35 St Johns Road Birkby

Bat Survey Report

3rd March 2025

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Disclaimer

Contents

1. Summary

1.1.1 A bat inspection of 35 St John's Road, Birkby was commissioned by architect Paul Briggs of Northern Design Partnership. The survey was undertaken in February 2025 to inform a planning application for the partial demolition to create a courtyard, and conversion of the building into 21 apartments. This included the construction of a new two-storey section of building with a pitched roof at the rear of the site.

1.1.2 A previous bat inspection of the building was undertaken in 2012 for a previous planning application. No bat roosts or signs of a roost were identified during the 2012 inspection and it was assessed at the time that it was unlikely that a significant bat roost (such as a maternity roost) was present within building.

1.1.3 The building was in a derelict state. The front section of the building had pitched roofs which were being repaired. Approximately half of the pitched roofs were covered with a roofing membrane and secured with battens. The rear section of the building had a flat roof covered with thick bitumen felt.

1.1.4 The site was located on a busy road between Huddersfield centre and the suburb of Birkby. A wooded embankment was present to the rear (west) of the site. The habitat to the north, south and east of the site comprised predominantly well lit buildings and hardstanding although numerous street trees were also present. The diversity of bat species present within the area was considered likely to be below average with light sensitive species underrepresented.

1.1.5 The building inspection identified seven bat droppings within the rear of the building, but these droppings were not associated with a potential roost feature. It was anticipated that the derelict state of the building and its proximity to the wooded embankment to the rear, resulted in occasional foraging within the building. It was considered feasible that the building had been used as a bat roost in the past, however, it was considered that no roost was present at the time of inspection. There was no reason to believe that the ongoing repair works had already resulted in the loss of a roost.

1.1.6 The building was considered to have low suitability to support roosting bats. Bat Conservation Trust survey guidance states that, in such instances, if all areas are checked and no evidence found (and is unlikely to have been removed or hidden), then no further survey is required.

1.1.7 Old bird nests were present within the building but there were no signs of nesting activity and the ongoing repair works meant it was unlikely that nest building would be likely to commence.

1.1.8 The provision of eight bat boxes and eight bird boxes, to be located in adjacent pairs, will be sufficient to mitigate for the loss of potential bat roost features and confirmed bird nesting opportunities. A bat safe roofing membrane should be used on the pitched roof over the new second storey section of the building, located at the rear of the property, adjacent to the woodland embankment. Use of a bat safe membrane will ensure any bats accidentally coming into contact with this material in the future, will be protected against killing or injuring as a result of entanglement.

1.1.9 The recommendations included in this report are considered valid until May 2026. If the project is delayed until after this time, Middleton Bell Ecology should be contacted to assess the need for an additional survey.

2. Introduction

2.1.1 A bat inspection of 35 St John's Road, Birkby was commissioned by the architect Paul Briggs of Northern Design Partnership, on behalf of the client Harprit Chahal, on 29th January 2025. The survey was undertaken to inform a planning application for the partial demolition to create a courtyard, and conversion of the building into 21 apartments which includes the construction of a new two-storey section of building with a pitched roof (over an existing single storey section with an existing flat roof) at the rear of the site.

2.1.2 A previous bat inspection of the building was undertaken in 2012 for a previous planning application. No bat roosts or signs of a roost were identified during the 2012 inspection and it was assessed at the time that it was unlikely that a significant bat roost (such as a maternity roost) was present within building but that roosts of low conservation value could be present (Kingdom Ecology, 2012). The 2012 survey recommended further nocturnal surveys were undertaken but no report detailing the nocturnal surveys is associated with the planning application and no other evidence that surveys were undertaken has been identified.

2.1.3 The legislative context to the survey and assessment reported here is included in Appendix 1.

3. Habitat Assessment

3.1.1 The site was located on a busy road between Huddersfield centre and the suburb of Birkby. The building was located at the base of a wooded embankment, which had good connectivity to green space given the site's urban location (Plate 1, Plate 2) (Figure 1). To the west of the site, playing fields and Edgerton cemetery were both connected to the rear of the building via the wooded embankment. The habitat to the north, south and east of the site comprised predominantly well lit buildings and hardstanding, although numerous street trees were present in that area.

