

Bat Roost Characterisation and Mitigation Report.

Of

12 Wattisfield Road, Walsham Le Willows,
Suffolk,
IP31 3BD

Carried out for:

Nicole Lane

Prepared by:

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Executive Summary

Abrehart Ecology was commissioned by Nicole Lane, to conduct a bat survey as part of a Protected Species Assessment of 12 Wattisfield Road, Walsham Le Willows, Suffolk, IP31 3BD (hereafter referred to as the Site).

Due to the potential roost features identified during the initial Preliminary Roost Assessment (PRA), bat surveys were required to inform assessment of the potential impact of the proposals on them, and the degree of mitigation required to offset any impacts to roosting bats. These were undertaken on the 30/05/2023, 17/07/2023 and 15/08/2023.

During the survey period, common pipistrelle, soprano pipistrelle, noctule, and Natterer's bat were recorded commuting and foraging.

Bat droppings were found and identified as Brown long-eared bat during the PRA; however, as these were low numbers of droppings (no more than five) it is unlikely the roost was a maternity roost. No bats were seen emerging or returning to roost during the three surveys, either on camera or by surveyors. All surveys were carried out in line with best practice guidance. Bats have used the loft space in the past and so a precautionary approach should be followed. This will involve working to and following a Reasonable Avoidance Measures (RAMS) method statement for bats. This will be undertaken by a level 2 licensed bat ecologist and will include installation of bat boxes and tiles and a soft strip off the necessary tiles.

1 Introduction and background

1.1 Purpose and brief

- 1.1.1 Bat (emergence/return to roost) surveys were surveyed on the 30th of May, the 17th of July, and the 15th of August undertaken on behalf of Nicole Lane of 12 Wattisfield Road, Walsham Le Willows, Suffolk, IP31 3BD.
- 1.1.2 The surveys were required to form an assessment of the ecological impacts that works on the Site may have on bat populations in the area.

1.2 Description of Site and Local Area

- 1.2.1 The Site is approximately 136 square metres, comprising of the main residential two storey dwelling, and garage surrounded by small areas of hardstanding, amenity grassland, scattered trees, and ornamental shrubs. The building was of brick construction with a pitched clay tiled roof, wooden soffits, and fascia boards. Internally, the structure included a loft space. The garage was a single storey, concrete sheeted single skin walls with a pitched roof (potentially asbestos), there was the occasional ornamental shrub surrounding around the house, with well-maintained amenity grassland and a hardstanding driveway and paths.
- 1.2.2 The Site is located off Wattisfield Road within the village of Walsham Le Willows. The surrounding landscape includes further areas of residential housing with small pockets of allotments, amenity ground, hedgerows, and scattered trees. The wider landscape beyond the housing consists largely of agricultural land with associated ditches, hedgerows, and boundary tree habitats (see Figure 1).

1.3 The proposed development

- 1.3.1 The assessment was required to determine the presence, potential presence or likely absence of roosting bats using the building proposed for works, to inform a future permitted development application at the Site: to include an extension to the existing two-storey residential house which will alter the roof and demolish the garage.

2 Legislative Context and Planning Policy

- 2.1.1 All bat species and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2010 (as amended). Under this legislation it is an offence to intentionally or recklessly:
- Capture, injure or kill a bat;
 - Disturb a bat;
 - Destroy or obstruct access to a bat roost.
- 2.1.2 The National Planning Policy Framework (NPPF) 2021 places responsibility on Local Planning Authorities (LPAs) to aim to conserve and enhance biodiversity in and around developments. Section 40 of the NERC Act requires every public body to “have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”. Biodiversity, as covered by the Section 40 duty, is not confined to habitats and species of principal importance but refers to all species and habitats. However, the expectation is that public bodies would refer to the Section 41 list (of species and habitats) through compliance with the Section 40 duty.

3 Previous Survey Results and Background

3.1.1 Records of common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), noctule (*Nyctalus noctula*), and barbastelle (*Barbastella barbastellus*). All the records were from Walsham-le-Willows. Five of the records were from 414m north of the Site at Willow Farm, these returns were the closest and the most recent (from 2017).

3.2 Previous surveys

Preliminary Roost Assessment (PRA) – December 2022

3.2.1 A PRA, including a desk study, was undertaken by Abrehart Ecology Ltd on the 16th of December 2022 (Abrehart Ecology Ltd., 2022).

