

St Barnabas Hall, Barnsley

Bat Survey Report

7th June 2024



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1. Summary

- 1.1.1 A bat survey of St Barnabas Hall was commissioned by Peter Knowles of Kruidberg Capital on 26th January 2024.
- 1.1.2 The survey was undertaken to inform proposals to undertake a residential renovation of the building complex.
- 1.1.3 Bat survey works detailed in this report include a desk-based study, an internal and external visual inspection and two nocturnal surveys, all undertaken during 2024.
- 1.1.4 No historic bat records relating to roost presence were obtained in relation to the site. No evidence of bat roosting was recorded during the visual inspection of the component buildings, however, the building complex was considered to display a moderate level of bat roost suitability.
- 1.1.5 Nocturnal surveys recorded the presence of a common pipistrelle day roost, used by a peak count of one bat. No bird nesting activity was recorded during the surveys.
- 1.1.6 The survey work undertaken is considered sufficient to inform the planning application. It is however recommended that if the development is to commence after May 2025, then at least one update nocturnal survey is undertaken.
- 1.1.7 It is feasible that the bat roost may be retained during building re-development, with the roost present in an open joint within masonry on a southwest gable wall. If the roost could be retained without alteration, then it would not be necessary to obtain a bat mitigation licence. In such an instance, it should instead be possible to proceed with the works under the terms of a non-licensed method statement.
- 1.1.8 Regardless of whether the scheme progresses under a non-licensed method statement or a bat mitigation licence, precautionary working practices need to be adopted. Such measures would include the undertaking of a pre-works re-inspection of the building by an ecologist, the delivery of a toolbox talk to construction staff and the oversight of key aspects of any roof and/or hanging tile strip works.
- 1.1.9 It is recommended the known roost is retained, two new integrated bat boxes are fitted and bat safe roofing felt is used during any re-roofing. It is also recommended that two swift boxes are fitted in the re-developed building.
- 1.1.10 Building re-development works should commence either outside the bird nesting period (March to August inclusive), or the works will need to be preceded by a nesting bird check.

2. Introduction

- 2.1.1 A bat survey of St Barnabas Hall was commissioned by Peter Knowles of Kruidberg Capital on 26th January 2024.
- 2.1.2 The survey was undertaken to inform proposals to undertake a residential renovation of the building complex.
- 2.1.3 Bat survey works detailed in this report include a desk-based study, an internal and external visual inspection and two nocturnal surveys.
- 2.1.4 The Saint Barnabas Hall complex of buildings was located at the junction of Old Mill Lane and Honeywell Street close to Barnsley town centre.

3. Habitat Assessment

- 3.1.1 Saint Barnabas Hall was located in a quite densely populated residential area with adjacent buildings comprising mainly terraced housing. There was however suitable bat foraging habitat quite close to site, notably including the tree-lined rail corridor c.55 m west of the site. More extensive areas of higher quality foraging habitat were located c. 450 m northeast of the site and included the River Dearne, which connected locally to Dearne Valley Country Park and The Fleets. Old Mill Lane Culvert Bat Roost Local Wildlife site was located 450 m northeast of the site.
- 3.1.2 Given the presence of extensive street lighting in the area, with residential housing on all sides of the buildings, it is likely that bat species using the local area for roosting or sustained foraging would be likely to be limited to common pipistrelle *Pipistrellus pipistrellus* and/or soprano pipistrelle *Pipistrellus pygmaeus*. The density of bats was considered likely to be at a low-moderate level. Table 1 summarises the habitats present, adjacent to and further afield of the surveyed building.