Figure 1. The survey area

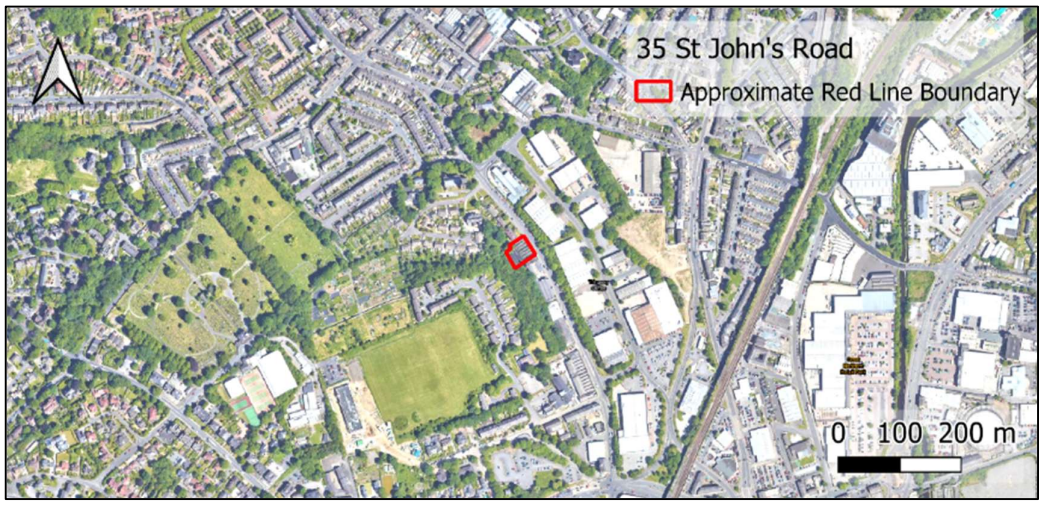


Plate 1. The building outlined in red (viewed from the east)

Plate 2. The surveyed building in the foreground, viewed from the south

3.1.2 Pockets of above average suitability bat habitat were present in the immediate surrounding area, but in the wider area the habitat was considered to be below average in terms of its suitability for use by roosting, foraging and commuting bats. It was anticipated that the lighting along the roads and associated with the buildings in the areas to the north, south, and east would significantly reduce the suitability for light sensitive species. The diversity of bat species present within the area was considered likely to be below average with light sensitive species underrepresented. Table 1 summarises the habitats present within, and adjacent to the site.

Table 1. Location and habitat table

Name and address: 35 St John's Road			
OS Grid Ref. SE 14210 17619		Altitude. 86 m	
Local Planning Authority: Calderdale Council			
Features on site and adjacent to site			
Feature	On site	Adjacent	Comments
Buildings	✔	✔	
Watercourse bordered by trees			None.
Standing water			None.
Bridges tunnels and culverts			None.
Trees	✔	✔	Wooded embankment at the rear of the property.
Woodland	✔	✔	
Grassland		✔	Lawns within adjacent garden.

3.2 Aims

3.2.1 The survey was conducted to help determine the:

- Presence/absence of roosting bats within building.
- Potential roosting areas and roost access/egress points.
- Level of bat roost suitability associated with the building.
- 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 A desk study was undertaken with West Yorkshire Bat Group and West Yorkshire Ecology to request bat records for locations within 2 km of the site.

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

4.2 Field Survey

Internal and External Visual Inspection

4.2.1 An inspection of the building was undertaken on 12th February 2025 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 initial inspection survey:

- An examination of all parts of the building 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, windows and windowsills, gaps/holes in cladding and soffits and to the possibility of finding

droppings stuck to walls, floors or other surfaces, 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 inspection:

- a high powered torch;
- binoculars;
- ladders;
- an endoscope;
- a camera; and
- an ultralight drone (DJI Mini 4 Pro).

