

66 Arbor Lane
Winnersh
Berkshire
RG41 5JD

Bat Emergence Survey

Report ref.: R3204_BES_b

Report Quality Control Information	
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August 2026



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CONTENTS PAGE

1	EXECUTIVE SUMMARY	3
2	INTRODUCTION.....	4
2.1	Project Background.....	4
2.2	Site Location and Context.....	5
2.3	Report Objectives	5
3	LEGISLATIVE AND POLICY BACKGROUND	6
3.1	Relevant Legislation.....	6
3.2	Planning Policy	6
3.3	Mitigation Licensing	7
4	SURVEY METHODOLOGY	8
4.1	Background Data Search.....	8
4.2	Emergence Survey	8
4.3	Survey Limitations and Report Validity	8
5	SURVEY RESULTS.....	9
5.1	Overview.....	9
5.2	Background Data Search.....	9
5.3	Emergence Survey	9
6	DISCUSSION	15
6.1	Assessment of Bat Roost Status – Main House	15
6.2	Impact Assessment – Main House.....	15
6.3	Assessment of Bat Roost Status and Recommendations - Garage.....	16
6.4	Assessment of Bats – Lighting.....	16
7	MITIGATION AND COMPENSATION PROPOSALS	18
8	SENSITIVE LIGHTING STRATEGY FOR	19
9	REFERENCES.....	20
	APPENDIX 1 – DARKEST POINT OF SURVEY FOR NIGHT VISION AIDS	21
	APPENDIX 2 - BAT EMERGENCE SURVEY RAW DATA TABLES.....	26

1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Andrew Coates to undertake a Bat Emergence Survey at 66 Arbor Lane in Winnersh, Berkshire. The survey was commissioned to accompany a householder planning application to be submitted to Wokingham Borough Council seeking consent for complete renovation of the house including a new roof and a permitted development application for a new extended garage following the demolition of the existing detached garage.
- 1.1.2** The Bat Emergence Survey follows a Preliminary Roost Assessment (PRA) conducted by Arbtech Consulting Ltd in July 2025. During the PRA, no evidence of bats or bat activity was identified in the loft space or around the exterior of the house (B1) or detached garage (B2). However, potential bat roosting features suitable for crevice-dwelling bat species were identified, comprising gaps beneath lifted clay roof tiles; therefore, the house was assigned moderate potential suitability and the detached garage was assigned low potential suitability for roosting bats. In line with good practice guidelines (Collins 2023), two dusk emergence surveys of the house were undertaken on the 5th and 26th August 2025. A maximum count of four soprano pipistrelle bats were observed emerging from a couple of locations across the roost. Two additional dusk emergence survey visits were undertaken for the house (B1) on the 11th May and 9th June 2026 and the detached garage (B2) was surveyed on the 9th June 2026, to characterise the confirmed roost and confirm the presence/absence of further roosts.
- 1.1.3** One common pipistrelle bat was recorded emerging from the house (B1) during the emergence surveys, and therefore the survey findings, combined with the PRA findings and previous emergence surveys, demonstrate that the house (B1) supports an occasional day roost for small numbers of male or non-breeding soprano pipistrelle and common pipistrelle bats i.e. roosts of low conservation significance. There was no confirmed roosts identified within the detached garage (B2).
- 1.1.4** A European Protected Species (EPS) Mitigation Licence will be required to allow the work to proceed lawfully, and the survey findings establish that the site would qualify for “low impact” Bat Mitigation Class Licence (BMCL) WML-CL21 registration. Under the terms of a BMCL, mitigation for the impacts of the work will be required to avoid harming bats and the mitigation strategy is set out in **Section 7**.
- 1.1.5** This report contains information regarding a mobile species so it will likely be valid for up to 12 months only (CIEEM 2019b).

2 INTRODUCTION

2.1 Project Background

2.1.1 John Wenman Ecological Consultancy LLP was instructed by Andrew Coates to undertake a Bat Emergence Survey at 66 Arbor Lane in Winnersh, Berkshire. The survey was commissioned to accompany a householder planning application to be submitted to Wokingham Borough Council seeking consent for complete renovation of the house including a new roof and a permitted development application for a new extended garage following the demolition of the existing detached garage..

2.1.2 The Bat Emergence Survey follows a Preliminary Roost Assessment for bats (PRA) conducted by Arbtech Consulting Ltd in July 2025. The PRA report states the following:

'B1 (the main house) is assessed to have moderate habitat value for roosting bats due to the presence of lifted roofing tiles.'

'B2 (the detached garage) is assessed to have low habitat value for roosting bats due to the presence of a handful of lifted tiles.'

2.1.3 The PRA report recommends the following:

2.1.4 *'Two bat emergence and re-entry surveys are required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely absence of a bat roost in the building. Both of the surveys should be completed during the optimal survey period mid-May to August inclusive.'*

2.1.5 Two emergence surveys were undertaken on the 5th and 26th August 2025 and a maximum count of four soprano pipistrelle bats were observed emerging from beneath a lifted tile on the eastern elevation and three from lifted roof tiles on the south-western corner of the house during the first evening surveys. No bats were observed during the second evening emergence survey

2.2 Site Location and Context

2.2.1 The property is a detached two-storey residential dwelling situated to the north of Arbor Lane in Winnersh, Berkshire (OS grid reference: SU 77943 71134).