Table 1. Location and habitat table

Name and address: St Barnabas Hall, 26 Honeywell Street, Barnsley, S71 1PZ			
OS Grid Ref. SE 34708 06939		Altitude. 80 m	
Local Planning Authority: Barnsley Council			
Features on site and adjacent to site			
Feature	On site	Adjacent	Comments
Buildings	✓	✓	Located in residential area
River bordered by trees			River Dearne 450 m northeast of site
Standing water			The Fleets located 490 m northeast
Bridges tunnels and culverts			Associated with River Dearne. Notably including the Old Mill Lane Culvert Bat Roost
Trees		✓	Single tree located adjacent to western elevation
Woodland			Small woodland block 55 m west
Grassland		✓	Small lawned areas associated with adjoining dwellings

Figure 1. Site location, as indicated by red circle



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 buildings.
- The level of bat roost potential associated with the buildings.
- The number and species of bat roosting within the buildings if present.
- Identify further survey work or mitigation requirements.

4. Methodology

4.1 Data Consultation

- 4.1.1 A desk study was undertaken, with bat records from locations within 2 km of the site requested from Barnsley Biological Records Centre (BBRC) and South Yorkshire Bat Group (SYBG).

4.2 Field Survey

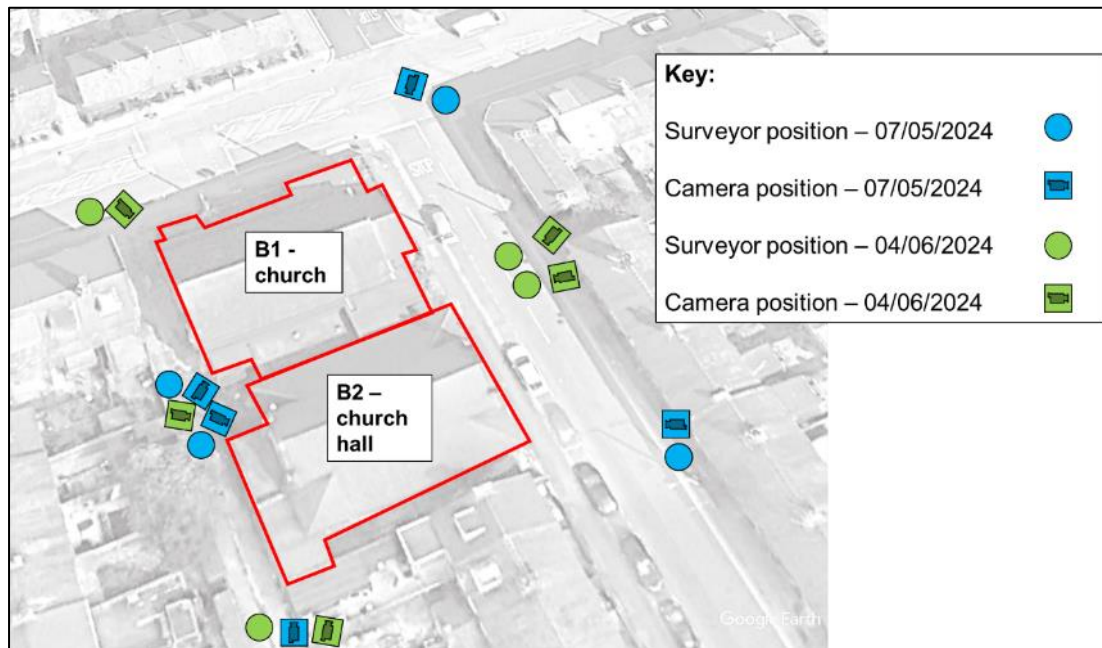
Internal and External Visual Inspection

- 4.2.1 The internal and external visual inspection was undertaken on 8th February 2024 by Robert Bell (MCIEEM; Class license WML-A34-Level 4, 2016-25236-CLS-CLS).
- 4.2.2 The following activities were carried out during the surveys in compliance with relevant Bat Survey Guidelines (Collins, 2023):
- A brief inspection and assessment of the site and habitats present to within 300 m.
 - An extensive examination of all parts of the buildings both inside and out to record structural features and condition and to record features that may be suitable for roosting bats. Particular attention was paid to any crevices or gaps in walls, lintels, gaps between beams and joists and to the possibility of finding droppings stuck to walls, floors or other surfaces, or insect remains below beams, among a number of other factors. All 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 buildings' bat roost potential (negligible, low, moderate, high or confirmed roost).
- 4.2.3 In addition, any signs of nesting bird usage of the buildings were recorded.
- 4.2.4 The following equipment was used or at hand during the survey:
- Clulight
 - Binoculars
 - Endoscope
 - Ladders
 - Camera

