabricated concrete panels and posts (Plate 5). The building had a shallow two-pitched roof covered with corrugated cement boards (Plate 6). Wooden cladding was present on the gables and a wooden fascia supported the guttering on the western aspect. No fascia or guttering was present on the eastern side of the building.

Plate 5. The garage viewed from the northwest



Plate 6. The garage roof viewed from the northeast



External inspection - garage

5.2.12 No suitable potential bat roost features were identified on the garage. Some gaps were present beneath the corrugated board at the wall top on the eastern side of the building (Plate 7) (PRF D, Figure 2). These allowed access into the interior of the garage but were not considered sufficient to be used as a potential roost location in their own right as the wall was relatively thin.

Plate 7. The interior of the garage including the spaces beneath the corrugated boards at the top of the wall (circled red)



Internal inspection - garage

- 5.2.13 No roof void was present within the building and no lining or insulation was present below the cement board roof covering.
- 5.2.14 No bats or signs of bats were present within the building and no suitable crevice roost features were recorded within the garage.
- 5.2.15 No bird nests were present within the building and no potential for use by nesting birds was recorded.

6. Assessment

6.1 Summary and Evaluation of Findings

- 6.1.1 Although some entry points into the two buildings were present on both buildings the suitability of the buildings was determined to be negligible with no bats or signs of bats recorded.
- 6.1.2 No evidence of bird nesting was recorded during the inspection and no suitability for use by nesting birds existed.

6.2 Further Survey, Recommendations and Enhancements

Further survey

- 6.2.1 No further bat or bird survey is required. Although the features present are considered to have negligible suitability for use by roosting bats, a single bat can occasionally roost almost anywhere and vigilance should be taken when removing the ridge tiles on the hips of the roof. If bats are recorded at any time during the renovation, work in that area should cease and advice sought from Middleton Bell Ecology.

Roofing membrane

- 6.2.2 Although there is no requirement to use a bat safe roofing felt, it should be considered during the construction of any new roof, or reroofing project. Additional information on

roofing membranes is included in Appendix 2.

Lighting

- 6.2.3 Existing light levels around the exterior of the building were considered likely to be relatively high. In line with guidance from the Bat Conservation Trust and the Institute of Lighting Professionals, outdoor lighting should be kept to a minimum with passive infrared sensors and/or timers used to ensure lights are only on when they're needed. Where new outside lighting is required, it should be low level, downwards facing, relatively dim, and a warm white colour (ILP, 2023).

Enhancement measures

- 6.2.4 Due to the homeowner's phobia of bats no build in or building mounted bat or bird boxes have been recommended for the proposed extension. If they were required the client has indicated that they could be installed on a pole at the end of the garden but, due to the exposed nature of the location, such a measure is considered to have a relatively low chance of success and therefore in this instance no ecological enhancement measures are proposed.

6.3 Conclusion

- 6.3.1 The survey undertaken was considered sufficient to determine the likely absence of roosting bats within the dwelling and adjacent garage. In the unlikely event an unexpected bat is recorded at any time during the renovation, work in that area should cease and advice sought from Middleton Bell Ecology.
- 6.3.2 Although bat and bird box enhancement measures are not proposed in this instance, any changes which result in a reduction, or more appropriate use of external lighting would result in a small net benefit to the nocturnal wildlife in the area.
- 6.3.3 The recommendations included in this report are considered valid for 24 months from the survey date.

7. References

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

Appendix 1. Legislation and Policy Guidance

Bats

Bats receive protection under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981 (as amended).

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.

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.

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 bat *Myotis bechsteinii*, brown long-eared bat, greater horseshoe bat *Rhinolophus ferrumequinum*, lesser horseshoe bat *Rhinolophus hipposideros*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* 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.

Where it is proposed to carry out works which will have an adverse impact on roosting bats a European Protected Species (EPS) license must first be obtained from Natural England. This requirement applies even if no bats are expected to be present when the work is carried out.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to:

- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

National Planning Policy Framework

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'.

Appendix 2. Roofing and Cladding 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 A2.1. Four dead pipistrelles tangled in breathable roofing membrane



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: TLX BatSafe^{3,4} and SIGA Majcoat 200 SOB Diffusion. 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 A2.2. 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.