4.3 Survey Limitations

4.3.1 No significant survey limitations were encountered.

5. Results

5.1 Data Consultation

5.1.1 West Yorkshire Ecology provided 149 bat records for locations within a 2 km radius. Species positively identified in the data comprised common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, Daubenton's bat *Myotis daubentonii*, whiskered bat *Myotis mystacinus*, noctule *Nyctalus noctula*, and Leisler's bat *Nyctalus leisleri*.

5.1.2 West Yorkshire Bat Group returned 47 bat records for the 2 km data search area. No additional species were included in the West Yorkshire Bat Group records.

5.1.3 Additional records of bats identified as unidentified *Myotis* bat species, unidentified *Pipistrellus* species, and unidentified bat species were also included by both data providers.

5.1.4 No records related to the site. The closest record was a "possible roost" of an unidentified bat species, located approximately 320 m northwest of the site. The record dated from 1996.

5.1.5 No bat European Protected Species mitigation licences had been issued within the 2 km of the area.

5.2 Field Survey

Internal and External Visual Inspection

5.2.1 Prior to the survey, the building had been cleared out and repairs had commenced. The repair work had been ongoing for the past seven or eight months.

5.2.2 No bats were recorded during the inspection, however, bat droppings were recorded on one of the internal walls, although they did not appear to be associated with a

specific roost feature. The droppings were of a size and shape that indicated they were likely to have been deposited by a pipistrelle.

Building description

5.2.3 The building was constructed from brick and concrete blocks with a stone façade (Plate 3). The building comprised two distinct halves Section B1a at the front, and Section B1b at the rear (Figure 2).

Plate 3. The façade of 35 St Johns Road viewed from the north

Figure 2. Site layout

5.2.4 The front of the building (section B1a) comprised a two storey area with a multi-pitched roof. The roof sections at either end of the building and in the centre had a higher ridge line than the sections between (Plate 4).

5.2.5 On Section B1a the roof timbers were in the process of being installed as part of the ongoing repair process, and half of the pitches had been covered with a breathable roof membrane although no slates had been installed at the time of survey. Many of the floor joists had been replaced and a temporary first floor was present over the

majority of the two storey section of the building. The wall tops were unfinished leaving the wall cavity open to the elements from above (Plates 4 and 5).

Plate 4. The multi-pitched roof of 35 St Johns Road viewed from the flat roof section behind (to the southwest)

5.2.6 The building was built into the hillside so the first floor extended back further than the ground floor which was only present in approximately the front quarter of the building.

5.2.7 The rear half of the building (Section B1b) comprised a brick built structure with a flat roof covered with thick strips of bitumen. Cement render was present on the side wall to the northwest, but the rear wall, and southeast wall were exposed bricks. A separate building abutted the site to the southeast, leaving only part of the brick wall visible (Plate 1 and 6). Aerial photographs indicate that the adjacent building had also recently been renovated.

Plate 5. The gable wall tops at the rear of Section B1a

Plate 6. The building with new roof timbers being installed and half of the roof covered with a breathable membrane

External inspection

5.2.8 Bats could freely enter the building via the missing roof, missing windows and open doorways. However, the pointing on the masonry was relatively good. The small sections of missing mortar that were present on the exterior were shallow and unsuitable to support roosting bats. Despite the poor condition of the building overall, potential bat roost features on the exterior of the building were limited to gaps around boarded up windows and doors (Plate 7), and two low-level vents present at the rear (southeast elevation) of B1b (Plate 8).

Plate 7. Gaps around boarded up windows(circled red)

Plate 8. Low bat roost suitability vent shown on the right with obscured vent on the left

5.2.9 The low height of the vents (c. 1.4 m) reduced their suitability. A high-powered torch and endoscope was used to check the vents. No bats or signs of bats were present. Following the close inspection of the vents their bat roost suitability was considered to be negligible.

5.2.10 The boarded up windows and doors were at street level on a busy B road. They were checked from the inside with a high powered torch, and an additional search made around the gaps on the exterior. Given their location it was considered these features were also of negligible bat roost suitability.

Internal inspection

5.2.11 During the interior inspection of the building seven bat droppings were recorded on the wall in the northwest corner of B1b. The location of the droppings is shown in Figure 3 and Plate 9.