Nocturnal Surveys

- 4.2.5 Two dusk emergence surveys were undertaken. Both surveys were undertaken by teams of four surveyors using five night vision aids during each survey visit. The position of surveys or night vision aids during the survey visits is shown in Figure 2. The surveyor positions were swapped to opposite corners of the of the buildings for the second survey visit.

Figure 2. Nocturnal survey plan



4.2.6 The following personnel conducted the nocturnal surveys:

- Robert Bell (RB)
- Amanda Murphy (QualCIEEM; Bat Survey Class license WML-A34-Level 2, 2020-47913-CLS-CLS) (AM)
- Ian Wright (IW) (Bat Survey Class license WML-A34-Level 2, 2023-11218-CLS-CLS)
- John Pearce (JP)

4.2.7 The following activities were carried out in compliance with relevant Bat Survey Guidelines (Collins 2023).

- Dusk emergence survey on 7th May 2024 – RB, AM, IW & JP
- Dusk emergence survey on 4th June 2024 – RB, AM, IW & JP

4.2.8 The dusk emergence surveys continued from 15 minutes prior to sunset until 1.5 hours after this time.

4.2.9 Surveyors were equipped with Wildlife Acoustics EM Touch bat detectors and iPad/iPod recorders. Night vision aids used during the surveys included two Canon XA10s and two Panasonic VX980 infra-red lit video cameras (with external lights), together with one Guide TK612 thermal imaging camera.

4.3 Survey Limitations

4.3.1 A roof void present above the curved vaulted ceiling in B1 (the church in Figure 2) was not accessible due to the lack of an access hatch. In addition, the original roof void, present in the upper section of the roof within B2 (see church hall in Figure 2) was not accessible, due to lack of a safe means of access from the void beneath.

5. Results

5.1 Data Consultation

- 5.1.1 A total of 198 bat records was received from BBRC. None of the records received related to the site itself. Species positively identified in the records received included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's bat *Myotis daubentonii*, brown long-eared bat *Plecotus auritus*, noctule *Nyctalus noctula* and Leisler's bat *Nyctalus leisleri*. Other records related to either an unidentified pipistrelle species or an unidentified bat species. The closest bat record to site was collected in 1992 from a location 180 m southwest of the site and related to an observation of a common pipistrelle bat.
- 5.1.2 A total of 212 bat records were received from SYBG. Bat species positively identified in the records also comprised common pipistrelle, soprano pipistrelle, brown long-eared bat, Daubenton's bat, noctule and Leisler's bat. Other records related to either an unidentified pipistrelle species or an unidentified bat species. The closest record to site comprised the same 1992 common pipistrelle record that was supplied by BBRC.
- 5.1.3 A search of MAGIC highlighted two bat EPS mitigation licences as having historically been issued for locations within 2 km of the site. Both licences related to destruction of common pipistrelle resting places, with the closest licence granted for a location 470 m northwest of the site.

5.2 Field Survey

Internal and External Visual Inspection

- 5.2.1 No signs of bat presence were recorded from St Barnabas Hall, with the two component buildings (Figure 2) considered to display a moderate level of bat roost suitability.

