



LINDSAY CARRINGTON
ECOLOGICAL SERVICES

PHASE 1 & 2 BAT SURVEY REPORT

CLARKS MILL AND MILL HOUSE
STALLARD STREET
TROWBRIDGE
BA14 8HP

JULY 2018

ON BEHALF OF GREENWARD ASSOCIATES



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It is company policy to share species records collected during our surveys with local biological records centres unless instructed otherwise by the client

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SUMMARY

1. Lindsay Carrington Ecological Services Limited were commissioned by Greenward Associates on behalf of their client to conduct a phase 1 bat survey at Clarks Mill and Mill House, Stallard Street, Trowbridge, Wiltshire. The survey is required to gain planning permission for the conversion of the existing buildings.
2. An internal and external inspection was conducted on the 17th May 2017 and entailed a detailed inspection of both internal and external features of the buildings looking for signs of bats. No evidence of bats was recorded within either building
3. Dusk emergence surveys were undertaken on the 2nd May and one pre-dawn re-entry survey on the 17th May 2018.
4. The phase 2 bat surveys concluded no evidence of bats re-entering and emerging from the building.

1.0 INTRODUCTION

Lindsay Carrington Ecological Services Limited were commissioned by Greenward Associates on behalf of their client to conduct a phase 1 bat survey at Clark Mill and Mill House, Stallard Street, Trowbridge, Wiltshire BA14 8HP (Grid reference: ST853579). The survey is required to gain planning permission for the conversion of the buildings. A plan of the site has been provided in appendix I.

All bat species are legally protected under Annex IV of the EC Habitats and Species Directive which is transposed into UK law via the Conservation of Habitats and Species Regulations 2010. All species of bat are also protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to:

- Deliberately kill, injure or capture bats;
- Deliberately disturb bats in such a way as to be likely to significantly affect: (i) the ability of any significant group of bats to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of bats¹;
- Intentionally or recklessly disturb any bat whilst it is occupying a roost¹;
- Damage or destroy bat roosts; and
- Intentionally or recklessly obstruct access to a bat roost.

This legal protection means that where activities have the potential to impact on bats, the results of a bat survey and an appropriate mitigation strategy must be submitted to Natural England.

In addition, several species of bat including soprano pipistrelle and brown long-eared bats, are UK Biodiversity Action Plan (BAP) Species. BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets was strengthened through the Countryside and Rights of Way Act 2000 and policy in the National Planning Policy Framework (NPPF).

The NPPF sets out the Government's vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore or add to biodiversity and geological conservation interests. NPPF includes sections on legally protected species and sites.

¹ Note that the amendments to the Habitats Regulations in August 2007 and January 2009 have resulted in an increase in the threshold of illegal levels of disturbance to bats. An offence is only committed if the deliberate disturbance would result in significant impacts to the bat population. However, it should be noted that activities that cause low levels of disturbance to bats continue to constitute an offence under Section 9 of the Wildlife and Countryside Act.

Section 2 of the report provides details of the methodologies adopted and section 3 provides an account of the survey results. Section 4 provides information on the relevance of the results to the proposed development and presents appropriate measures of best practice.

2.0 METHODOLOGY

2.1 Desk study

Records of bat species within a 10 kilometre radius of the site were collected from personal records made by staff of Lindsay Carrington Ecological Services (LCES). In addition, the internet resource MAGIC was used to provide any bat records within 5kilometres of the site.

2.2 Field study

2.2.1 Phase 1 bats

Bats roost in a wide variety of sites within buildings, with many species roosting in cracks and crevices, within brick work, under slates and tiles, and within timber beam joints where they are difficult to see.

Bats often access roosts at key areas such as the gable end, soffits, barge boards, ridge tiles, between double lintels, around window frames, through open joints in the brickwork or broken tiles through open doors / entrances to the buildings.