Figure 3. Location of bat droppings

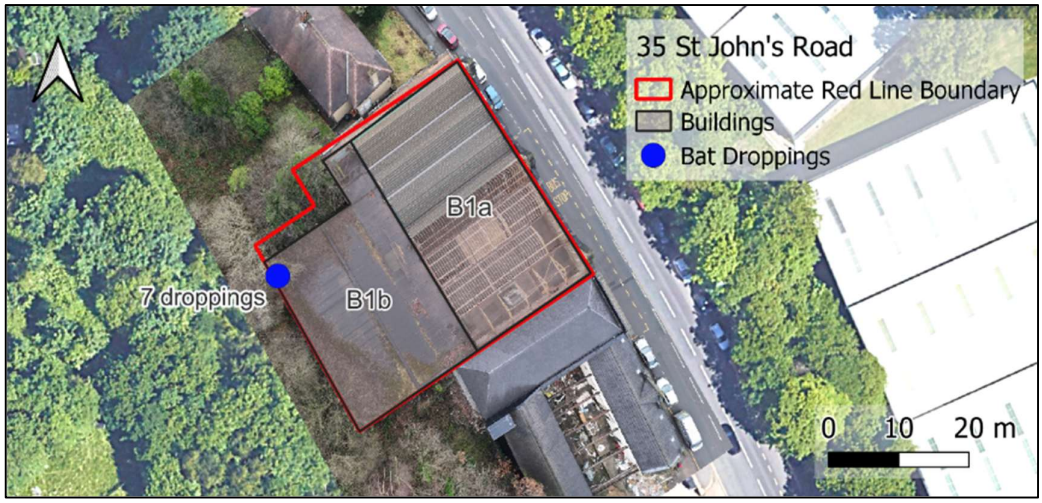
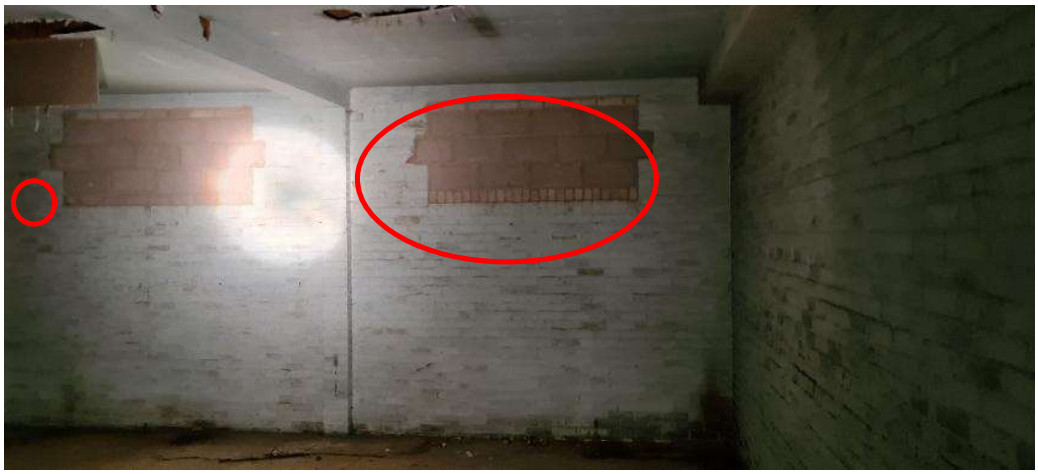
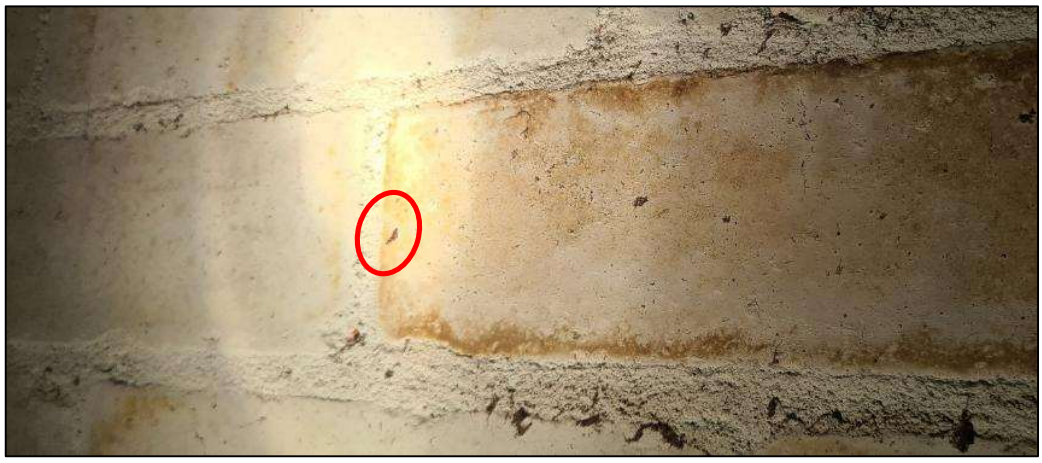