Description

- 5.2.2 St Barnabas Hall comprised two individual but connected buildings originally functioning as a church (B1 in Figure 2; Plate 1) and church hall (B2 in Figure 2; Plate 1) and used as a Women's Freemason lodge at the time of survey. Both the key buildings had single-storey flat roofed extensions, some of which formed the connecting linkage between these buildings.
- 5.2.3 The northern former church building (B1, Figure 2) comprised a 1930s brick-built chapel with a dual-pitched plain-tile covered roof (Plates 1, 2, 3 & 5). The ridge line stepped down towards Honeywell Street and the roof had mortar-filled gable verges. Windows were single paned with protective screens present in places. A wooden soffit was present.
- 5.2.4 The southern former church hall (B2, Figure 2) comprised a C19th stone built structure which appeared likely to have comprised the original church (Plates 1-4). The building had a dual pitched plain tile covered roof with stone coping at the gables, The roof extended down over single-storey wings to the northwest and southeast, with hip ends present at the corners of the lower sections of the roof. Hanging tiles were present along sections of the northwest and southeast elevations (i.e. Plate 2), with deep eaves present in places. The building had large wood-framed single-paned windows associated with both gables, however, these had been mainly covered with wooden

shuttering. Wooden louvre openings were present towards the apex on both gables (Plate 2). The remaining windows comprised a mix of single-pane wood-framed units with double-glazed plastic framed units on the southeast elevation. Plastic guttering was present.

Plate 1. Google Earth 3D image of St Barnabas Hall



Plate 2. Eastern corner of site



Plate 3. Northern corner of site



Plate 4. Southern corner of site



Plate 5. Northwest elevation, viewed from Old Mill Lane



External bat roost potential

5.2.5 On the exterior of B1 (church) the following potential roost features were noted:

- Gaps in verge mortar, allowing potential access beneath roof covering (Plate 6).
- A Gap present between much of the base of the wooden soffits and the adjacent brickwork (Plate 6).
- Occasional slipped and lifted tiles associated with the roof covering.

5.2.6 On the exterior of B2 (church hall) the following potential roost features were noted:

- Gaps around the edge of some hanging tiles and associated with flashing above hanging tiles (Plate 7).
- Open joints in masonry on southwest gable.
- Access into the roof space via wood louvre vents in gables.
- Access behind wood shuttering on windows, via gaps between shutters and glazing.
- Access to wall tops via gaps at eaves.
- Occasional broken slates on roof pitches and gaps beneath hip tiles.

Plate 6. Gaps in verge mortar and between base of soffit and wall on B1 (church)



Plate 7. Crevices associated with hanging tiles on B2 (church hall)



Internal inspection

- 5.2.7 Building 1 (church) had a curved vaulted ceiling (Plate 8). A roof void would have been present above this ceiling, however, no access point exists into this space.
- 5.2.8 Building 2 had a suspended ceiling at a height of c.5m, above which was a c.4m high void between an original ceiling and the suspended ceiling (Plate 9). Within this void it could be seen that the roof was lined with hessian backed Type 1F bituminous felt and was suspended on broad timber trusses, a ridge beam, purlins, rafters and battens. No insulation was present on the ceiling with this void being dusty. No signs of bats were recorded from any location, including between glazing and wood shuttering on the gable windows (Plate 10). A smaller roof void above the original ceiling could only be glimpsed through the occasional collapsed section of this ceiling.
- 5.2.9 A stone-walled cellar was also present in B2 (Plate 11). No potential bat access points into this cellar or signs of bat presence were however noted. Overall, the cellar was considered to be inaccessible to bats.
- 5.2.10 When all survey observations were considered together, it was concluded that St Barnabas Hall displayed a moderate level of bat roost suitability.
- 5.2.11 No signs of bird nesting were recorded during the survey, however, it was considered possible that birds may nest in the site buildings.

Plate 8. Interior of B1 (church), showing curved ceiling, lacking any access into small void above



Plate 9. Void between false ceiling and original ceiling in B2 (church hall)



Plate 10. Rear of boarded window on southwest gable of B2



Plate 11. Cellar within B2



Nocturnal Surveys

7th May 2024 – dusk emergence survey

- 5.2.12 The temperature at the beginning of monitoring was 14 °C, with a light air (Beaufort Scale Force 1) and clear skies. The temperature dropped to 12 °C during the survey with the wind and cloud levels remaining the same. The weather was dry throughout. Sunset was at 20:48.
- 5.2.13 At 21:14 (26 minutes after sunset) a single common pipistrelle was recorded emerging from an open joint in masonry on the southwest gable of the former church hall (see Plate 12 and video clip: <https://youtu.be/xiC4w3xXGq4>)
- 5.2.14 The first bat recorded during the survey comprised the emerging common pipistrelle. Thereafter intermittent common pipistrelle activity was recorded. Intermittent soprano pipistrelle passes were also recorded from the alley to the southwest of the surveyed buildings from 21:17. No other bat species were recorded during the survey and no bat observations were made by the surveyors positioned on Honeywell Street, to the northeast of the buildings.