2.2.2 The property is within a suburban setting bordered by residential properties and their associated gardens to the east and west, a parcel of woodland to the north and the grounds of Forest School to the south. The railway, bordered by mature trees, runs approximately 190 metres to the south-west and Winnersh Meadows, an area of open grassland with woodland and several ponds, is situated approximately 290 metres to the north-east of the house. A network of large lakes at Dinton Country Park, including White Swan Lake and Black Swan Lake, is situated approximately 775 metres to the north-west and the River Loddon flows approximately 950 metres to the north-west of the house. Lavells Lake, a Local Nature Reserve, is situated approximately 1680 metres to the north-east of the house.

2.3 Report Objectives

2.3.1 The aim of the BES is to determine the presence or likely absence of roosting bats and to characterise the bat roost(/s) in cases where presence is confirmed. The emergence survey findings inform an impact assessment and mitigation strategy for the development proposals and ascertain whether a European Protected Species (EPS) mitigation licence would be required to allow the works to proceed lawfully.

3 LEGISLATIVE AND POLICY BACKGROUND

3.1 Relevant Legislation

3.1.1 In England and Wales, all bat species found in the wild are fully protected under the Wildlife & Countryside Act 1981 (as amended) (WCA) and Conservation of Habitats and Species Regulations 2017 (as amended); the regulations are commonly referred to as the Habitat Regulations and hereafter referred to as such. The Habitat Regulations refer to European Protected Species (EPS) and all species of bats in the United Kingdom (UK) are EPS. Although the UK left the European Union on the 31st January 2020 and is therefore no longer tied to European legislation, the Habitat Regulations have been retained in their current format.

3.1.2 The legal framework underpinned by the WCA and Habitat Regulations makes these specific actions an offence as follows:

- Deliberately kill, injure, capture or take a wild bat;
- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or to significantly affect local distribution or abundance;
- Damage or destroy a place used by a bat for breeding or resting; and
- Intentionally or recklessly obstruct access to any place used by a bat for shelter or protection.

3.2 Planning Policy

3.2.1 The biodiversity duty imposed through the Environment Act 2021 states that Local Planning Authorities (LPAs) must consider what action they can take to conserve and enhance biodiversity in England. Government planning policy, such as the ODPM Circular 06/2005, requires LPAs to account for the conservation of protected species when considering and determining planning applications.

3.2.2 The ODPM Circular 06/2005 states that 'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.' This policy means that in instances where there is a reasonable likelihood of bats being present and affected by a development, surveys must be undertaken to inform a mitigation strategy to be agreed prior to granting planning permission.

3.3 Mitigation Licensing

3.3.1 The government's statutory nature conservation body, Natural England, is responsible for issuing European Protected Species (EPS) mitigation licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. An EPS mitigation licence can be issued if the following three tests derived from Regulation 55 have been satisfied:

- (2)(e) – the derogation is for the purposes of *'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.'*
- (9)(a) – there is *'no satisfactory alternative'* to the derogation; and
- (9)(b) – *'the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'*

3.3.2 LPAs have a statutory duty under Regulation 7(3)(e) of the Habitat Regulations to consider and determine whether these three tests are likely to be satisfied by planning proposals affecting EPS before granting planning permission. If an EPS mitigation licence is necessary, a licence can be sought once all the necessary planning consents have been granted. Natural England aims to issue a decision on licence applications within 30 working days of submission.

3.3.3 The Bat Mitigation Class Licence (BMCL) scheme allows ecologists to apply to become Registered Consultants to use this licence for low conservation status roosts, i.e. roosts comprising small numbers of seven commonly occurring species. A site registration form must be completed as a condition of the licence and submitted to Natural England at least three weeks before the licensable activities are due to start; Natural England aims to register sites within two weeks of submission.

3.3.4 Baseline survey information supporting EPS mitigation licence applications or BMCL site registrations must be up-to-date and have been completed within the current or most recent optimal season. A suitably experienced ecologist will be required to undertake a site walkover/check within three months prior to application/registration submission to confirm that conditions have not changed since the most recent survey.

4 SURVEY METHODOLOGY

4.1 Background Data Search

- 4.1.1** The Berks & South Bucks Bat Group were commissioned to undertake a search of their records within a 2 kilometre radius of the property.

4.2 Emergence Survey

- 4.2.1** In line with good practice guidelines (Collins 2023), two dusk emergence survey visits were undertaken on the 11th May and 9th June 2026 by experienced bat surveyors Vicky Potts (2025-85632-CL18-BAT), Amy Dunness (2025-84271-CL20-BAT), Jake Morgan (2025-85343-CL17-BAT), Lauren Hayward (qualifying member of CIEEM) and Andy Cruse. During the first survey, four surveyors covered all aspects of the house (B1) and during the second survey the house (B1) and the detached garage (B2) were covered by two surveyors and six cameras – refer to emergence survey plan in **Section 5** below. The surveyor at Surveyor Location 5 surveyed the house (B1) and garage (B2) and the surveyor at Surveyor Location 6 surveyed the detached garage (B2).

- 4.2.2** The equipment used during the survey included full-spectrum sampling bat detectors (Batlogger M2 and Echo Meter Touch 2) and infrared/thermal imaging night vision aids (Pulsar Helion XP28 Thermal Imagery Camera, Sionyx Aurora Pro with infrared floodlights, Canon XA30 with infrared floodlights/torches and Pixfra ARC A613). A still shot of the darkest point of the survey has been included for all night vision aids in **Appendix 1**.

- 4.2.3** The emergence surveys started 15 minutes before sunset and continued for 1 hour and 30 minutes after sunset. Within a five-day period after the surveys, the bat call recordings were processed and analysed using the BatExplorer computer software package and the night vision video footage was reviewed in VLC media player.