The presence of roosting bats can be spotted through signs such as accumulations of moth or butterfly wings, staining, bat droppings, or bats themselves. The absence of these cannot, however, be treated as conclusive evidence that bats are not using the buildings. An assessment was therefore also made of the potential of the building to support bats based on the following scale in accordance with the Bat Conservation Trust survey guidelines (Collins, 2016):

Table 1: Criteria for assessing bat roosting potential of buildings

Confirmed Roost	Evidence of bat occupation found
High Roosting Potential	With significant roosting potential, either because they contain a large number of suitable features or those features present appear optimal
Moderate Roosting Potential	Features with moderate roosting potential, with roosting features appearing less suitable
Low or Negligible Roosting Potential	Buildings with few, if any, features suitable for roosting

A direct search for evidence of bats was therefore conducted on both internal and external features of the building on 17th July 2017 by Jenny Sutch (Licence number: 2015-12971-CLS-CLS).

2.2.2 Phase 2 bat survey

Following the phase 1 bat survey, Clarks Mill was subject to one dusk emergence survey conducted on 2nd July 2018. The Mill House was subject to one dusk emergence survey conducted on 2nd July 2018 and a dawn re-entry survey undertaken on the 17th July 2018. The surveys were undertaken with reference to the *Bat Conservation Trust Bat Survey Good Practice Guidelines* (Collins, 2016). The emergence survey commenced 15 minutes before sunset and continued for approximately two hours. The dawn re-entry survey commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

The phase 2 bat surveys involved a number of surveyors standing at key points around the building. A combination of frequency division (EM3), EMT and heterodyne (Magenta MKII) bat detectors were used to record any bats that were seen leaving / entering the buildings. Visual observations were also used to record flight patterns and feeding behaviour to aid identification to species level. General bat activity within the vicinity of the property was also recorded. Notes were recorded on times, species and behaviour.

All recorded bat calls were subsequently analysed using the software Analook.

3.0 RESULTS

3.1 Desk study

Table 2 below lists bat species within a 5kilometre radius of the site as provided by MAGIC. No records were held by LCES.

Table 2: Bat species within a 5kilometre radius of Clarks Mill and Mill House, Trowbridge

Common Name	Scientific name	Status	Location
Serotine	<i>Eptesicus serotinus</i>	Schedule 2, Habs Regs ² , Schedule 5, WCA ³	1 record located 2.8km south west from 2012.
Brandt's	<i>Myotis brandtii.</i>	Schedule 2, Habs Regs, Schedule 5, WCA	1 record located 2.4km north east from 2012.
Whiskered	<i>Myotis mystacinus</i>	Schedule 2, Habs Regs, Schedule 5, WCA	1 record located 2.4km north east from 2012.
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Schedule 2, Habs Regs, Schedule 5, WCA	4 records located between 0.1km south east and 2.9km north east from 2012 to 2015.
Brown long-eared bat	<i>Plecotus auritus.</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP ⁴	3 records located between 1.3km south east and 2.4km north east from 2012 to 2015.
Lesser horseshoe	<i>Rhinolophus hipposideros</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	1 record located 0.5km south east from 2015.

These records of bat species in the vicinity of the site increase the likelihood of them being within Clarks Mill and Mill House.

² Habs Regs: The Conservation of Habitats and Species Regulations 2010

³ WCA: Wildlife and Conservation Act 1981 (as amended)

⁴ UK BAP: UK Biodiversity Action Plan species

3.2 Field study

Weather conditions

The survey was undertaken when it was dry, sunny, cloud cover of 2/8, little wind, and was 19 degrees.

A description of the buildings are provided below whilst a series of photographs have been provided as appendix II to this report.