Plate 12. Common pipistrelle day roost location



4th June 2024 – dusk emergence survey

- 5.2.15 The temperature at the beginning of monitoring was 9 °C, with a gentle breeze (Beaufort Scale Force 3) and clear skies. The temperature remained the same during the survey, with the wind dropping to a light breeze (Force 2) and clear skies persisting. The weather was dry throughout. Sunset was at 21:29.
- 5.2.16 No bat roosting activity was observed during the survey.
- 5.2.17 Three common pipistrelle passes were recorded during the survey, with the first at 22:03 and subsequent passes at 22:50 & 22:55. No other bat species were recorded during the survey.

6. Assessment

6.1 Summary and Evaluation of Findings

- 6.1.1 One of the surveyed buildings (B2 - the former church hall) supported a single common pipistrelle day roost. This roost was considered to be of low conservation value (Mitchell-Jones, 2004), and of no more than site level importance to the resident common pipistrelle population (Reason & Wray, 2023). Maternity roosts appear to be absent from the surveyed buildings.
- 6.1.2 The surveyed building lacked bat accessible cellars or alternative areas likely to offer the cool stable temperatures and humid conditions preferred by some bat species in winter, however, bat use during the hibernation season could not be completely ruled out. This is particularly the case for those species known to tolerate wide temperature fluctuations within their roost locations during the hibernation season, such as pipistrelle species.
- 6.1.3 It is feasible that the bat roost may be retained during building re-development, with the roost present in an open joint within masonry on a southwest gable wall.
- 6.1.4 No signs of bird nesting were recorded during the survey works.

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 bat *Myotis bechsteinii*, brown long-eared bat, greater horseshoe bat *Rhinolophus ferrumequinum*, lesser horseshoe bat *Rhinolophus hipposideros*, noctule and soprano pipistrelle 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 Where it is proposed to carry out works which will have an adverse impact on roosting bats, the site must either be registered on the Bat Mitigation Class Licence (BMCL) or Earned Recognition (ER) licence, or 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.
- 6.2.6 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’.

Birds

- 6.2.7 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.

6.3 Further Survey, Recommendations and Enhancements

Bats

The requirement for bat licensing and further survey

- 6.3.1 The survey work undertaken is considered sufficient to inform the planning application. It is however recommended that if the development is to commence after May 2025, then at least one update nocturnal survey be undertaken.
- 6.3.2 The roost location is within the solid stone southwest gable of B2 (the former church hall)(Plate 12). It may be feasible to retain this feature during the re-development. If there are concerns about water ingress into the walls, these could be mediated through one of two measures. A small horizontal lip of flashing could be pointed into a joint above the roost, to re-direct water running down the wall away from the roost, and/or mortar could be used to create a slope at the bottom of the (crevice) roost, in order that any water entering the joints runs back out (Plate 13).
- 6.3.3 If the roost could be retained without alteration, then it would not be necessary to obtain a bat mitigation licence. In such an instance, it should instead be possible to proceed with the works under the terms of a non-licensed method statement.

Plate 13. Example of mortar being used to create a ramp at base of a prospective roost location to let water out



Timings

- 6.3.4 The presence of over-wintering bats cannot be ruled out. Therefore, as a precaution, any works to the exterior of the buildings (i.e. re-roofing or repointing) should avoid the peak hibernation period (December – February).