3.2.2 During the PRA evidence of use by bats was found and potential roost features were noted such as:

- House exterior
 - Ingress points under the edge tiles adjacent to fascia boards on external roof of the house;
 - Holes in mortar on the east side;
 - Lifting lead flashing around the chimney and above the tiles on the ground floor;
 - Hole in concrete below roof tiles on first floor;
 - Rotting fascia boards on southeast corner.
- Loft inspection
 - Gaps between beams, and in brick and mortar in loft;
 - Bat droppings were observed in the loft (5 max).
- Garage
 - Large gaps around front garage door, and wooden door.

MAGiC

Magic Map

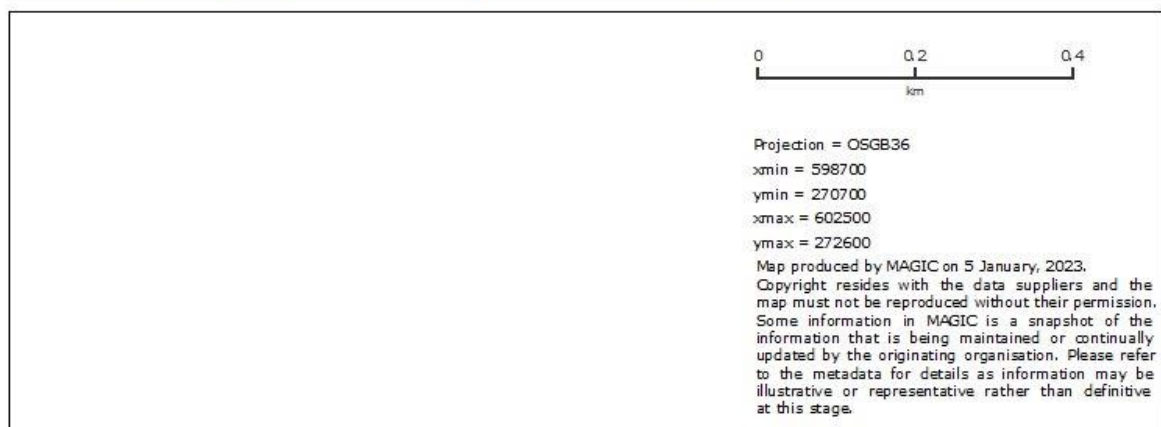
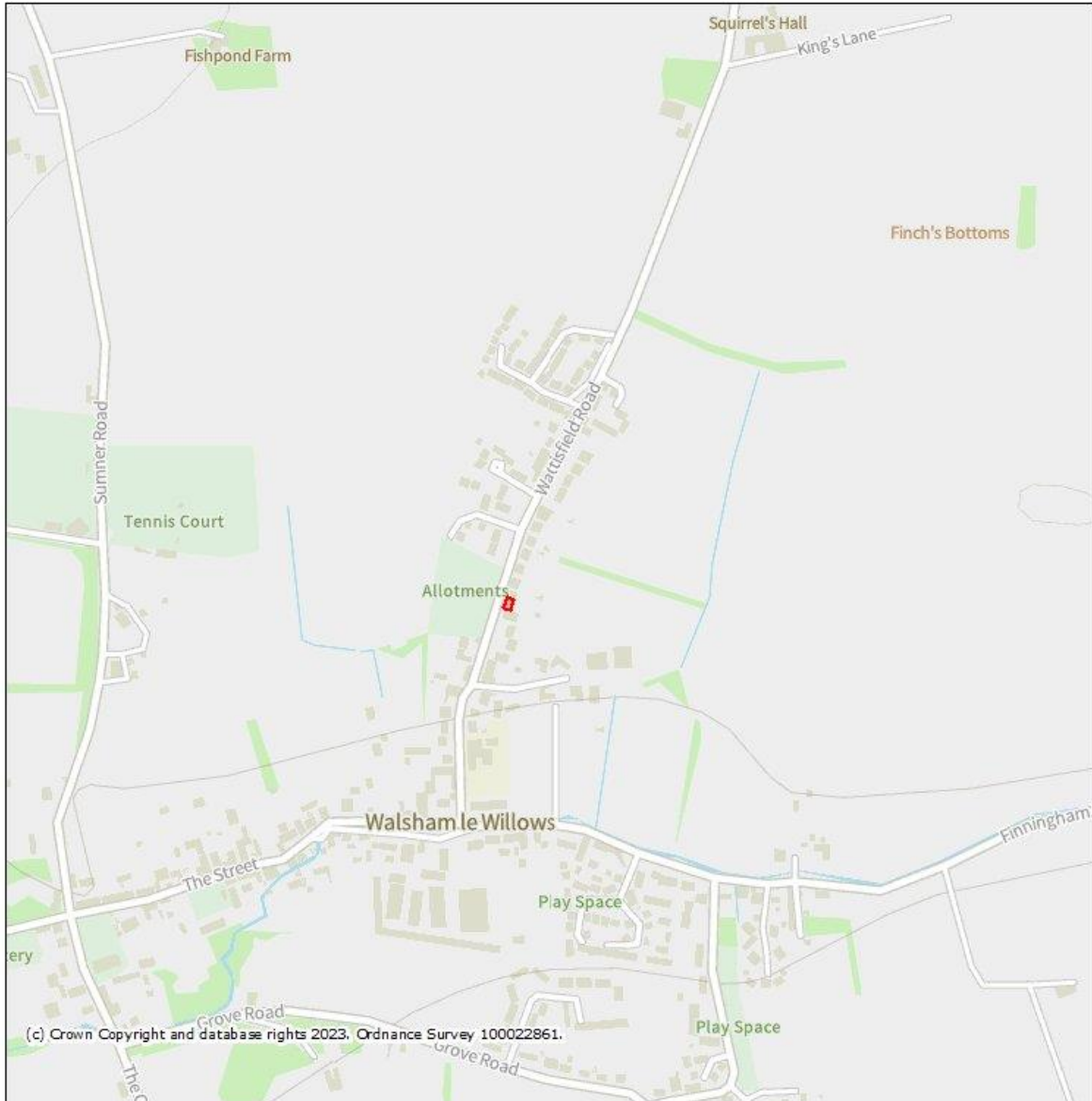