Clarks Mill

- The building is constructed from brick and stone and is four storeys high. The building is currently derelict.
- A brick tower comprising a stair well is located on the north-eastern elevation.
- The roof is pitched and hipped and forms an 'E' shape, and is covered with both tiles and slate. A flat roof lift shaft is present on the roof.
- Fascias are present around the building and are constructed from concrete.
- Window and door frames are aluminium in construction.
- No access into the roof voids were possible. The top floor comprised suspended ceilings with evidence of water damage in places, and potential asbestos coating in areas.
- A square tunnel leading to the roof was visible from the top floor with a metal grill covering.
- A void was present above the tower. The void is approximately 3metres high and brick walls were visible. Dense cobwebs were also noted.
- The tower itself has previously been used by pigeons with droppings recorded on the floor. A ladder leading to the void was noted however access was not obtained. Asbestos containing material was noted within this area.

Mill House

- Mill House comprises a series of inter-connected buildings including single and two storey buildings constructed from brick and stone.
- The main two storey structure has a pitched and hipped roof (running north west to south east) constructed from stone and interlocking concrete tiles, with two dormer windows, both of which have hanging stone tiles.
- A pitched roof connects to the main roof (running north east to south west) and is constructed from concrete tiles.
- A two storey structure located on the south eastern elevation has a pitched roof of interlocking concrete tiles (running north east to south west). No access was possible into the void due to lack of roof hatch.
- A single storey extension located on the north eastern elevation has a part pitched roof of both slate on the north west elevation, and corrugated asbestos sheeting on the south west elevation. A pitched glass roof is present with wooden and metal

- frames. A single storey flat roof extension lined with bitumen felt is present on the north eastern elevation. Two dormer windows are present.
- The roof void above the main structure is partially built into. A narrow void is present which measures approximately 15 metres in length, 2.5 metres wide and 1.2 metres high. The void is lined with bitumen roofing felt, and fibre glass insulation is present. Evidence of a large wasp's nest which had been treated was present. The typical truss and ridge beam are wooden with mortise joints visible. Cobwebs were recorded.
 - A roof void on the north western elevation is pitched and measures approximately 9 metres in length, 3 metres wide and 2 metres high. No roofing felt is present and the tiles are visible. Fibre glass insulation is present and evidence of wasp nests that had been treated along with dead wasps were recorded within the void and in the room below the void. Debris was present throughout due to numerous gaps. The gable end wall is constructed from brick whilst a plaster board wall is present where the void connects to the main void.
 - The single storey roof void is approximately 2 metres high, 20 metres in length and 9 metres wide. A suspended ceiling is present, but visibility into the void was available where ceiling panels had been removed/ damaged through water ingress. The void is partially pitched and flat and visibility straight into the glass void was recorded. The void was lined with plaster board, with bitumen under felt recorded in areas. Wooden rafters and steel supports were noted along with fibre glass insulation.

Immediate surroundings

The buildings are situated within the town of Trowbridge with a supermarket to the south and office buildings to the west. Hardstanding in the form of a car park surrounds the buildings with some areas of colonised hardstanding and ornamental planting. The River Biss is located to the north east of the buildings which comprise brick banks with areas of vegetation including ivy (*Hedera helix*), butterfly bush (*Buddleja davidii*), ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*) saplings. Three large sycamore trees covered in dense ivy were along noted on the boundary of the site north of Mill House.

3.2.1 Phase 1 survey

Internal survey: evidence of bats

There was limited access to the buildings with several roof voids not accessible. However, of the voids that were accessed no evidence of roosting bats were recorded.

External survey: evidence of bats

Despite a thorough and detailed external survey of the buildings, no evidence of bats was encountered.

Potential for bats

The buildings were assessed for their potential to support roosting bats. This is detailed in table 3 below.

Table 3: Potential within buildings for roosting bats

Building reference	Potential access	Potential roosting	Overall potential
Clarks Mill	• Gap under tiles	• Between tiles	Due to the limited access and roosting potential for bats the building was considered to hold low roosting potential.
Mill House	• Gaps between wall and lead flashing. • Gaps under stone tiles. • Gaps under hanging tiles. • Broken tile. • Gaps between tiles and missing mortar	• Along ridge beam. • Between tiles and bitumen roofing felt. • Between mortise joints.	The building was considered to hold moderate potential due to the access and roosting provisions present.

