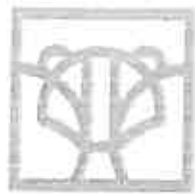


320170607P

Bat and Water Vole Survey

BE-508.1

Punch Bowl Inn



Bagshaw
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Report title	Bat and Water Vole Survey
Report reference	BE508.1
Revision	A
Site address	Site of former Punch Bowl Inn, Longridge Road, Hurst Green, Clitheroe BB7 9QP
Grid reference	SD 67396 37863
Report reviewed by	David Watts BSc (Hons) MGrEEM
Client	Andrew Donelan
Date	9 th June 2017

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Executive Summary

Bagshaw Ecology Ltd have been requested by Bramley-Pate & Partners, on behalf of Andrew Donelan, to carry out a Bat Activity Survey and Water Vole Survey at the site of the former Punch Bowl Inn, Longridge Road, Hurst Green, Clitheroe BB7 9QP, in relation to an application for planning. The development proposals are to construct 15 holiday lets on the site, necessitating removal of the existing building. This report follows a previous report produced by Pennine Ecological in 2015, which identified the requirement for further surveys.

A scoping survey found no signs of bats within the building. Feature suitable for roosting bats were identified on the exterior of the building. The following presence/absence surveys identified at least five common pipistrelles *Pipistrellus pipistrellus* roosting under roof tiles, a ridge tile, and the pub sign on the exterior of the building. Bats were also observed commuting and foraging on the site, in particular adjacent to a linear group of Leyland cypress *Cupressus leylandii* adjacent to the east boundary.

Blue tits *Cyanistes caeruleus* were observed nesting in an ashtray attached to the north aspect of the building. Other common bird species were observed on the site.

Two transects of the stream found no signs indicative of water voles. The stream was found to be shallow and fast moving, providing suboptimal habitat.

As there is a confirmed bat roost within the site, a Natural England European protected Species Licence will be required prior to the commencement of works. Further works to ensure avoidance of ecological impact, and further mitigation may be required as part of the licence application.

It is recommended that the Leyland cypress trees to the east of the site are retained. If for any reason these trees are removed, this should be mitigated by further tree planting.

Trees with ivy *Hedera helix* cover adjacent to the stream were determined to have low potential for roosting bats. If any of these are to be removed, works should be carried out under the supervision of a licensed bat consultant.

It is recommended that no works affecting the bird nest is undertaken during bird nesting season (1st March – 31st August), unless it has been verified that the nest is no longer occupied. Similarly, no trees should be removed during the season, unless it has been confirmed that birds are not present.

As it is not anticipated that water voles are present in the stream, and as the proposed development is over 5m from the stream bank, there are no further recommendations in regard to this species.

It is recommended that the ecological value of the site is enhanced through the incorporation of bat and bird boxes into the proposed development.

1. Introduction

Background

- 1.1. Bagshaw Ecology Ltd have been requested by Bramley-Pate and Partners, on behalf of Andrew Donegan, to carry out a Bat and Water Vole Survey of the land at the former Punch Bowl Inn, Longridge Road, Hurst Green, Clitheroe BB7 9QP, hereafter referred to as 'the site'.
- 1.2. The purpose of the report is to identify the habitat types on the site, along with the presence or absence of any protected or notable species. The ecological impact of any proposed development is assessed, and mitigation, management and aftercare proposals are suggested when appropriate.

Site Details

- 1.3. The site is located at grid reference SD 67396 37863, and is accessed off the south of Longridge Road (B6243), approximately 500m west of Hurst Green.
- 1.4. The site consists of the building of the former Punch Bowl Inn, and an area of grassland. The site is bordered by Longridge Road to the north, by agricultural land to the east and south, and by Bailey Brook to the west.

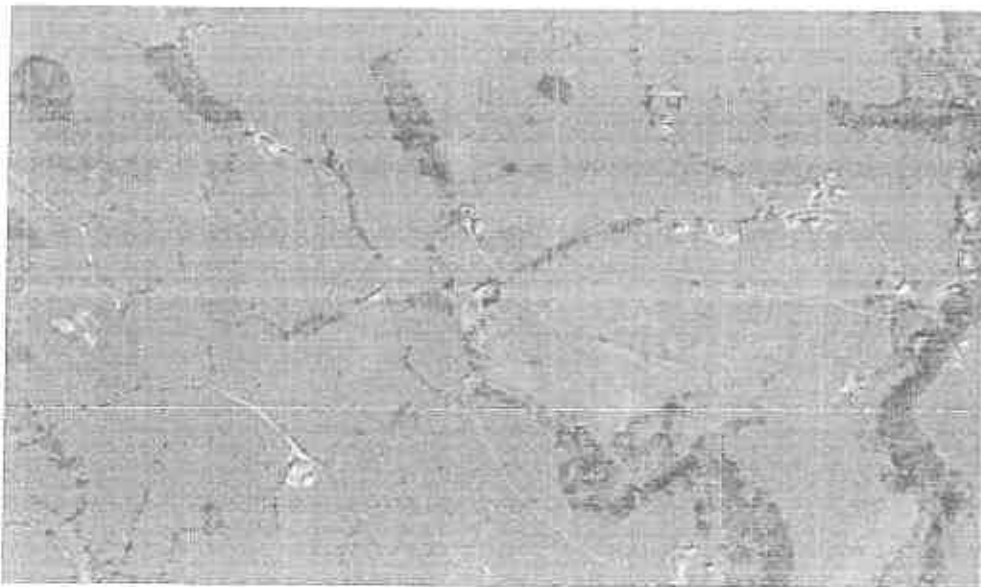


Figure 1. Aerial imagery of site and surrounding area (Google Earth Pro, 2017)

Development Proposals

- 1.5. The development proposals are to demolish the existing building on the site, and to construct 15 holiday cottages, along with their associated parking spaces and amenity areas.