Figure 1. Site location.

4 Methods

4.1 Presence/Likely Absence and Roost Characterisation

Overview

- 4.1.1 The surveys were carried out according to good practice guidelines (Collins, 2016).
- 4.1.2 Both surveys were undertaken using infra-red (IR) cameras and static detectors based on the Interim Guidance Note on the use of night vision aids for bat emergence surveys (BCT, 2022).

Personnel

- 4.1.3 Surveyor details of each of the surveys is detailed in Table 1 below.

Table 1. Personnel Details

Roost Characterisation Surveys	
Date	Surveyors Present
30 th May 2023	Alister Killingsworth, Thomas Jordan, and Terry Stopher
17 th July 2023	Thomas Jordan, Toby Abrehart, and Terry Stopher
15 th August 2023	Alister Killingsworth, Thomas Jordan, and Terry Stopher

Equipment

- 4.1.4 Three IR cameras (Canon XA60 with three high intensity infra-red LED lights) was used. These were used in conjunction with Anabat bat detectors. The Site was also watched by three experienced ecologists to cover the entire survey area / all observed potential roost features and possible ingress points.

Equipment deployment and monitoring

- 4.1.5 The IR cameras were placed in a position which covered a large portion of the Site, to view potential roost features, in order to observe any emerging bats, in conjunction with visual monitoring by experienced ecologists.
- 4.1.6 The cameras were periodically checked throughout the survey to ensure the cameras were operational.

Analysis of footage and static detectors

- 4.1.7 The infra-red camera footage was reviewed after the survey to record emergence of any bats surveyed. Emergence was cross-checked using the Anabat bat detector recordings to confirm species identification.

Bat call analysis

- 4.1.8 The sound recordings from the Anabat bat detectors were analysed in Kaleidoscope to record bat species and calling at time of emergence. This is cross-checked with IR footage providing an accurate species ID and emergence time.

5 Limitations and Caveats

- 5.1.1 There were no limitations associated with these surveys.

6 Survey Results

Emergence & Return to Roost Surveys

30/05/2023

- 6.1.1 Weather 11°C, 100% cloud cover, very light rain, Beaufort 2-3.
- 6.1.2 Species recorded commuting and foraging were common pipistrelle, soprano pipistrelle and Noctule.
- 6.1.3 No bats were recorded emerging, and activity was low around surveyors' positions.