Plate 9. Approximate location of the seven bat droppings



5.2.12 The size and shape of the bat droppings indicated that they were likely to be pipistrelle droppings (Plate 10).

Plate 10. Shows one of the droppings in situ



5.2.13 No potential bat roost features were present in the area where the bat droppings were located but it was noted that it was the darkest, and least disturbed area within the building. In eight locations in this room the plasterboard ceiling had been damaged (Plate 11). These eight locations were inspected but no bats or signs of bats were present. Some were fairly heavily cobwebbed and in all locations it was considered that bat droppings would have persisted on the upper surface of the adjacent plasterboard, if bats had been roosting within the spaces (Plate 12).

Plate 11. Example of an area of damaged plasterboard

Plate 12. The void opened up by the damage

5.2.14 The interior of Section B1a comprised brick walls on the ground floor, with a sump or similar present at the northern end of this area (Plate 13 and 14).

Plate 13. The southern end of the ground floor

Plate 14. The sump at the northern end of the ground floor

5.2.15 A section of damaged brickwork was present in the brick wall directly opposite the main building entrance. The section of damaged brickwork led into a cavity within this interior wall (Plate 15). It was anticipated that this cavity was likely to have been opened up during the recent repair work as it was directly beneath a set of stairs that had been installed to allow access to the first floor. A second area of damaged brickwork was also present in an internal brick wall nearby but no cavity was present in the second location.

Plate 15. Cavity within the interior wall on the ground floor, viewed from the area of damaged brickwork

5.2.16 The first floor of B1a comprised metal beams and columns supporting timber king post trusses. The majority of the timber trusses were new but some original timbers were still present (Plate 16).

Plate 16. The interior of Section B1a viewed from the rear of Section B1a

5.2.17 Two doorways separated Section B1a from B1b. Gaps were present in the lintels above these two doorways but not in the rest of the building. Within the lintel gaps at the northern end two old bird's nests were present (Plate 17).

Plate 17. old bird nests over the brickwork at the edge of the doorway in the space between the metal lintels

5.2.18 At the southern end of the dividing wall the lintel led into the cavity wall to the south but was blocked to the north. The cavity was checked with torches and an endoscope.

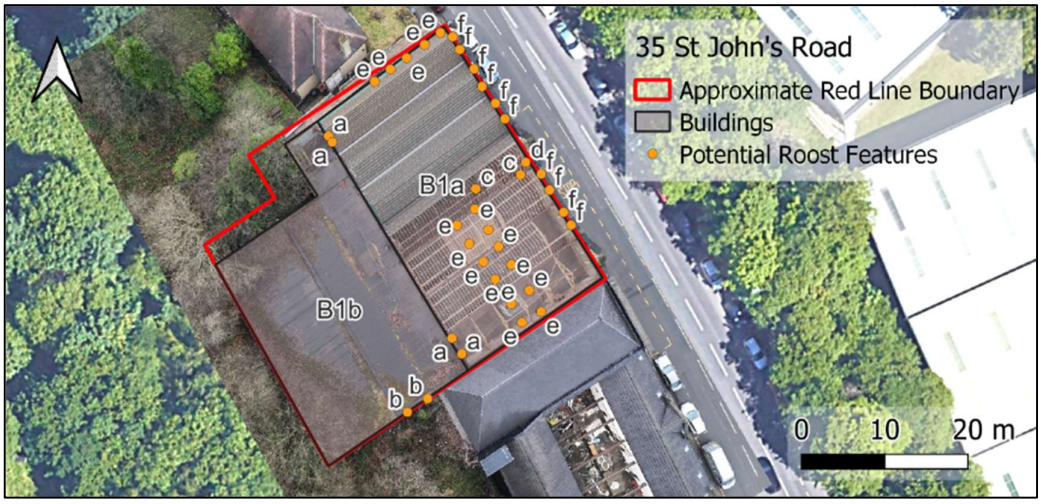
5.2.19 Additional potential roost features were recorded between wooden boards near the main entrance, and between the new floor joists and the brickwork – no significant gap was present between the older joists and the brickwork. The potential roost features are shown in Table 2 and Figure 4 below.