Previous Reports

- 1.6. A previous report was produced by Pennine Ecological in November 2015 (Leatham, 2015). During the site survey it was not possible to access the interior of the building. However, due to the presence of exterior features with the potential for roosting bats, the buildings were identified as having moderate-high bat roost potential. A further two bat activity surveys were recommended. Trees with Ivy *Hedera helix* cover on the site were also identified as having low bat roost potential.
- 1.7. The stream to the west of the site, Bailey Brook, was identified as having potential for water vole *Arvicola amphibius*. It was recommended that all buildings were positioned at least 5m from the stream.

2. Legislation and Policy

2.1. Water voles and all species of British bat are protected under the Wildlife and Countryside Act 1981, extended by the Rights of Way Act (2000), making it an offence to deliberately or recklessly:

- Injure, kill or capture a bat or water vole.
- Intentionally or recklessly destroy a bat roost or place of shelter for water voles (regardless of whether the species concerned is present or not)
- Possess or control any live or dead specimen of a bat or water vole.
- Destroy or obstruct access to any structure or place used for protection by a bat or water vole.
- Sell, barter or exchange a bat or water vole.

2.2. All bat species are afforded additional protection under Schedule II of the Conservation of Habitats and Species Regulations 2010. The Conservation of Habitats and Species Regulations makes it an offence to kill, capture or damage a bat, or to destroy a breeding site or resting place of a bat. Any development which compromises the protection afforded to bats under the regulations will require a European Protected Species License from Natural England.

2.3. All birds are protected under the Wildlife and Countryside Act 1981 (as amended) when nesting. Some bird species, including barn owl *Tyto alba* are afforded additional protection under Schedule 1 of the Act.

3. Methods

Bat Survey

- 3.1. The initial bat scoping survey was carried out on 16th May 2017. The survey was carried out by David Watts BSc (Hons) MCIEEM (Class License 2016-24731-CLS-CLS), an ecological consultant experienced in carrying out building inspections for bats.
- 3.2. The survey was based upon methodologies prescribed by Collins (2016), Mitchell-Jones (2004) and Mitchell-Jones and McLeish (2004). This involved an inspection of the exterior and interior of the buildings. Any structural features with potential for use by roosting bats were recorded and any suitable access points were identified. Any direct evidence of bats, such as scratch marks, oil stains, droppings and feeding remains were also identified.
- 3.3. Taking account of the structural features of the buildings, and the surrounding habitat, the buildings were assigned a level of roost suitability based upon professional judgement (see table 1).

Table 1 Bat Roosting Potential in Buildings

Roosting potential	Criteria
Confirmed Presence	Presence confirmed by the survey.
High	Buildings that have many areas suitable for roosting with a large number of potential access points. These are normally in sheltered locations, subject to low variation in temperature. Buildings with good potential could be used for a whole range of roosts including maternity roosts.
Medium	Buildings with a smaller number of areas suitable for roosting, but still supporting features that could be attractive to bats and potentially support maternity roosts.
Low	Buildings with limited roosting opportunities but which could be used on a sporadic or occasional basis which are unsuitable for maternity roosts. Buildings that would otherwise be medium to high potential but have reduced value due to other factors such as exposed location, separation from nearby foraging, or presence of strong lighting.
Negligible	Buildings which appear unsuitable for roosting bats due to a clear lack of roosting spaces such as voids etc. and/or absence of suitable access points.

- 3.4. Following the initial scoping survey, three activity surveys were undertaken. These consisted of two dusk emergence surveys and one dawn re-entry survey.
- 3.4. The surveys were undertaken by David Watts, Amy Reddick, Kath Smyki and Alexandra Kaley. Surveyors were equipped with Batbox Duet bat detectors, and bat calls were recorded with Anabat Express. The building was monitored for any signs of emerging or re-entering bats. Any foraging and commuting bats in the surrounding area were also recorded.

Table 2 Activity Survey Details

Date	Surveyors	Sunset/sunrise time	Start time	Finish time	Weather conditions
16/05/2017	David Watts, Kath Smyki, Alexandra Kaley	21:06	20:51	22:56	Start temperature 15°C, finish temperature 11°C. Clear and dry. Cloud cover 20%. Wind Beaufort 2.
01/06/2017	David Watts, Amy Reddick, Alex Kaley	04:46	03:11	05:01	Start temperature 15°C, finish temperature 13°C. Clear and dry. Cloud cover 5%. Wind Beaufort 1.
07/06/2017	David Watts, Amy Reddick, Kath Smyki	21:35	21:20	23:05	Start temperature 13°C, finish temperature 13°C. Overcast and dry. Cloud cover 100%. Wind Beaufort 1.

Birds

- 3.5. During the bat survey, the building was inspected for any signs of nesting birds, in particular barn owl.

Water Voles

- 3.6. The water vole surveys were carried out in accordance with methods prescribed by Strachan *et al* (2001) and Dean *et al* (2016). Surveys were undertaken on 4th May 2017 and 7th June 2017.
- 3.7. Transects of the stream were undertaken by wading through the channel whilst inspecting the banks on both sides for signs indicative of water voles. The stream running through the site, and 500m to the south of the site was inspected. The stream to the north of the site was culverted, preventing a full inspection.