17/05/2023

- 6.1.4 Weather 18°C, 90% cloud cover, dry, Beaufort 1.
- 6.1.5 Species recorded commuting and foraging were common pipistrelle, soprano pipistrelle, and Natterer's.
- 6.1.6 No bats were recorded emerging, and activity was low around surveyors' positions.

15/08/2023

- 6.1.7 Weather 14°C, 0% cloud cover, dry, Beaufort 1.
- 6.1.8 Species recorded commuting and foraging were common pipistrelle only.
- 6.1.9 No bats were recorded emerging, and activity was low around surveyors' positions.

IR Cameras

- 6.1.10 Footage was watched after the survey and no additional bats were seen.

7 Conclusions and Enhancements

- 7.1 The collected bat droppings have identified that brown long-eared bats have used the loft space in the past, as these were low numbers of droppings (no more than five) it is unlikely the roost was a maternity roost. However, roost characterisation surveys in 2023 did not detect any roosting bats emerging from or returning to roost. These surveys were supported by Night Vision Aids (NVAs), were carried out at appropriate times of year, carried out during suitable weather, and were timed to record late emerging/early returning species.
- 7.2 Droppings indicated historical use by bats, with the surveys offering no additional data; therefore, a precautionary approach should be followed. This will involve working to and following a Reasonable Avoidance Measures (RAMS) method statement for bats. This will be undertaken by a level 2 licensed bat ecologist and will include installation of bat boxes and tiles and a soft strip off the necessary tiles.
- 7.3 It would be possible to recreate roosting opportunities within the loft, or to enhance the future roofing with external features – some of which are detailed below however the RAMS will detail locations of boxes and tiles.
- 7.4 Sensitive lighting will be implemented to prevent disturbance to nocturnal animals, particularly bats which were recorded using the surrounding area.
- 7.5 The addition of bat roost features, such as access tiles, ridge access, or bat boxes (both external and integral) would increase roosting opportunities for bats in the local area.
- 7.6 Should bat access be encouraged within roof or beneath tiles then it is recommended that bituminous roofing felt is used. Breathable Roofing Membranes (BRMs) can create an entanglement threat to bats.
- 7.7 Below are example images of enhancement features. Boxes should be sited at least 3m from ground level and be clear of obstructions – allowing for a clear flight path to the box entrance i.e., not obscured by tree limbs or foliage. All features shown below do not require maintenance as the design encourages droppings to fall out of the bricks or access features. Bat roosts are protected from disturbance and so should be left undisturbed once installed – unless maintenance/remedial works are carried out by a suitably licenced ecologist at correct times of year – this should be discussed with an ecologist prior to being undertaken.



- 7.8 New planting – in the form of bushes, shrubs, and trees – will provide opportunity to increase foraging and sheltering potential for a range of wildlife, including birds, invertebrates, and mammals. Any planting should be of local provenance and of native species.

- 7.9 Trees and shrubs can provide year-round habitat for wildlife; the dense canopy formed by shrub beds offer protection from predators and foraging opportunities for butterflies, birds, and mammals; and trees provide additional nesting and foraging for birds – including resident and migratory bird species.
- 7.10 Trees – these should be planted 2-3m apart and avoid planting within 4m of buildings. Further details on planting can be found online (such as the RSPB website (<https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/plants-for-wildlife/garden-trees/>) or from the supplier of the trees. Trimming should be avoided throughout the bird nesting season (March to end of August) to prevent disturbing nesting birds or harming eggs/young birds.
- 7.11 Shrubs – should be planted 0.5-1.2m apart and to specifications/details provided by the supplier or found on the RSPB website (<https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/plants-for-wildlife/shrubs-for-gardens/>). Management of shrub growth should take place in winter months – both avoiding the nesting bird season and ensuring greatest benefit to local wildlife, as species detailed below will provide berries and seeds for animals to forage on.
- 7.12 Suitable species for shrub beds and tree planting include:
- Birch (*Betula* sp.)
 - Holly
 - Rowan
 - Crab apple
 - Berberis
 - Spindle
 - Dogwood
 - Guelder rose
 - Hawthorn
 - Cornelian cherry

8 Conclusion

- 8.1 Low numbers of droppings were found within the loft (eDNA analysis confirmed as from brown long-eared bats).
- 8.2 Surveys were carried out as part of ‘roost characterisation’; however, no bats were seen to emerge from, or return to roost within, the building.
- 8.3 Activity was low on all three surveys, with the target species not recorded – only common pipistrelle, soprano pipistrelle, Natterers and noctule were recorded. This activity was limited to individual passes of commuting and foraging animals.
- 8.4 A precautionary approach should be followed. This will involve working to and following a Reasonable Avoidance Measures (RAMS) method statement for bats. This will be undertaken by a level 2 licensed bat ecologist and will include installation of bat boxes and tiles and a soft strip off the necessary tiles.