4.3 Survey Limitations and Report Validity

- 4.3.1** There were no significant constraints to the bat emergence surveys, which were undertaken during the optimal survey season, i.e. May to August, and in conditions suitable for bat activity, i.e. dry and calm with air temperatures 10°C or above at sunset (Collins 2023).
- 4.3.2** This report contains information regarding a mobile species so it will likely be valid for up to 12 months only (CIEEM 2019b).

5 SURVEY RESULTS

5.1 Overview

- 5.1.1** The results from the Berks & South Bucks Bat Group data search are detailed below. The bat emergence survey findings are described, summarised in **Tables 1 & 2** and illustrated in **Figure 1 & Figure 2** below; the raw detector data is supplied in **Appendix 2**.

5.2 Background Data Search

- 5.2.1** The data search revealed that at least seven species have been recorded locally within the last 10 years: serotine (*Eptesicus serotinus*), Daubenton's bat (*Myotis daubentonii*), noctule (*Nyctalus noctula*), Leisler's bat (*Nyctalus leisleri*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Myotis bat species (*Myotis* sp.), Natterer's bat (*Myotis nattereri*) and brown long-eared (*Plecotus auritus*).
- 5.2.2** The nearest roost record is situated within 500m of the property at residential property on Dexter Way where an injured common pipistrelle (*P. pipistrellus*) was found in 2017. The next closest record includes another injured common pipistrelle (*P. pipistrellus*) found in 2017 within a residential house along Dexter Way, within 500m of the property.

5.3 Emergence Survey

11th May 2026

- 5.3.1** No bats were recorded emerging from the property.

Table 1. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (%)	Rain	Temperature (°C)	
	1	25	None	Start	Finish
Start	20:28	Sunset	20:43	Finish	22:13

Table 2a. Surveyor recordings at location 1

Species	Recordings*	Emergences [†]	Time of first call (minutes after sunset)
Common pipistrelle	39	0	21:07 (24)
Soprano pipistrelle	7	0	21:15 (32)
Nathusius' pipistrelle	1	0	21:20 (37)

Table 2b. Surveyor recordings at location 2

Species	Recordings*	Emergences [†]	Time of first call (minutes after sunset)
Common pipistrelle	39	0	21:07 (24)
Soprano pipistrelle	3	0	21:10 (27)
Nathusius' pipistrelle	1	0	21:20 (37)

Table 2c. Surveyor recordings at location 3

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	23	0	21:12 (29)
Soprano pipistrelle	2	0	21:15 (32)

Table 2d. Surveyor recordings at location 4

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	10	0	21:07 (24)
Soprano pipistrelle	1	0	21:30 (47)
Nathusius' pipistrelle	1	0	21:21 (38)

*recordings are the number of times that the detector was triggered when bat calls were detected.

†confirmed by direct observation and/or night vision aid.

- 5.3.2** The first recorded bat was a Common pipistrelle (*P. pipistrellus*) detected by the surveyors at Survey Location 1, 2 and 4 at 21:07 (24 minutes after sunset), directly observed commuting along the fence and hedge line on the western side of the house. The individual was recorded 24 minutes after sunset which falls within its typical emergence period, indicating that it likely emerged from a roost nearby. *P. pipistrellus* activity was moderate, with intermittently *P. pygmaeus* recorded throughout the survey, and were observed commuting and foraging within the rear and front garden.
- 5.3.3** One individual Nathusius' pipistrelle (*P. nathusii*) was recorded 21:20 by the surveyors at Surveyor Location 1 and 2 (37 minutes after sunset), and then recorded at by the surveyor at Surveyor Location 4 at 21:21 (38 minutes after sunset), which falls outside of this species typical emergence period, indicating it likely did not emerge nearby.

9th June 2026

- 5.3.4** One common pipistrelle (*P. pipistrellus*) was recorded emerging from the house (B1) at 21:42 from the hanging tiles on the rear dormer window, recorded by the surveyor at Surveyor Location 2. No bats emergence from the detached garage (B2).

Table 3. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (%)	Rain	Temperature (°C)	
	3	0	None	Start	Finish
Start	21:03	Sunset	21:18	Finish	22:48

Table 4a. Surveyor recordings at location 1 & 4

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	55	0	21:42 (24 mins)
Nathusius' pipistrelle	1	0	22:20 (58 mins)
Soprano pipistrelle	2	0	22:41 (81 mins)

Table 4b. Surveyor recordings at location 2

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	7	1	21:42 (24 mins)
Soprano pipistrelle	4	0	21:43 (25 mins)

Table 4c. Surveyor recordings at location 3 & 5

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	16	0	
Soprano pipistrelle	1	0	21:43 (25 mins)
Nathusius' pipistrelle	1	0	22:19 (57 mins)

Table 4d. Surveyor recordings at location 6

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	22	0	21:40 (22 mins)
Soprano pipistrelle	4	0	21:43 (25 mins)
Nathusius' pipistrelle	1	0	22:19 (57 mins)

*recordings are the number of times that the detector was triggered when bat calls were detected.

†confirmed by direct observation and/or night vision aid.



Photograph 1. Common pipistrelle bat flying away from the hanging tiles at 21:42 and location of access point

5.3.5 The first recorded bat was a Common pipistrelle (*P. pipistrellus*) detected by the bat detector at Survey Location 6 at 21:40 (22 minutes after sunset). The individual was recorded 22 minutes after sunset which falls within its typical emergence period, indicating that it likely emerged from a roost nearby. *P. pipistrellus* activity was moderate, with intermittently *P. pygmaeus* recorded throughout the survey, with bats observed commuting and foraging within the rear and front garden.