Recommendations for further survey works has been made and the results are provided in section 3.2.2 below.

3.2.2 Phase 2 survey results

The full results of the phase 2 emergence-re-entry surveys are provided in appendix III whilst a summary has been provided below:

Dusk 2nd July 2018 Clarks Mill

- No bats were recorded emerging from the building
- A common pipistrelle (*Pipistrellus pipistrellus*) was recorded commuting north to south and back around the side of a building, with ongoing foraging in the car park between 22:02 and 22:05.
- A common pipistrelle was recorded but not seen commuting across the site at 22:58.

Dusk 2nd July 2018 Mill House

- No bats were recorded emerging from the building
- A common pipistrelle was recorded foraging around trees in the north of the site and then flying south towards the building with ongoing foraging from 22:00 to 22:04.

- Common pipistrelle activity was recorded throughout the survey between 22:00 and 22:59.

Dawn 17th July 2018 Clarks Mill

- *No bats were recorded re-entering the building*
- A soprano pipistrelle (*Pipistrellus pygmaeus*) was recorded briefly but not seen at 03:20 and 03:37.
- A noctule (*Nyctalus noctule*) was recorded but not seen commuting across the site at 03:22
- Common pipistrelle activity was recorded throughout the survey between 03:39 and 05:22.

No bats were recorded roosting within either building on site.

3.2.3 Nesting birds

Swifts (*Apus apus*) were observed emerging and re-entering in the gaps in between the gutter and the wall on the south western corner of Clarks Mill. Herring gull (*Larus argentatus*) chicks were observed on the flat roof of Clarks Mill and wood pigeons (*Columba palumbus*) were nesting in the tower.

Due to the presence of nesting birds' recommendations have been provided in section 4.1.

4.0 CONCLUSIONS AND RECOMMENDATIONS

No evidence of bats was recorded during the phase 1 and 2 surveys. It was therefore concluded that both Clarks Mill and Mill House do not support a bat roost and no further action is required.

4.1 Nesting birds

During the phase 1 and 2 bat surveys nesting birds were encountered in Clarks Mill. The following precautions will negate risk of harming, injuring or contributing to the demise of these species:

- Any building work, including the removal or dismantling of the roof should be conducted outside of the bird nesting season which is considered to run from March to September.
- Where this is not possible a suitable qualified ecologist should check potential nesting habitat immediately prior to clearance. Where nesting birds are encountered clearance must be postponed until the chicks have fledged.

4.2 Ecological enhancements

Development sites like this have the potential to be enhanced for wildlife. A few suggestions to be incorporated into the design have been provided below.

- Provision of bat boxes for pipistrelle bats and nest boxes for bird species such as swift on the side of buildings. Bat and bird boxes can be purchased from websites such as www.nhbs.com and www.livingwithbirds.co.uk, and their provision on site would enhance the habitat for the local bat and bird population.