9 References

Literature

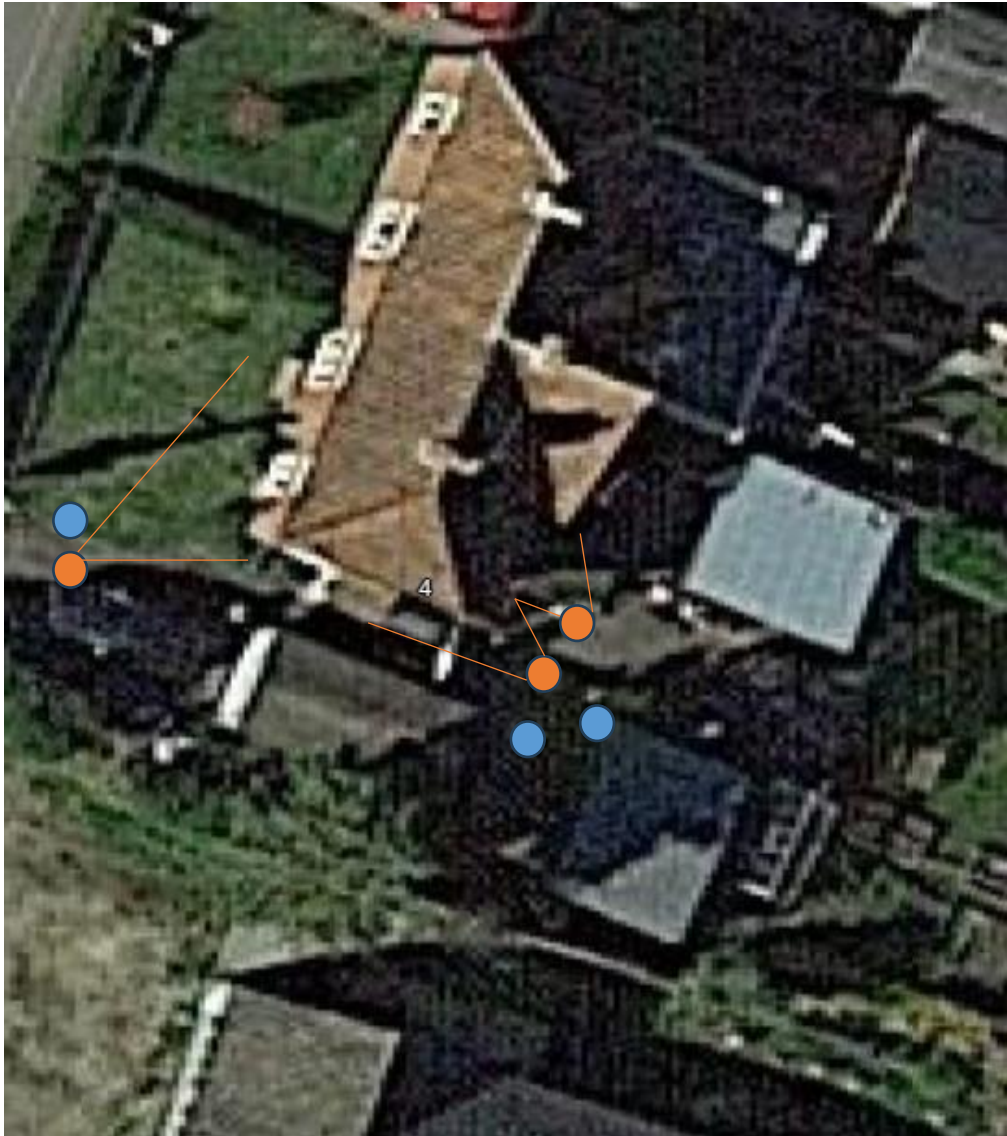
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Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd ed). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.