- 5.3.6** One individual Nathusius' pipistrelle (*P.nathusii*) was recorded 22:19 by the bat detectors at Surveyor Location 6 (57 after sunset), and then recorded at by the bat detector at Surveyor Location 1 & 4 at 22:20 (58 minutes after sunset), which falls outside of this species typical emergence period, indicating it likely did not emerge nearby.

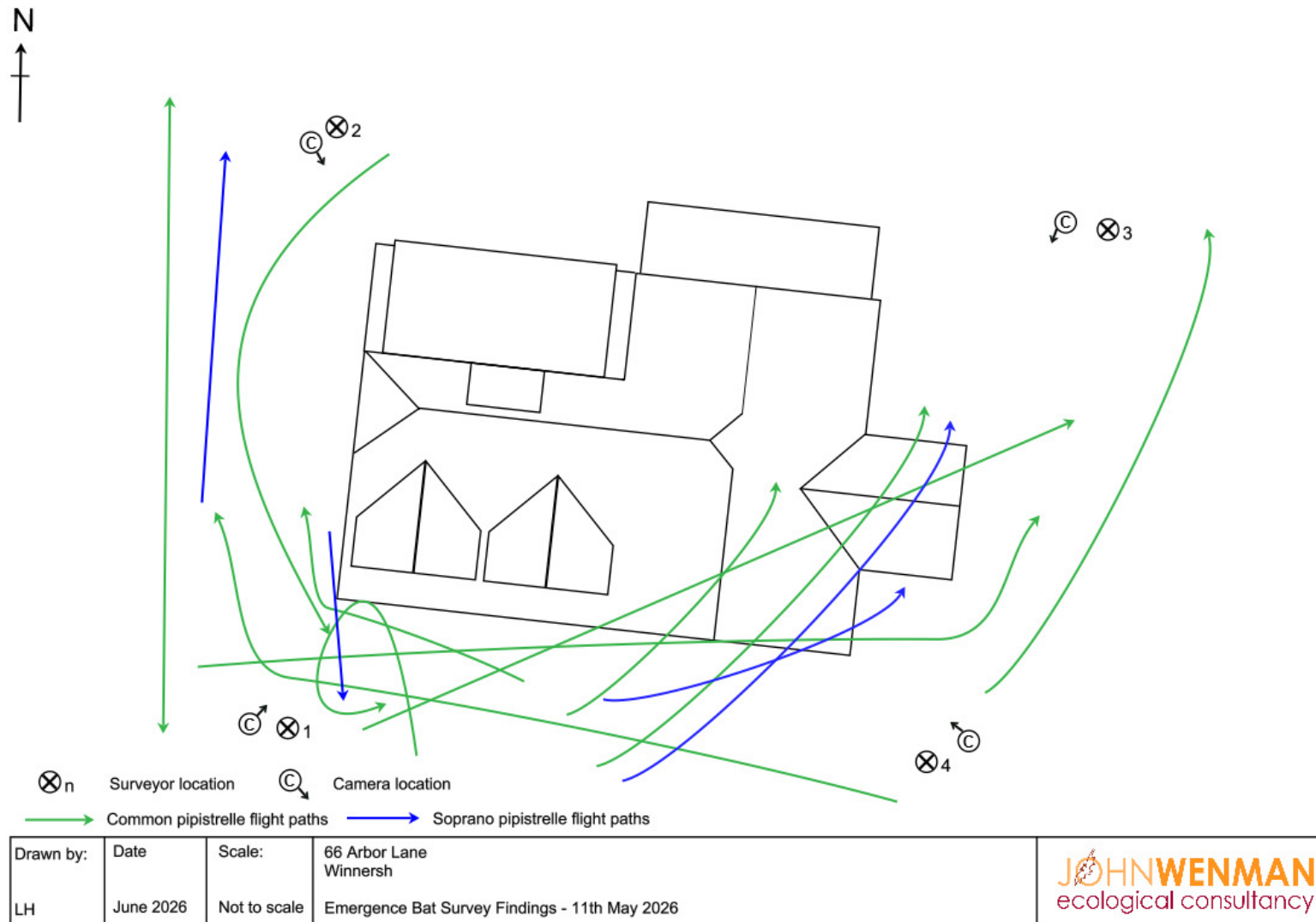


Figure 1. Bat Emergence Survey Plan of the House (B1) – 11th May 2026

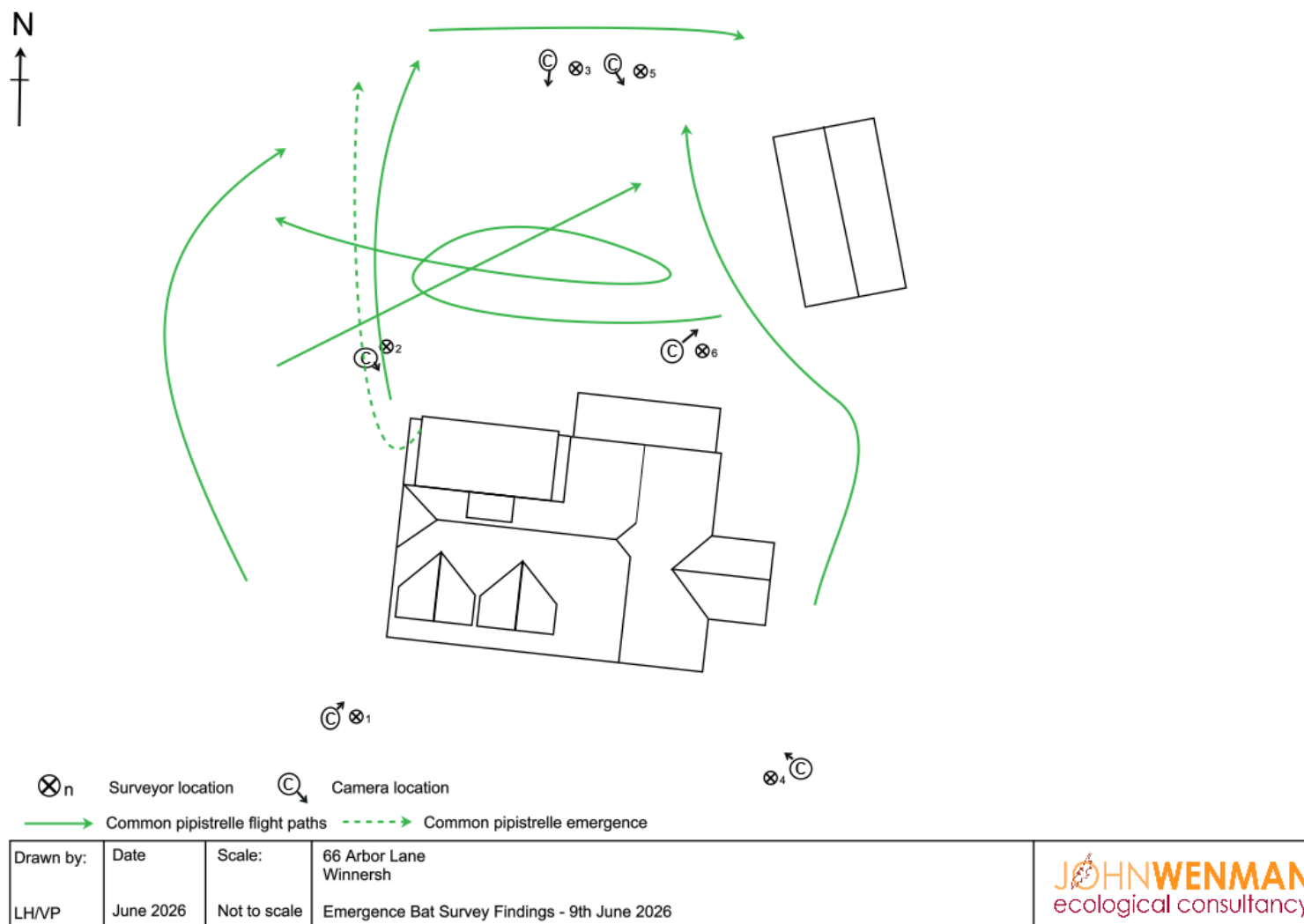


Figure 2. Bat Emergence Survey Plan of the House (B1) and Garage (B2) – 9th June 2026

66 Arbor Lane, Winnersh - Bat Emergence Survey (R3204_BES_b)

6 DISCUSSION

6.1 Assessment of Bat Roost Status – Main House

- 6.1.1** Activity was relatively low during the updated survey visit with common pipistrelle (*P. pipistrellus*) recorded within their typical emergence periods, indicating that these species are roosting nearby. One common pipistrelle (*P. pipistrellus*) was recorded from the rear of the house (B1). No bats were recorded emerging from detached garage (B2) during the survey visits.
- 6.1.2** The PRA findings and emergence surveys from 2025 which observed up to four soprano pipistrelle (*P. pygmaeus*) bats emerging from two locations from the property, including from beneath a lifted tile on the eastern elevation and from lifted roof tiles on the south-western corner of the house, are consistent with the building acting as a day roost (i.e. summer resting place used by individual or small groups of male or non-breeding bats) for small numbers of soprano pipistrelle (*P. pygmaeus*) bats with up to two access points. The observation of a total of four bats emerging at the beginning of August in 2025 (which is within the optimal survey season) is not consistent with a presence of a maternity roost. The updated survey observed one common pipistrelle (*P. pipistrellus*) bat emerging from the hanging tiles on the rear dormer window, which is consistent with the building also acting as a day roost for individual common pipistrelle (*P. pipistrellus*) bats.