4. Results and Assessment

Bats

- 4.1. The building consisted of a two-storey structure, with three adjoining pitched roofs, with a hipped end to the east. The building has a two-storey annex to the southeast, and a single-storey annex to the southwest, both with pitched roof.
- 4.2. The roof of the exterior of the building was in a poor state of repair, with numerous gaps in the roof and ridge tiles, which were suitable for roosting bats.
- 4.3. The scoping survey of the interior of the building found it to be in a poor state of repair. The northeast section of the building consisted of a mezzanine, which was open to the roof, and well-lit. There was a separate roof void to the centre north of the building and to the northwest. Both of these were in poor condition, with bare roof tiles and numerous gaps leading from the exterior of the building. The roof voids to the south of the building had collapsed, and were open to the ground floor. No signs indicative of bats were identified.
- 4.4. Following the scoping survey, it was concluded that the building had high potential for roosting bats, and a further three activity surveys were recommended. No features were identified as suitable for roosting bats within the mezzanine to the west of the building, therefore further surveys were only required for the north, east and south aspects.
- 4.5. The surveys recorded at least five common pipistrelles *Pipistrellus pipistrellus* emerging from and re-entering the roof of the building. These included:
 - Three common pipistrelles emerging from separate lifted roof tiles on the south aspect during the dusk emergence survey on 4th May 2017.
 - Two common pipistrelles re-entering separate roof tiles on the south aspect on the dawn re-entry survey on 1st June 2017.
 - One common pipistrelle re-entering gaps under the pub sign on the north aspect on the dawn re-entry survey on 1st June 2017.
 - One common pipistrelle re-entering a lifted roof tile on the south aspect on the dawn re-entry survey on 1st June 2017.
 - One common pipistrelle emerging from a lifted roof tile on the north aspect on the dusk emergence survey on 7th June 2017.
- 4.6. No more than one bat was observed going into any individual feature of the building during any single survey. It is therefore anticipated that the roosts are night roosts or transitional roosts, and there was no indication of a maternity roost being present.
- 4.7. Common pipistrelle and soprano pipistrelle *Pipistrellus pygmaeus* were observed foraging adjacent to the Leyland cypress *Cupressus x leylandii* to the east of the site during all three surveys. Noctule *Nyctalus noctula*, *Myotis* spp. and brown long-eared bat *Plecotus auritus* were also observed foraging and commuting over the site.
- 4.8. Trees adjacent to the stream with dense ivy cover are considered to have low potential for roosting bats.

- 4.9. A plan showing bat activity during surveys, and detailed survey sheets, can be viewed in the appendices.

Birds

- 4.10. During the site surveys, blue tit *Cyanistes caeruleus* were observed nesting in an ashtray attached to the wall on the north aspect.
- 4.11. Other bird species observed on the site include heron *Ardea cinerea*, goldfinch *Carduelis carduelis*, carrion crow *Corvus corone*, rook *C. frugilegus*, song thrush *Turdus philomelos*, pied wagtail *Motacilla alba* and wren *Troglodytes troglodytes*.

Water Voles

- 4.12. The watercourse was fast moving and approximately 10mm deep, with occasional pockets up to 30mm deep. No signs indicative of water voles were observed during either survey, and it is considered that the stream provides suboptimal habitat for water voles.

5. Conclusion and Recommendations

- 5.1. There is a confirmed bat roost within the building, with at least five common pipistrelle bats roosting within different areas of the roof. It is anticipated that these comprise day or transitional roosts, and there is no indication of a maternity roost being present.
- 5.2. As the building is unsafe and in a poor state of repair, there is no viable alternative to the proposals which would not necessitate the removal of the bat roosts within the building. The bat roosts within the building contain a relatively small number of a common bat species.
- 5.3. Prior to the commencement of works, a Natural England European Protected Species Licence (EPSL) will be required. The EPSL should prescribe measures to avoid any harm to bats during demolition works, and if necessary, should prescribe further mitigation.
- 5.4. Trees with ivy are considered to have low potential for roosting bats. If removal of any of these trees is required, works should be carried out under the supervision of a licensed bat worker. Any potential harm to bats can be negated by either stripping the ivy back to determine if any potential roost features are revealed, or if this is not possible, to fell the trees and leave them *in situ* for 24 hours prior to processing.
- 5.5. The Leyland cypress trees to the east of the site provide a linear feature suitable for commuting and foraging bats. It is recommended that these are retained. If removal of these trees is required, further mitigation planting is recommended.
- 5.6. It is recommended that no works with the potential to affect the blue tit nest on the north aspect of the building are undertaken during bird nesting season (1st March – 31st August), unless it has been verified that all chicks have fledged and the nest is no longer occupied.
- 5.7. No tree removals should be undertaken during bird nesting season. If this is not possible, a nesting bird check should be carried out within 48 hours prior to removal, and works should only commence if it has been established that no nesting birds are present.
- 5.8. It is not anticipated that water voles are present within the stream to the west of the site. Following the previous report produced by Pennine Ecological, the development proposals have been modified to ensure building are over 5m from the stream bank. Therefore, even if water voles were present, there would be no foreseeable impact resulting from the development proposals.
- 5.9. In accordance with the National Planning Policy Framework, it is recommended that the ecological value of the site is improved through the incorporation of bat and bird boxes into the development proposals. These should include:
 - Six bat boxes of type Schwegler 1FN. These should be hung on trees on the site, at a minimum height of 5m, and with clear flight paths to and from the entrances.
 - Two bird boxes of type Schwegler 1B, with 26mm entrances. These should be hung on trees at a height of 1.5-3m
 - Two bird boxes of type Schwegler 1B, with 32mm entrances. These should be hung on trees at a height of 1.5-3m