Table 2. Potential Roost Features Recorded

PRF	Example Photo	Description
A		Gaps between lintels
B		Low level air vents.

PRF	Example Photo	Description
C		Damaged brickwork
D		Gaps between wooden boarding.
E		Gaps between new first floor joists and the brickwork
F		Gaps around boarded up windows.

Figure 4. Potential roof feature locations



5.2.20 Due to the lack of bats, or signs of bats present within or around potential roost features, it was considered that no roost was present within the building. It was considered most likely that the bat droppings present on the rear internal wall of B1b were deposited by a bat or low numbers of bats in flight. The droppings were expected to be common pipistrelle droppings based on their size and shape, and the location of the building.

6. Assessment

6.1 Summary and Evaluation of Findings

6.1.1 The building had low or negligible suitability bat roost features present, however, all were able to be thoroughly checked or otherwise ruled out. The seven bat droppings present on the rear internal wall were not associated with any potential bat roost features. It was anticipated that a bat may have been using the dry covered space to forage for invertebrates within the building during the autumn/winter period.

6.1.2 It is considered feasible that a bat roost had been present in the building within the past, but no roost was identified at the time of the 2025 inspection. This reflected the finding of the earlier 2012 inspection (Kingdom Ecology, 2012). There was also no evidence that a roost had been destroyed during repair work undertaken to date.

6.2 Further Survey, Recommendations and Enhancements

Further survey

6.2.1 The building was considered to have low suitability to support roosting bats. Bat Conservation Trust survey guidance states that in such instances “if all areas (including voids, cracks and crevices) of a structure have been inspected and no evidence found (and is unlikely to have been removed by weather or cleaning or be hidden), then further surveys are not appropriate” (Collins, 2023). On this basis, it is considered that no further survey is required for the building.

6.3 Mitigation

Roofing membrane

6.3.1 The roofing membrane has already started to be installed on Building 1a, with battens fitted. It was noted that this roofing membrane was not one of the ones listed as safe for use in bat roosts. Given this membrane is located on Section 1a at the front of the property, this is considered much less likely to be used by roosting bats than the area over the roof of the rear building (Section 1b). It is recommended that the roofing membrane installed on the roof of the building to be located at the rear of the site (as shown on Figure 5) is one of the products identified as safer for use in areas with roosting bats. Further information on the issue of bats and roofing membranes is included in Appendix 2.

Figure 5. Shows the approximate proposed layout including the area where the use of a bat safe roof membrane is recommended

Lighting

6.3.2 Any new lighting required for the site in the future must be designed in line with guidance from the Bat Conservation Trust and the Institute of Lighting Professionals (ILP, 2023). No external lighting should be installed on the rear of the building. Lighting on the front of the building and within the proposed courtyard should be a warm white colour (3000 K), should not be directed upwards, and should not be allowed to spill onto the adjacent woodland. The use of PIR sensors and timers should be used to ensure lights are not left on throughout the entire night.