- 6.1.3** Soprano pipistrelle (*P. pygmaeus*) and common pipistrelle (*P. pipistrellus*) are crevice-dwelling species that are the most abundant and widespread bats in Great Britain. This species occur in almost any habitat type and are well adapted to the built environments; they are one of the species most regularly reported roosting in houses and churches (Mathews et al. 2018).
- 6.1.4** Day roosts used by soprano pipistrelle (*P. pygmaeus*) and common pipistrelle (*P. pipistrellus*) bats hold site level conservation importance only and the loss of such roosts is not usually significant beyond the scale of the site (Reason & Wray 2023).

6.2 Impact Assessment – Main House

- 6.2.1** The survey data demonstrates that the planning application seeking consent for major alterations to the roof, will result in the destruction of a soprano pipistrelle (*P. pygmaeus*) and common pipistrelle (*P. pipistrellus*) day roosts used by individual or low numbers of male or non-breeding bats. Furthermore, in the absence of mitigation measures, the works could cause disturbance, injury and or death of bats.

6.2.2 A European Protected Species (EPS) Mitigation Licence will be required to allow the work to proceed lawfully, and the survey findings establish that the property would qualify for registration under the “low impact” Bat Mitigation Class Licence (BMCL) WML-CL21. Under the terms of a full EPS mitigation licence or BMCL, mitigation for the impacts of the work will be required in order to avoid harming bats and the mitigations proposals detailing the strategy to be adopted are set out in **Section 7** below.