6. References

- CIEEM (2016). *Guidelines for Ecological Impact Assessment in Britain and Ireland: Terrestrial, Freshwater and Coastal, 2nd Edition*. Chartered Institute of Ecology and Environmental Management, Winchester
- Collins, J. (2016). *Bat Surveys Good Practice Guidelines – 3rd Edition*. Bat Conservation Trust, London
- Conservation of Habitats and Species Regulations 2010*
- Dean, M., Gow, D., Andrews, R. (2002). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Series)* (eds. Matthews, F., Charlin, P.). The Mammal Society, London
- Google Earth Pro (2017). *Google Earth* [online]. Available at: >www.earth.google.com< [accessed 5th June 2017]
- Leatham, R. (2015). *Extended Phase 1 Habitat Survey and protected Species Survey/Assessment – Land at Punch Bowl Inn, Longridge Road, Hurst Green, Clitheroe, BB7 9QP, Lancashire –* [technical report]. Penning Ecological, Bolton
- Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature
- Mitchell-Jones, A.J., McLeish, A.P. (2004). *Bat Workers Manual*. Joint Nature Conservation Committee
- Strachan, R., Moorhouse, T., Gelling, M. (2011). *Water Vole Conservation Handbook. Third Edition*. Wildlife Conservation Research Unit, Oxford
- Wildlife and Countryside Act 1981 Ch. 69*

Appendices

Appendix 1: Photographs



Plate 1: South aspect

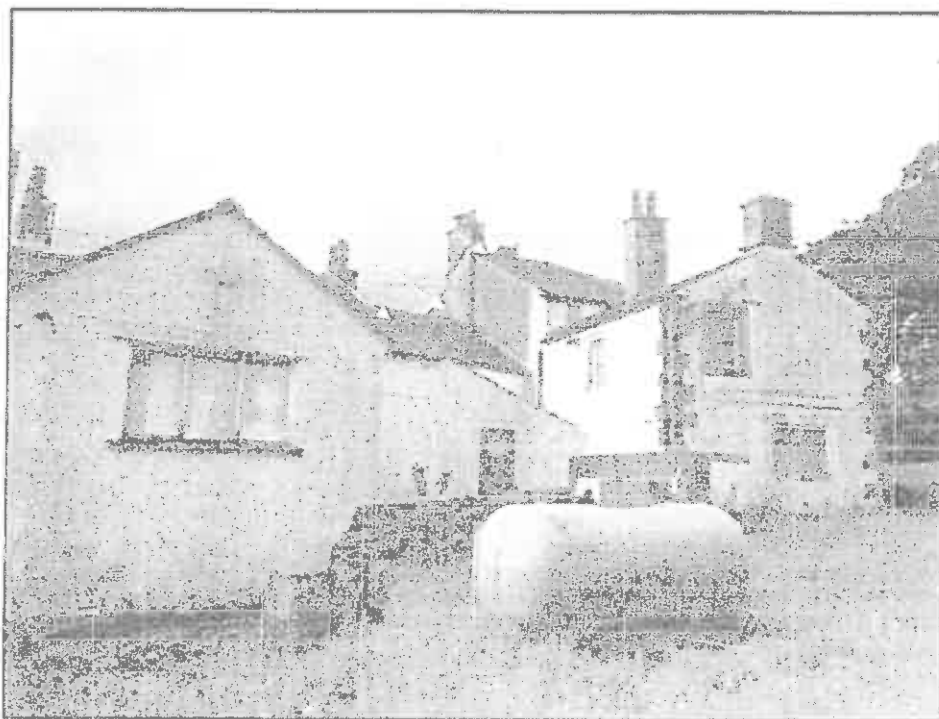


Plate 2: South aspect (arrows show approximate emergence/re-entry points)



Plate 3: North aspect (arrows show approximate emergence/re-entry points)