Avoidance of killing or injuring bats during construction

- 6.3.5 Regardless of whether works proceed under a bat mitigation licence or following the terms of a non-licensed method statement, they will need to be preceded by a reinspection of the site by an ecologist and the delivery of a Toolbox Talk to the construction team.
- 6.3.6 If the roost is to be lost or modified during the development, then it will first be necessary to exclude the roost, using a one-way exclusion device. If the roost is to be retained, then care will need to be taken to ensure it is not inadvertently blocked (i.e. by scaffold). As a precaution, key elements of the roof strip (i.e. removal of ridge and verge tiles) and any removal of hanging tiles, should be overseen by an ecologist. If a licence is in place and a bat/s are found then they will be captured, subject to a health check, and moved to a temporary release box. If bat/s are found and a licence has not been obtained, then the requirement for a licence will be reappraised and appropriate steps taken.

Long-term roost mitigation

- 6.3.7 Retention of the known bat roost is preferable and was considered likely to be possible. If it is not possible to retain the roost, then at least one new crevice roost feature should be included in the development.
- 6.3.8 Regardless of whether the known roost can be retained, it is recommended that two bat boxes should be fitted during renovation of the building complex. A suitable location for these boxes would be the southwest gable of B1 (Figure 3). A suitable design of integrated box would comprise the Vivara Pro Build-in WoodStone Bat Box.

Figure 3. Recommended locations for integrated bat boxes



- 6.3.9 Over time bats will often get into new buildings, accessing roofing materials. 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 (i.e. Siga Majcoat 200 SOB) which have been shown to be relatively safe for bats. As a result, it is recommended that one of these 'bat safe' membranes should be used during any required re-roofing.

Lighting

- 6.3.10 High levels of lighting exist to the northeast (Honeywell Street) and northwest (Old Mill Lane). There is however less light along the passageway to the southwest of the buildings, with this the location where all bat activity was recorded. Consequently, it is recommended that new external lighting along this passageway be restricted to passive infra-red sensor operated lighting only. Where lighting is necessary, it is

advised that lighting is low height, low output, directional and of a warm colour tone. No light spill should occur across either the roost location or new bat boxes.

Monitoring

6.3.11 No monitoring survey work is considered necessary.

Birds

6.3.12 If re-roofing and external renovation works are to commence during the main bird nesting period (March to August inclusive), then they should be preceded by a nesting bird check, to be undertaken by an ecologist.

6.3.13 In accordance with the aims of the National Planning Policy Framework, and to compensate for the loss of bird nesting habitat, it is recommended that two swift *Apus apus* boxes (i.e. S Brick) be installed either on or within the renovated building. A suggested location for these boxes would comprise the northeast gable of B1 (Figure 4). Studies have shown that swift boxes are used by other bird species that utilise buildings and consequently this measure will provide potential nesting space for house sparrows *Passer domesticus* and starlings *Sturnus vulgaris*, in addition to potentially providing future nest space for swift.

Figure 4. Recommended locations for integrated swift boxes



6.4 Conclusions

- 6.4.1 St Barnabas Hall supports one common pipistrelle day roost. Retention of the roost may be possible and consequently it may be possible to progress the scheme under a non-licensed method statement.
- 6.4.2 Regardless of whether the scheme progresses under the terms of a non-licensed method statement or a bat mitigation licence, precautionary working practices need to be adopted, as set out in this report.
- 6.4.3 It is recommended the known roost is retained, two new integrated bat boxes are fitted and bat safe roofing felt is used during any re-roofing. It is also recommended that two swift boxes are fitted in the re-developed building.
- 6.4.4 Building re-development works should commence either outside the bird nesting period (March to August inclusive), or the works will need to be preceded by a nesting bird check.

7. References

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

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 For Submission To Recording Organisations

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
07/05/2024	Common pipistrelle	St Barnabas Hall, 26 Honeywell Street, Barnsley, S71 1PZ	SE 34708 06939	Day roost – x 1 bat
07/05/2024	Soprano pipistrelle	St Barnabas Hall, 26 Honeywell Street, Barnsley, S71 1PZ	SE 34708 06939	Pass