6.3 Assessment of Bat Roost Status and Recommendations - Garage

6.3.1 No bats were observed emerging from garage during the two survey visits undertaken in the optimal survey season. This survey data provides a sufficient level of confidence that bat roosts are absent from the garage.

6.3.2 The survey data demonstrates that the permitted development planning application, which involves the demolition of the existing garage, is unlikely to result in the damage and/or destruction of a bat roost or cause disturbance, injury and/or death of bats. Therefore, a European Protected Species (EPS) mitigation licence would not be required to allow the works to proceed lawfully.

6.3.3 In the event that bats are encountered during the works, the works will stop immediately and will not continue until further written advice has been received. At this stage, an EPS mitigation licence may be required to permit the works to recommence lawful.

6.4 Assessment of Bats – Lighting

6.4.1 The proposals will not lead to significant changes in artificial lighting on the application site that is already used for residential properties. However, as artificial lighting has been shown to alter the activity of nocturnal species and certain bat species have been found to be especially averse to lighting and actively avoid lit areas (ILP 2023) it is recommend that a sensitive lighting strategy is adopted for the new roof. The current building has a number of floodlights across the roof although they do not directly face the bat roost access points they could limit the use of the house by bats, particularly those adverse to artificial light pollution and therefore reduce the importance of the site to bats in the local area. Furthermore they could spill onto the surrounding hedgerows and scattered trees on the boundaries.

6.4.2 Therefore to prevent any minor adverse impacts from lighting, the existing lighting will be removed and new lighting will be designed with the aim of reducing light spillage onto the bat roosts, hedgerows and scattered mature trees on the boundaries, thereby

maintaining dark corridors along the margins of the site and on potential bat roosts
therefore a sensitive lighting strategy will be adopted - refer to **Section 8**

7 MITIGATION AND COMPENSATION PROPOSALS

- 7.1.1** Following the grant of planning consent, before the licensable work begins, a European Protected Species Mitigation Licence (EPSML) or confirmation of the registration of the site under the Bat Mitigation Class Licence (BMCL) (Low Impact) WML-CL21 will be obtained.
- 7.1.2** All licensable works to the house i.e. removal of roof tiles and construction work, will be undertaken outside of the winter hibernation season (mid-November to February) to minimise the risk of disturbing torpid bats. One woodcrete bat box will be fixed to a suitable mature tree or purpose-built pole in the rear garden to the west of the property prior to the works starting and will be in place for a minimum of five years (boxes can only be removed after the five years if no evidence of use has been found at this stage).
- 7.1.3** Removal of the roof tiles along the eastern elevation and north-western corner, and hanging tiles on the rear dormer window will be carried out by a soft strip i.e. hand removal with handheld tools if necessary. Before the soft strip begins, the licensed ecologist or 'Registered Consultant' if working under the BMCL, will give a toolbox talk to the contractors on site detailing bats are present, the legislation protecting bats, the location of the roosting site in the buildings, good working practices, the measures that are required to protect bats during the work and what to do if bats are found. A copy of the licence will be available for inspection on site during all licensable works.
- 7.1.4** The roof tiles will be carefully removed by gloved hands under the supervision of a licensed ecologist, or Registered Consultant if working under the BMCL. If bat(s) are discovered during the work, the licensed ecologist or Registered Consultant would capture the bat(s) and transfer it/them directly to a bat box erected in advance of the works.
- 7.1.5** The installation of two additional general purpose woodcrete bat boxes will be fixed to suitable mature trees in the rear and front garden to suitably compensate for the lost roosts under the hanging tiles used by common pipistrelle bats and roof tiles used by soprano pipistrelle bats.

8 SENSITIVE LIGHTING STRATEGY FOR

- 8.1.1** During development, artificial lighting should be avoided or kept to a minimum and if security lighting is required, this should be controlled by passive infra-red motion sensors with no light spillage onto retained hedgerows or scattered trees.
- 8.1.2** In the long-term, external lighting should be avoided wherever possible, but if essential, factors such as column height, light source, use of passive infrared motion sensors and light spillage should be considered carefully when designing the lighting. If lighting is required, lighting with low or no UV content, i.e. warm white LED lames (2700K or below), should be used in place or other directional light accessories should be used to ensure that light spillage onto the retained hedgerows and scattered trees including those with tree mounted bat boxes around the boundaries is avoided (BCT and ILP, 2023). Turning off lighting at night will avoid extended periods of time where area would be lit, and this can be tailored to suit human health and safety as well as wildlife needs.

9 REFERENCES

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APPENDIX 1 – DARKEST POINT OF SURVEY FOR NIGHT VISION AIDS

11th May 2026



Pixfra ARC A613 at Surveyor Location 1.



Pixfra ARC A613 at Surveyor Location 2.