5.0 REFERENCES

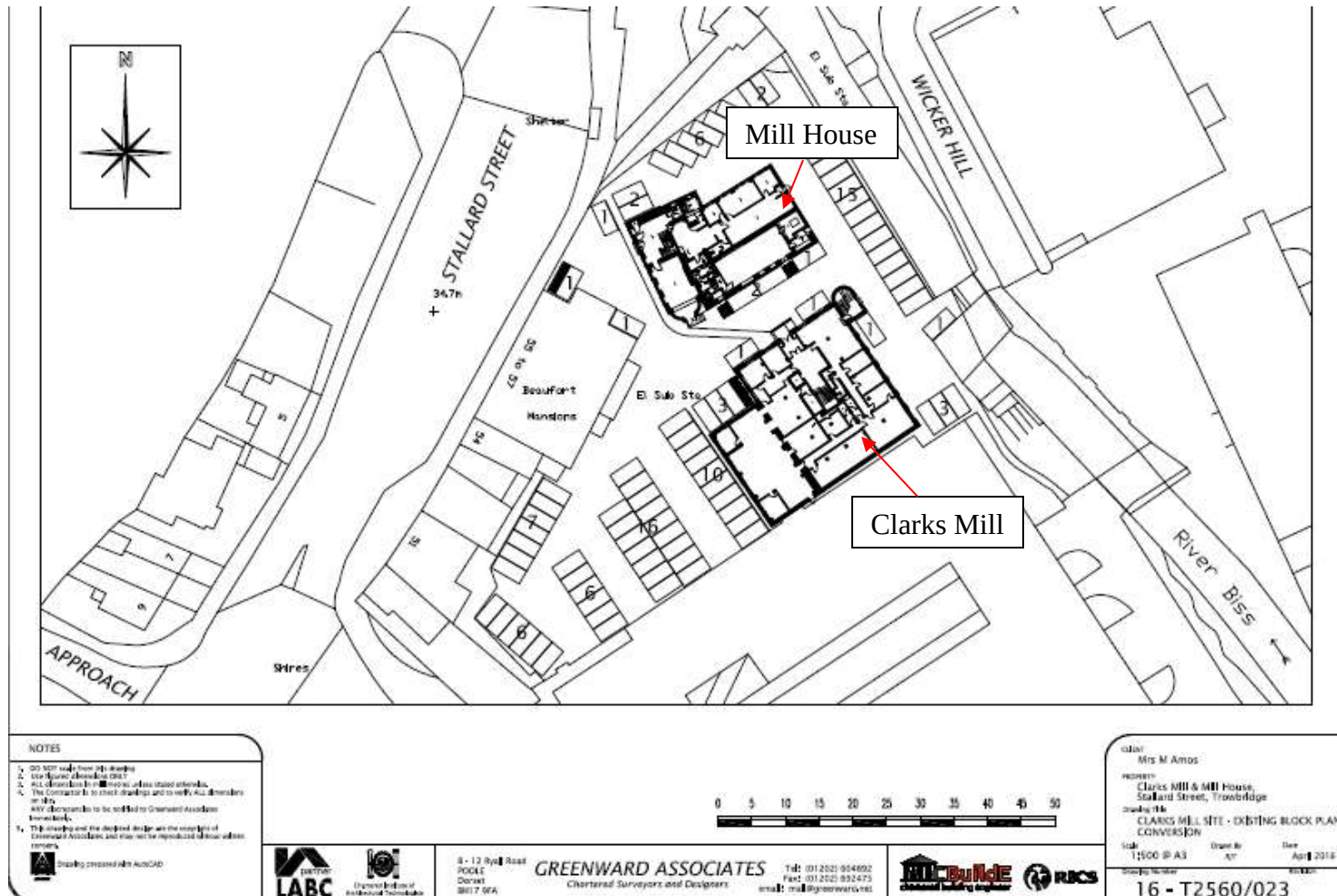
Collins, J (ed) (2016). *Bat Surveys for Professionals Ecologists: Good Practice Guidelines (3rd Edition)*. The Bat Conservation Trust, London.

Department for Communities and Local Government (2005). *Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

Department for Communities and Local Government (2012). *National Planning Policy Framework*.

Multi-Agency Geographical Information for the Countryside (MAGIC) Website at www.magic.gov.uk

APPENDIX I: Site location plan



APPENDIX II: Photographs of site

Clarks Mill



Photo 1: North west elevation



Photo 2: South west elevation



Photo 3: View of South east elevation



Photo 4: View of tower and north east elevation



Photo 5: Internal view of tower



Photo 6: Internal view on top floor

Mill House



Photo 7: South view of building



Photo 8: North east / north west elevation



Photo 9: North east elevation



Photo 10: View of roof top on south east



Photo 11: Roof void on south west elevation Photo 12: Roof void on north west elevation