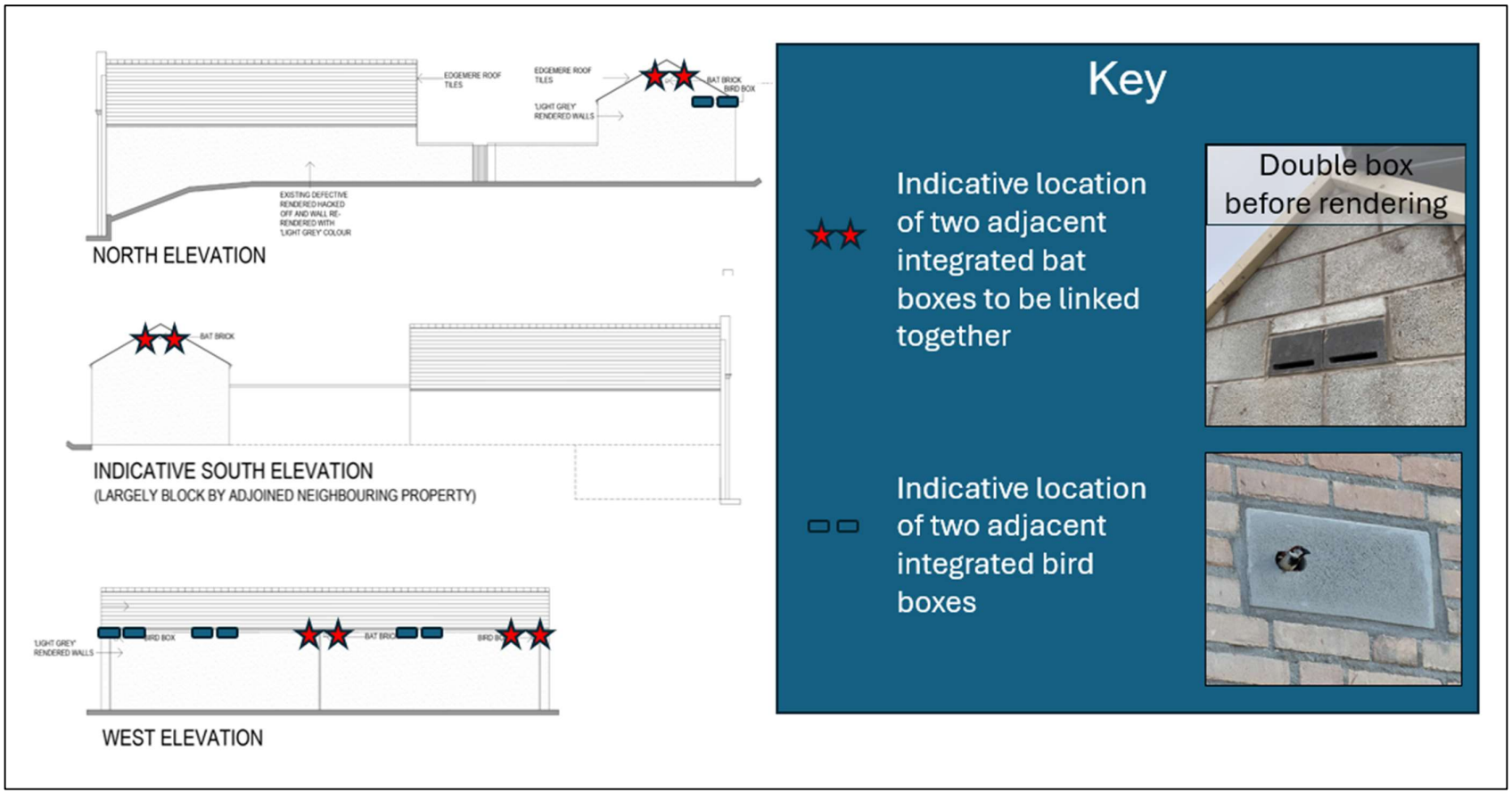
Bat and bird boxes

6.3.3 To replace the potential bat roost features and confirmed bird nesting opportunities within the building, the number of integrated bat and bird should be increased from three boxes for each species group, to eight boxes per species group. Bat boxes should comprise Vivara Pro UK bat boxes (or similar). The bird boxes should comprise swift bricks such as the S-bricks supplied by Action for Swifts[1]. The boxes should be located in adjacent pairs, with adjacent bat boxes connected internally (as shown in Figure 6).