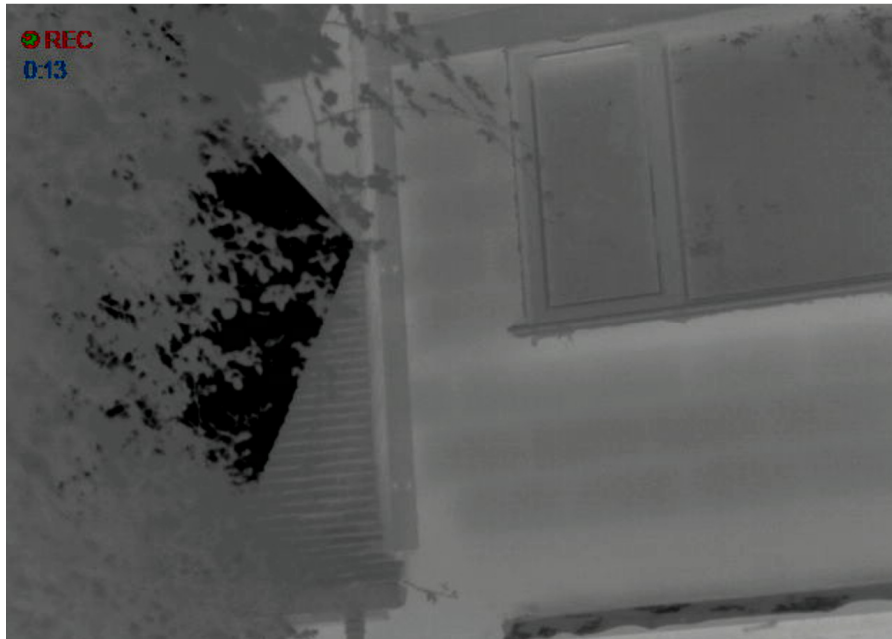


Pixfra ARC A613 at Surveyor Location 3.



Canon XA30 at Surveyor Location 4.

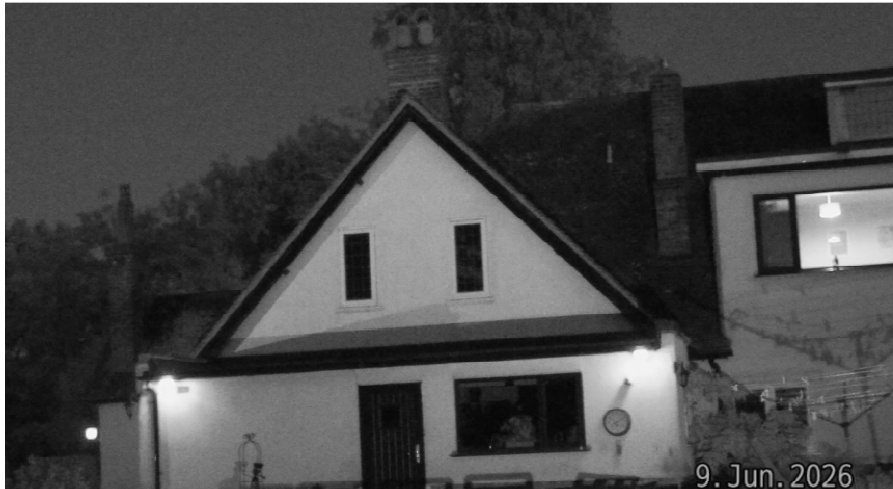
9th June 2026



Pulsar Helion XP28 at Surveyor Location 1.



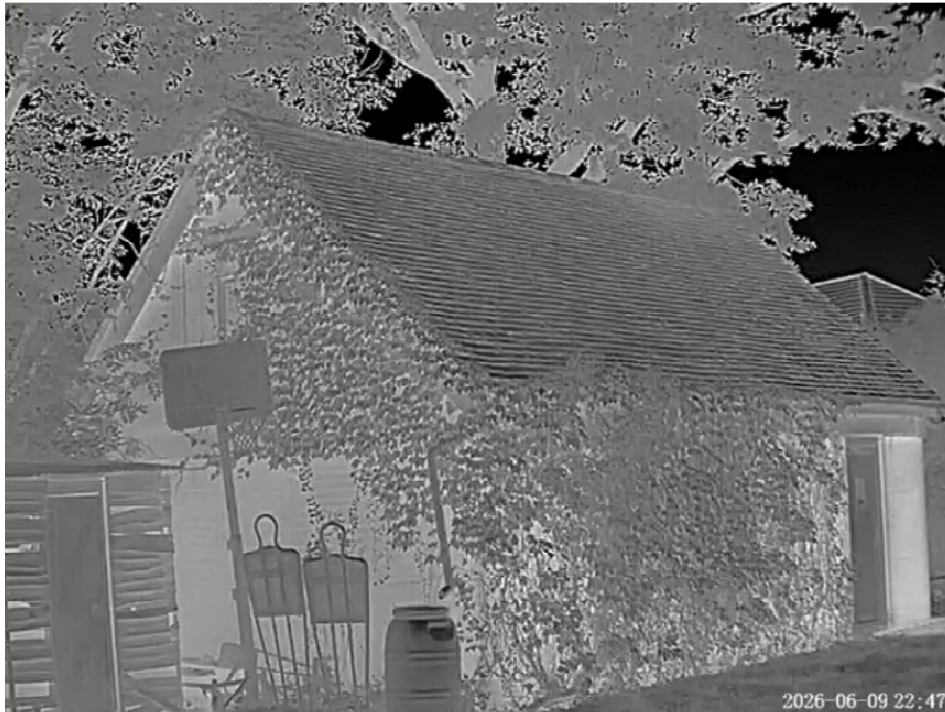
Pixfra ARC A613 at Surveyor Location 2.