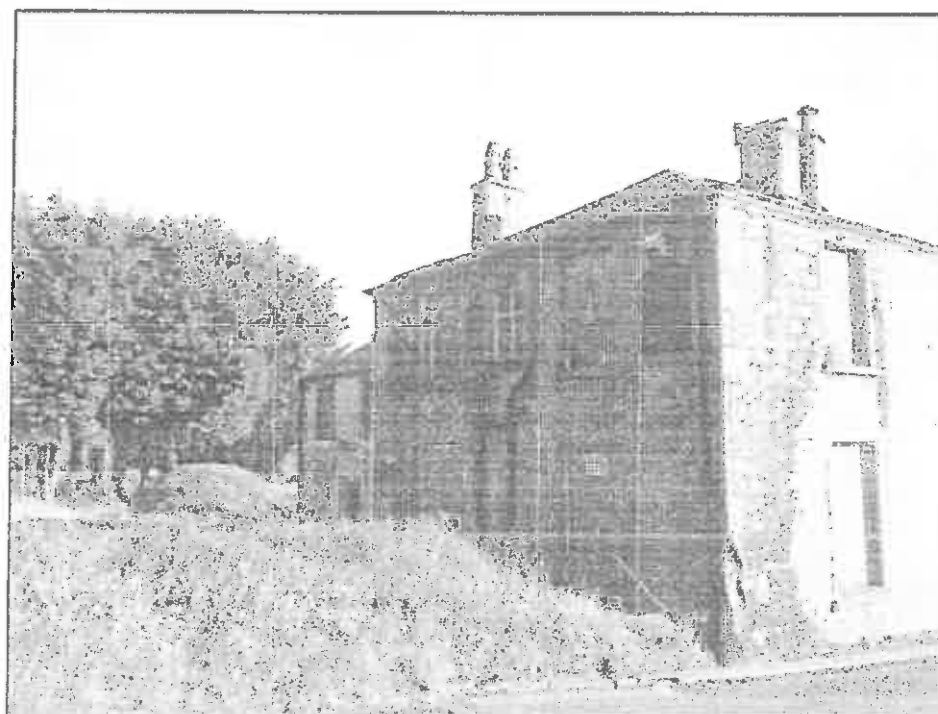


Plate 4: East aspect

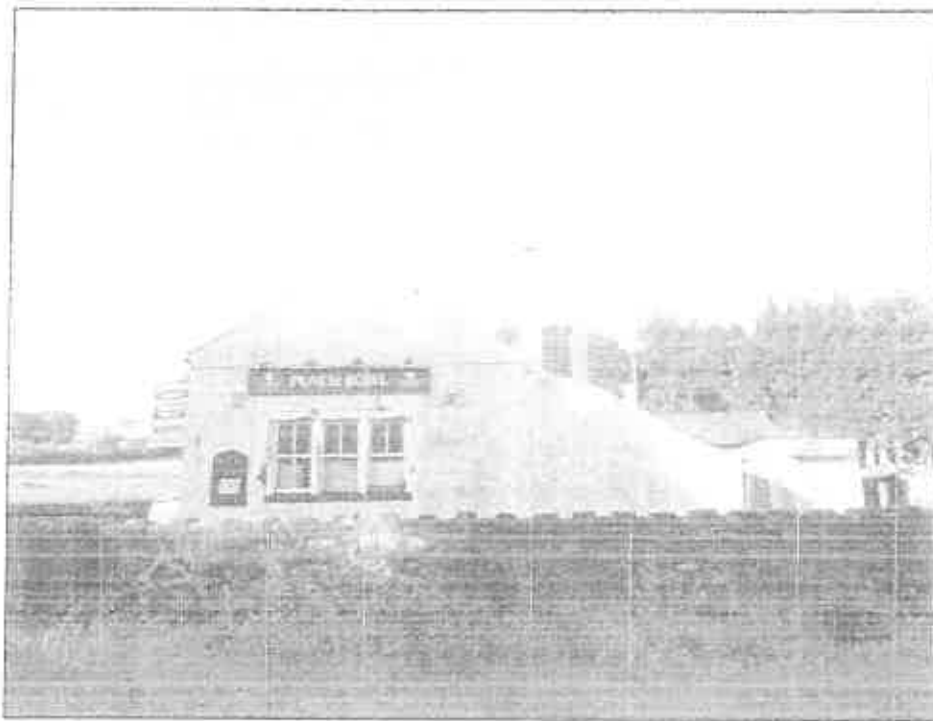


Plate 5: West aspect



Plate 6: Blue tit nest on north aspect

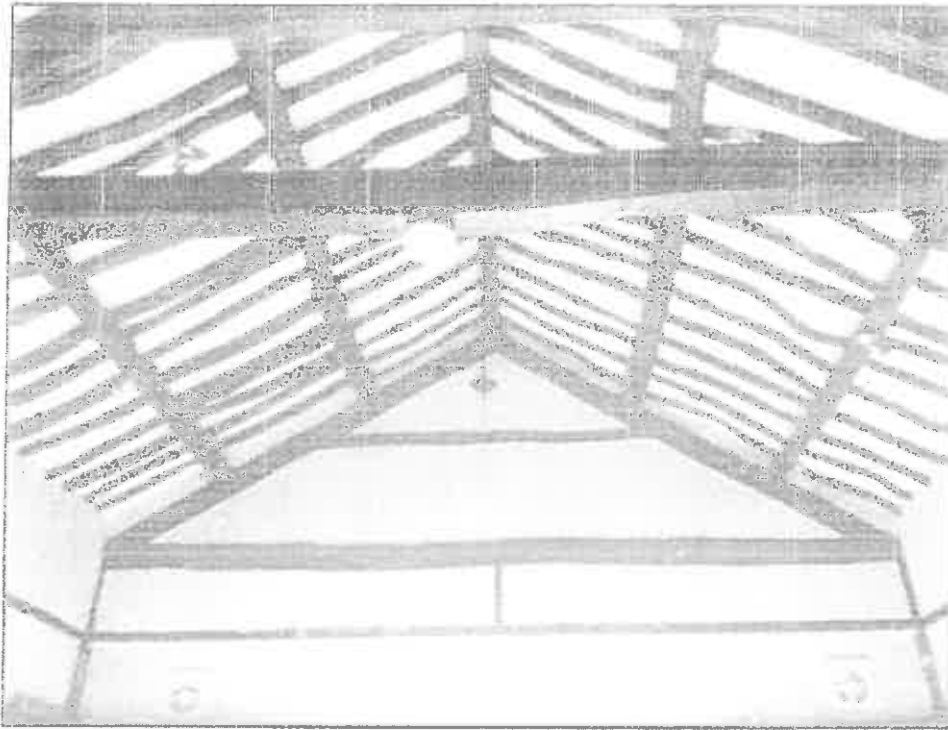


Plate 7: Mezzanine to northeast

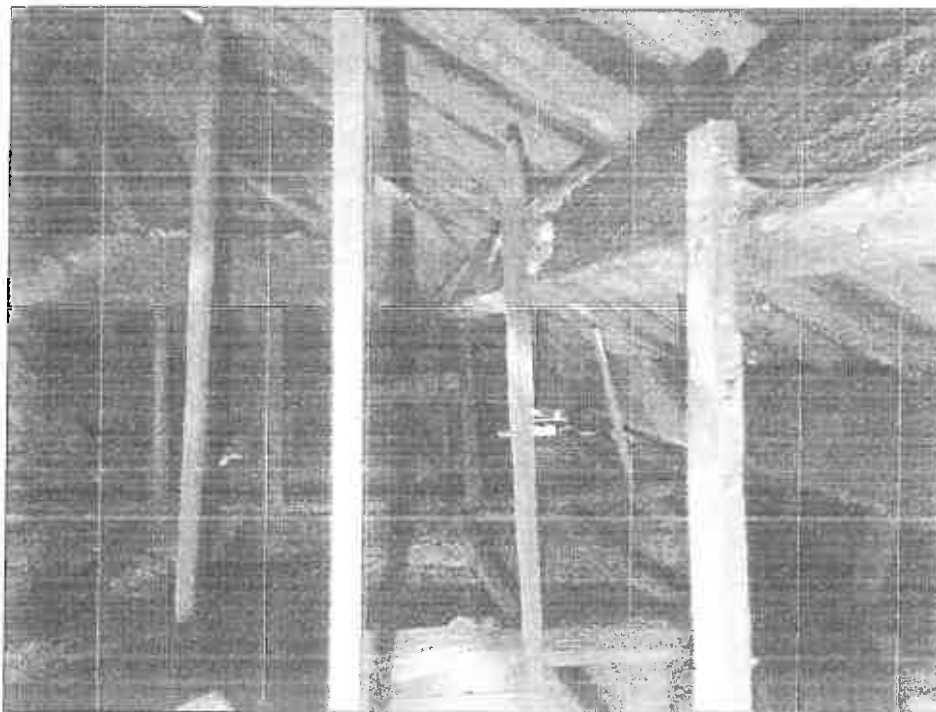


Plate 8: Roof void, west aspect



Plate 9: Roof void to centre-north



Plate 10: Stream



Plate 11: Stream, leading from south of site

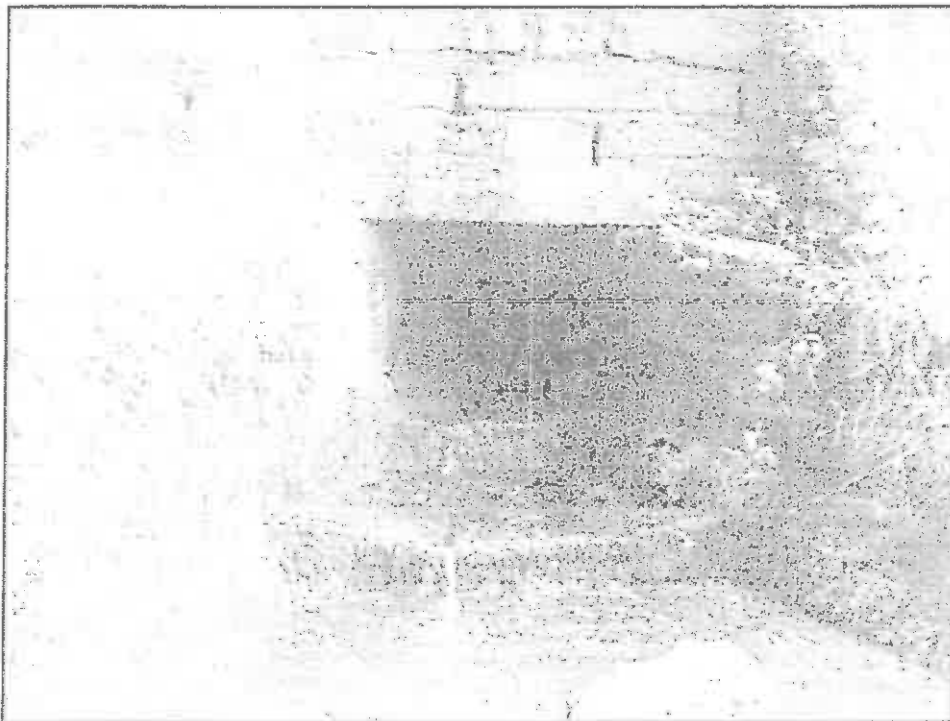


Plate 12: Culvert to north of site

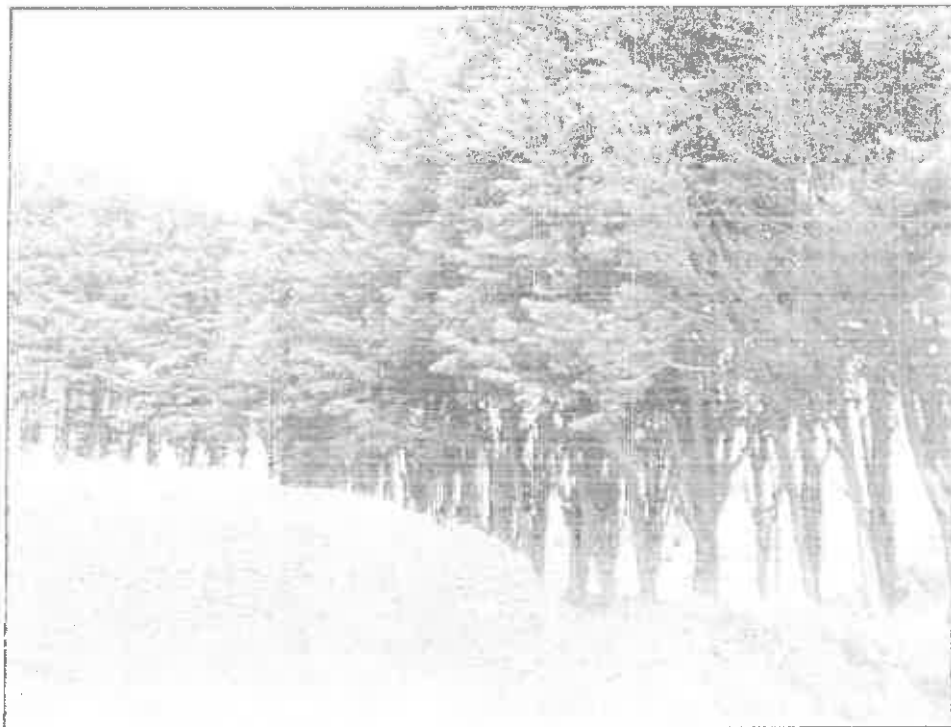


Plate 13: Leyland cypress trees to east of site

Appendix 2: Survey Sheets

Date:		16/05/2017	Surveyor:	Kath Smyki (A)
Start time:		20:51	Finish time:	22:36
Number on plan	Time	Species	Comments	
1	21:31	<i>Pipistrellus pipistrellus</i>	Emerged from near ridge tiles on centre roof	
2	21:36	<i>Pipistrellus pipistrellus</i>	Emerged from eastern roof tiles	
3	21:43	<i>Pipistrellus pipistrellus</i>	Emerged from ridge tile on centre roof	
4	21:53	<i>Pipistrellus pipistrellus</i>	Foraging	
5	21:58	<i>Pipistrellus pipistrellus</i>	Commuting over building	
-	22:01	<i>Myotis sp</i>	Pass	
-	22:02	<i>Myotis sp</i>	Pass	
-	22:04	<i>Pipistrellus pipistrellus</i>	Pass	