Photo 13: Internal view of single storey



Photo 14: Internal view of glass roof

APPENDIX III: Phase 2 surveys

Dusk emergence survey 2nd July 2018 Clarks Mill

BAT EMERGENCE SURVEY					
SURVEY LOCATION:	CLARKSM	SURVEYORS:	Pete Duffy, Stuart Woodley	DATE:	02/07/2018
TEMP AT START:	23°C	SUNSET:	21:28	START TIME:	21:13
TEMP AT END:	19°C	CLOUD COVER (oktas):	0/8	END TIME:	23:00
WIND (bft):	3/12	RAINFALL:	None	WEATHER:	Warm, dry
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		
22:02	Common pipistrelle	1	Commuting north to south		
22:03-05	Common pipistrelle	1	Commuting south to north around side of adjacent building. Foraging in car park		
22:58	Common pipistrelle	1	Heard not seen. Commuting		

Dusk emergence survey 2nd July 2018 Mill House

BAT EMERGENCE SURVEY					
SURVEY LOCATION:	CLARKSM (Mill House)	SURVEYORS:	Joe Marcroft, Elen Lesourd, Mallory Warrington	DATE:	02/07/18
TEMP AT START:	23 C	SUNSET:	21:28	START TIME:	21:13
TEMP AT END:	19 C	CLOUD COVER (oktas):	1/8	END TIME:	22:58
WIND (bft):	1/12	RAINFALL:	None	WEATHER:	Warm, calm

TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.
22:00	Common pipistrelle	1	Foraging around trees
22:01	Common pipistrelle	1	Flew south towards building.
22:02	Common pipistrelle	1	Commuting, heard not seen
22:04	Common pipistrelle	1	Heard not seen, foraging
22:18	Common pipistrelle	1	Flew overhead east to west
22:26-22:27	Common pipistrelle	1	Heard not seen
22:33-22:34	Common pipistrelle	1	Heard not seen
22:35	Common pipistrelle	1	Heard not seen. Faint call
22:40	Common pipistrelle	1	Heard not seen
22:43	Common pipistrelle	1	Heard not seen
22:46-48	Common pipistrelle	1	Heard not seen
22:49	Common pipistrelle	1	Heard not seen
22:52	Common pipistrelle	1	Heard not seen
22:55	Common pipistrelle	1	Heard not seen
22:54-22:58	Common pipistrelle	1	Heard not seen
22:58	Common pipistrelle	1	Heard not seen
22:59	Common pipistrelle	1	Heard not seen. Faint call

Dawn re-entry survey 17th July Clarks Mill

BAT EMERGENCE SURVEY					
SURVEY LOCATION:	CLARKSM	SURVEYORS:	Colin Sutch, Jenny Sutch Elen Lesourd	DATE:	17/7/18
TEMP AT START:	13°C	SUNSET:	05:11	START TIME:	03:11
TEMP AT END:	12°C	CLOUD COVER (oktas):	0/8	END TIME:	05:26
WIND (bft):	2/12	RAINFALL:	nil	WEATHER:	Cool dry
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		
03:20	Soprano pipistrelle	1	Heard not seen short call		
03:22	Common pipistrelle	1	Heard not seen foraging south east		
03:22	Noctule	1	Heard not seen		
03:37	Soprano pipistrelle	1	Heard not seen short call		
03:39	Common pipistrelle	1	Heard not seen commuting		
03:43	Common pipistrelle	1	Heard not seen commuting from south east		
03:44	Common pipistrelle	1	Heard not seen commuting		
03:47	Common pipistrelle	1	Heard not seen commuting		
03:49	Common pipistrelle	1	Faint call heard not seen		
03:50	Common pipistrelle	1	Heard not seen feeding buzzes		
03:53	Common pipistrelle	1	Heard not seen foraging		
03:56	Common pipistrelle	1	Heard not seen		

04:08	Common pipistrelle	1	Heard not seen commuting
04:11-04:12	Common pipistrelle	1	Briefly heard not seen
04:21	Common pipistrelle	1	Flew east to west over building
04:23	Common pipistrelle	1	Heard not seen commuting
05:22	Common pipistrelle	1	Heard not seen short call