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Appendix I – Indicative surveyors and IR camera locations.



	Indicative surveyor locations.
	Indicative camera locations.

Appendix II – Survey Results

Surveyor Results – 30/05/2023 Dusk Survey (Sunset 21:05)

Surveyor: TJ			
Time	Species	# Bats	Activity
20:45	-	-	SURVEY START
21:23	<i>Nyctalus noctule</i>	1	Commuting HNS
22:10	<i>Pipistrellus pygmaeus</i>	1	HNS Commuting
22:12	<i>Pipistrellus pipistrellus</i>	1	HNS Foraging
22:25	<i>Pipistrellus pipistrellus</i>	1	HNS Commuting
22:30	<i>Pipistrellus pipistrellus</i>	1	Forage one loop above garden
22:35			SURVEY END

Surveyor: TS			
Time	Species	# Bats	Activity
20:45	-	-	SURVEY START
20:53	<i>Pipistrellus pipistrellus</i>	1	Commuting HNS
22:12	<i>Pipistrellus pipistrellus</i>	1	HNS by road
22:30	<i>Pipistrellus pipistrellus</i>	1	HNS
22:35			SURVEY END

Surveyor: AK			
Time	Species	# Bats	Activity
20:45	-	-	SURVEY START
21:23	<i>Nyctalus noctule</i>	1	Commuting HNS
21:28	<i>Nyctalus noctule</i>	1	Commuting
22:35			SURVEY END

DCS

Surveyor results 17/07/2023 (Sunset 21:06)

Surveyor: TJ			
Time	Species	# Bats	Activity
20:46	-	-	SURVEY START
21:49 – 21:50	<i>Pipistrellus pipistrellus</i>	1	Forage over garden area
21:57	<i>Pipistrellus pygmaeus</i>	1	Commute from TA and over to the east
22:15	<i>Pipistrellus pipistrellus</i>	1	HNS Foraging
22:23	<i>Pipistrellus pipistrellus</i>	1	HNS Foraging
22:28	<i>Myotis nattereri</i>	1	HNS
22:36			SURVEY END

Surveyor: TRA			
Time	Species	# Bats	Activity
20:46	-	-	SURVEY START
21:57	<i>Pipistrellus pygmaeus</i>	1	Foraging flew along the road
22:15	<i>Pipistrellus pipistrellus</i>	1	Foraging not seen close by
22:22	<i>Pipistrellus pipistrellus</i>	1	HNS
22:24	<i>Pipistrellus pipistrellus</i>	1	HNS
22:25	<i>Pipistrellus pygmaeus</i>	1	HNS
22:36			SURVEY END

Surveyor: TS			
Time	Species	# Bats	Activity
20:46	-	-	SURVEY START
21:50	<i>Pipistrellus pipistrellus</i>	1	Commuting HNS
22:23	<i>Pipistrellus pipistrellus</i>	1	HNS
22:25	<i>Myotis nattereri</i>	1	HNS flew by
22:36			SURVEY END

Surveyor results 15/08/2023 (Sunrise: 05:40)

Surveyor: AK			
Time	Species	# Bats	Activity
03:40	-	-	SURVEY START
03:41	<i>Pipistrellus pipistrellus</i>	1	Foraging single pass HNS
03:47	<i>Pipistrellus pipistrellus</i>	1	Foraging and social calls flew towards TS
04:06	<i>Pipistrellus pipistrellus</i>	1	HNS single more distant pass
05:55			SURVEY END

Surveyor: TJ			
Time	Species	# Bats	Activity
03:40	-	-	SURVEY START
03:42	<i>Pipistrellus pipistrellus</i>	1	Foraging looping round the garden
03:48	<i>Pipistrellus pipistrellus</i>	1	From me to TS – social calls
04:06	<i>Pipistrellus pipistrellus</i>	1	HNS flew by
05:55			SURVEY END

Surveyor: TS			
Time	Species	# Bats	Activity
03:40	-	-	SURVEY START
03:41	<i>Pipistrellus pipistrellus</i>	1	Foraging HNS
03:57	<i>Pipistrellus pipistrellus</i>	1	Flying along the road
04:27	<i>Pipistrellus pipistrellus</i>	1	Seen again flying along the road
04:58	<i>Pipistrellus pipistrellus</i>		Fly over house
05:55			SURVEY END