4	22:07	<i>Pipistrellus pipistrellus</i>	Foraging	
4	22:10	<i>Pipistrellus pipistrellus</i>	Foraging	
4	22:15	<i>Pipistrellus pipistrellus</i>	Foraging	
-	22:15	<i>Plectotus auritus</i>	Heard not seen	

Date:		16/05/2017	Surveyor:	David Watts (B)
Start time:		20:51	Finish time:	22:36
Number on plan	Time	Species	Comments	
6	21:42	<i>Pipistrellus pipistrellus</i>	Commuting east to west alongside hedgerow	
3	21:46	<i>Pipistrellus pipistrellus</i>	Flew south to north over building	
7	21:47 – 22:04	<i>Pipistrellus pipistrellus</i>	Foraging over field to north until 22:04	
-	22:02	<i>Nyctalus noctula</i>	Heard, no visual	

Date:	16/05/2017	Surveyor:	Alex Kaley (C)
Start time:	20:51	Finish time:	22:36
Number on plan	Time	Species	Comments
5	21:31	<i>Pipistrellus pipistrellus</i>	Flew west to east, before foraging adjacent to trees
4	21:47 - 22:36	<i>Pipistrellus pipistrellus</i>	Foraging around Leyland cypress trees for remainder of survey. Joined by at least one other bat from 21:58
8	22:01	<i>Myotis sp.</i>	Commuting north to south alongside east aspect of building

Date:	01/06/2017	Surveyor:	Amy Reddick (A)
Start time:	3:11 am	Finish time:	5:01
Number on plan	Time	Species	Comments
9	3:50 - 3:54	<i>Pipistrellus pipistrellus</i>	Foraging outside building