6.3.4 The bat boxes should be located on the rear elevation (west), where they will be facing the woodland, as well as on the north and south facing gables. The bird boxes can be included on the north, east or west elevations. The bird and bat boxes should be located near the wall top on the new two storey section of the building. These elevations are ideal because they will be undisturbed. Boxes should not be located directly above windows. Suitable locations for the proposed bat and bird boxes are shown on Figure 6 overleaf.

[1] Vivara Pro UK Bat Boxes are available from: https://www.nhbs.com/build-in-woodstone-bat-box-uk-brick-size?bkfno=256321
Swift bricks are available from: https://www.actionforswifts.com/introduction

Figure 6. Suitable locations for the proposed bat and bird boxes on the north, south and west elevations



6.4 Conclusion

6.4.1 The building inspection identified seven bat droppings within the building, however, these droppings were not associated with a potential roost feature. It is assessed that given the derelict state of the building and its proximity to the wooded embankment, the building has been occasionally used as a foraging area by bats, rather than as a roost location. It is feasible that the building had been used as a bat roost in the past, but no roost was present and there was also no evidence that a roost had been destroyed during repair work undertaken to date.

6.4.2 Old bird nests were present within the building, but there were no signs of nesting activity and the ongoing repair works meant it was unlikely that nest building would be likely to commence.

6.4.3 The provision of eight bat boxes and eight bird boxes, to be located in adjacent pairs, will be sufficient to mitigate for the loss of potential bat roost features and confirmed bird nesting opportunities. The use of a bat safe roofing membrane on the new second storey section at the rear of the property (adjacent to the woodland embankment) will ensure any bats accidentally coming into contact with the membrane in this location will be protected against entanglement.

6.4.4 The recommendations included in this report are considered valid until May 2026. If the project is delayed until after this time, Middleton Bell Ecology should be contacted to assess the need for a additional survey.

7. References

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

ILP (2023) Bats and Artificial Lighting at Night. Institute of Lighting Professionals. Available online at: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

Kingdom Ecology (2012) Results of Bat Survey at 35 St. Johns Road, Huddersfield. Available online at: https://www.kirklees.gov.uk/beta/planning-applications/search-for-planning-applications/downloaddocument.aspx?application_number=2012%2f90043&file_reference=396576&size=1030144

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.

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 2024. This document states that plans should 'promote the conservation, restoration and enhancement 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

Standard non-bitumen coated membranes (including almost all breathable 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 years[2].

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)

From a bat perspective, the best membrane option for areas where roosts are expected comprises traditional hessian-backed Type 1F bituminous felt. This product has 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 use in bat roosts. Wooden sarking also has the benefit of providing adding additional insulation

[2] 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

and is usually breathable.

At the time of writing (and to our knowledge) two products have passed the 'snagging propensity' test; consequently these products are approved by Natural England for use in bat roosts. This test attempts to replicate the wear and tear which results from bats crawling over the membrane. The approved products are: TLX BatSafe[3,4] and SIGA Majcoat 350. Although they have passed this test, it is unclear how these membranes will degrade in the medium and long term, particularly in larger bat roosts. Therefore we do not recommend that they are used for roosts with multiple bats, and particularly for large (maternity roosts). A third product, SIGA Majcoat 200 SOB Diffusion, passed the test for its upper surface only. This product should not be used in known bat roosts or locations where bat mitigation is to be installed. Although none of these products are considered to be as safe as traditional Type 1F bituminous felt, they may provide an option for roofs where future bat use cannot be ruled out, 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 A3.2). The wasps appear to have chewed holes in the felt and formed nests. This doesn't appear to be a problem associated with traditional bitumen coated roofing felt. Any holes within roofing felt are likely to significantly reduce its functionality as a secondary weather barrier. Where bats or birds come into contact with breathable roofing membranes, they can also damage it causing it to leak, 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. Sufficient ventilation can be usually be achieved, even in buildings with vaulted ceilings, however, some consideration during the design stage is required. Products to increase the ventilation within roofs where bituminous Type 1F felt has already been installed are also available.

[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.