10	3:56	<i>Pipistrellus pipistrellus</i>	Commuting over building north to south
9	3:59	<i>Pipistrellus pipistrellus</i>	Foraging outside building
10	4:00	<i>Pipistrellus pipistrellus</i>	Commuting over building north to south
11	4:02	<i>Pipistrellus pipistrellus</i>	Two bats swarming over roof
11	4:03 - 4:10	<i>Nyctalus noctula</i>	Foraging over building
1	4:09	<i>Pipistrellus pipistrellus</i>	Entered central roof under tiles
4	4:10	<i>Pipistrellus pipistrellus</i>	Foraging in trees to the south of the site

Date:	01/06/2017	Surveyor:	David Watts (B)
Start time:	3:11 am	Finish time:	5:01
Number on plan	Time	Species	Comments
7	3:37	<i>Pipistrellus pipistrellus</i>	Foraging adjacent to hedge
12	3:48 – 04:02	<i>Pipistrellus pipistrellus</i>	Swarming around south of building before entering gap under pub sign
10	4:00	<i>Pipistrellus pipistrellus</i>	Commuting over building north to south
13	4:00 – 4:07	<i>Pipistrellus pipistrellus</i>	Swarming around roof tiles, before flying to south
-	4:06	<i>Nyctalus noctula</i>	Heard, no visual
14	4:24	<i>Pipistrellus pipistrellus</i>	Flew from north, before entering central roof tiles
-	4:32	<i>Pipistrellus pipistrellus</i>	Heard, no visual

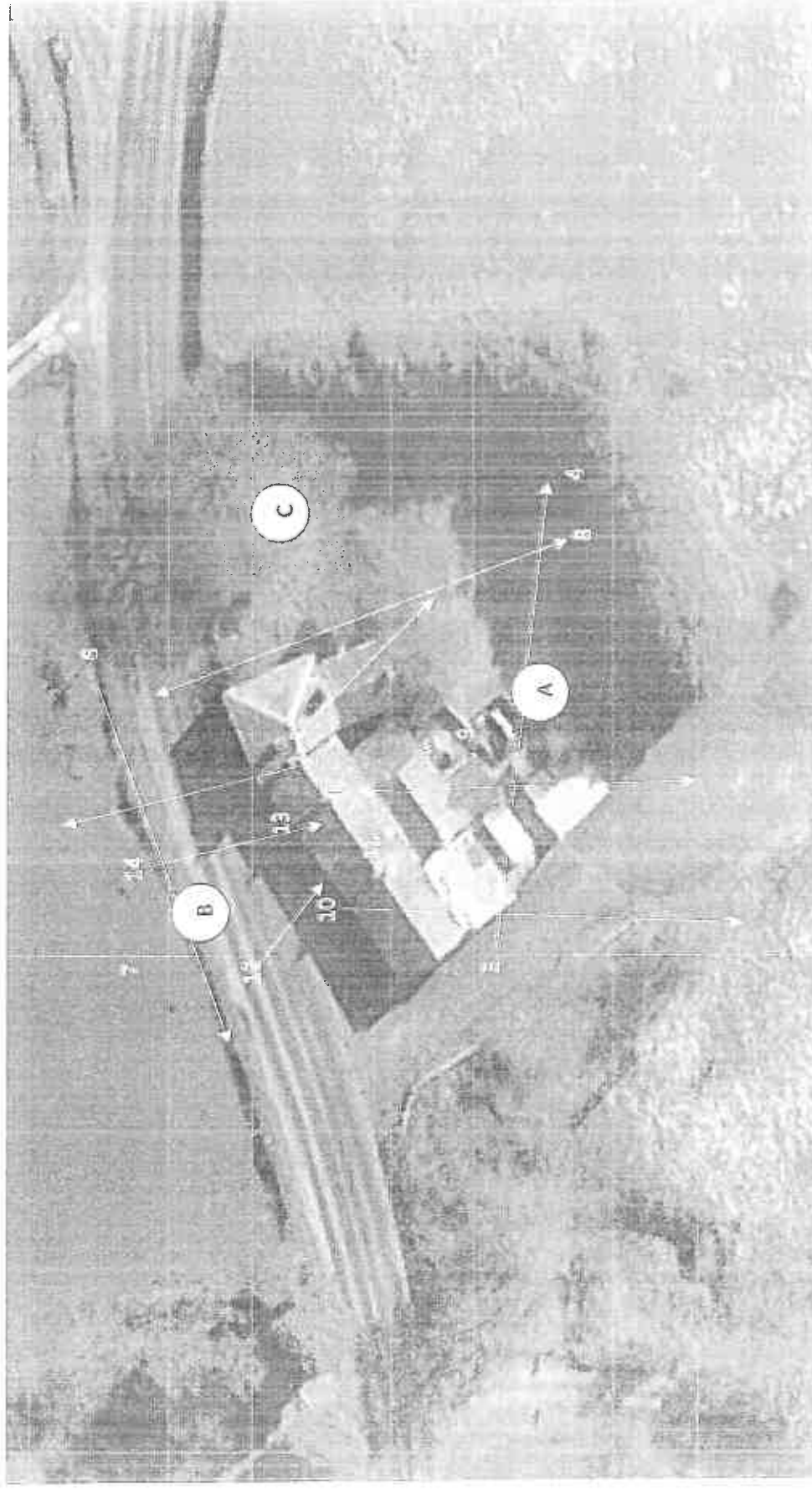
Date:	01/06/2017	Surveyor:	Alex Kaley (C)
Start time:	3:11 am	Finish time:	5:01
Number on plan	Time	Species	Comments
4	04:01-04:16	<i>Pipistrellus pipistrellus</i>	Foraging adjacent to trees
8	04:27	<i>Pipistrellus pipistrellus</i>	Commuting north to south
4	04:31 – 04:42	<i>Pipistrellus pipistrellus</i>	Foraging adjacent to trees
-	4:06	<i>Nyctalus noctula</i>	Heard, no visual

Date:	07/06/2017	Surveyor:	Amy Reddick (A)
Start time:	21:20	Finish time:	23:05
Number on plan	Time	Species	Comments
1	21:53	<i>Pipistrellus pipistrellus</i>	Emergence from eastern roof tiles
-	22:01	<i>Pipistrellus pipistrellus</i>	Heard not seen foraging
-	22:06	<i>Pipistrellus pipistrellus</i>	Pass
-	22:11	<i>Pipistrellus pipistrellus</i>	Pass

Date:	07/06/2017	Surveyor:	Kath Smyki (B)
Start time:	21:20	Finish time:	23:05
Number on plan	Time	Species	Comments
-	22:25	<i>Pipistrellus pipistrellus</i>	Faint heard not seen

Date:	07/06/2017	Surveyor:	David Watts (C)
Start time:	21:20	Finish time:	23:05
Number on plan	Time	Species	Comments
5/4	21:53 – 22:06	<i>Pipistrellus pipistrellus</i>	Commuting from west to east, before foraging adjacent to trees until 22:06
4	22:17	<i>Pipistrellus pipistrellus</i>	Foraging adjacent to trees until end of survey

Appendix 3: Site Plan (indicative plan only, not to scale)



Numbers and arrows show bat flight paths. Letters show location of surveyors (refer to Bat Survey Sheets).