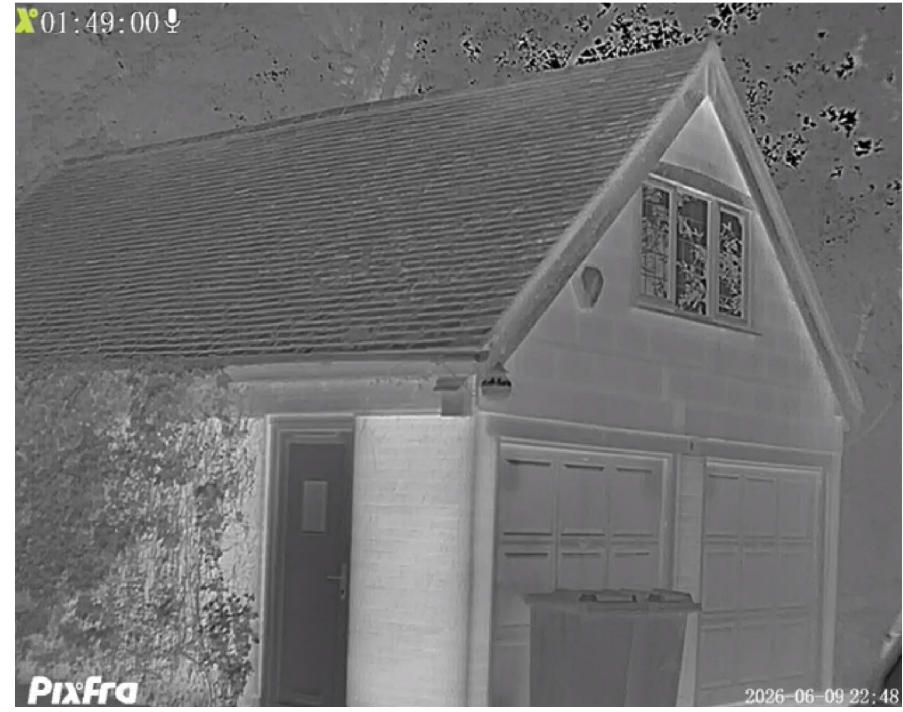
Canon XA60 Surveyor Location 3.



Sionyx Aurora Pro Surveyor Location 4



Pixfra ARC A613 Surveyor Location 5.



Pixfra ARC A613 Surveyor Location 6.

APPENDIX 2 - BAT EMERGENCE SURVEY RAW DATA TABLES

11th May 2026

Surveyor Location 1 – Batlogger M1

Time	Species	Calls [#]
21:07	<i>Pipistrellus pipistrellus</i>	10
21:10	<i>Pipistrellus pipistrellus</i>	8
21:10	<i>Pipistrellus pipistrellus</i>	5
21:10	<i>Pipistrellus pipistrellus</i>	1
21:13	<i>Pipistrellus pipistrellus</i>	1
21:13	<i>Pipistrellus pipistrellus</i>	1
21:13	<i>Pipistrellus pipistrellus</i>	1
21:14	<i>Pipistrellus pipistrellus</i>	6
21:15	<i>Pipistrellus pipistrellus</i>	7
21:15	<i>Pipistrellus pygmaeus</i>	15
21:15	<i>Pipistrellus pygmaeus</i>	7
21:15	<i>Pipistrellus pipistrellus</i>	4
21:17	<i>Pipistrellus pipistrellus</i>	3
21:17	<i>Pipistrellus pipistrellus</i>	1
21:17	<i>Pipistrellus pipistrellus</i>	5
21:17	<i>Pipistrellus nathusii</i>	24
21:20	<i>Pipistrellus pipistrellus</i>	6
21:21	<i>Pipistrellus pipistrellus</i>	20
21:21	<i>Pipistrellus pygmaeus</i>	2
21:24	<i>Pipistrellus pipistrellus</i>	1
21:24	<i>Pipistrellus pipistrellus</i>	15
21:25	<i>Pipistrellus pipistrellus</i>	6
21:26	<i>Pipistrellus pipistrellus</i>	2
21:28	<i>Pipistrellus pipistrellus</i>	5
21:28	<i>Pipistrellus pipistrellus</i>	12
21:28	<i>Pipistrellus pygmaeus</i>	11
21:30	<i>Pipistrellus pipistrellus</i>	2
21:35	<i>Pipistrellus pipistrellus</i>	3
21:36	<i>Pipistrellus pipistrellus</i>	0
21:36	<i>Pipistrellus pygmaeus</i>	1
21:37	<i>Pipistrellus pipistrellus</i>	0
21:37	<i>Pipistrellus pipistrellus</i>	5
21:37	<i>Pipistrellus pipistrellus</i>	5
21:39	<i>Pipistrellus pipistrellus</i>	2
21:39	<i>Pipistrellus pipistrellus</i>	5
21:41	<i>Pipistrellus pipistrellus</i>	9
21:41	<i>Pipistrellus pipistrellus</i>	24
21:42	<i>Pipistrellus pipistrellus</i>	5
21:42	<i>Pipistrellus pipistrellus</i>	1
21:43	<i>Pipistrellus pipistrellus</i>	4
21:50	<i>Pipistrellus pipistrellus</i>	1

21:50	<i>Pipistrellus pipistrellus</i>	6
21:51	<i>Pipistrellus pipistrellus</i>	3
22:05	<i>Pipistrellus pipistrellus</i>	7
22:05	<i>Pipistrellus pygmaeus</i>	5
22:07	<i>Pipistrellus pipistrellus</i>	21
22:08	<i>Pipistrellus pygmaeus</i>	3

Surveyor location 2 – Batlogger M2

Time	Species	Calls [#]
21:07	<i>Pipistrellus pipistrellus</i>	12
21:09	<i>Pipistrellus pipistrellus</i>	9
21:09	<i>Pipistrellus pipistrellus</i>	1
21:09	<i>Pipistrellus pipistrellus</i>	10
21:09	<i>Pipistrellus pipistrellus</i>	11
21:10	<i>Pipistrellus pipistrellus</i>	21
21:10	<i>Pipistrellus pipistrellus</i>	1
21:10	<i>Pipistrellus pipistrellus</i>	2
21:10	<i>Pipistrellus pygmaeus</i>	9
21:11	<i>Pipistrellus pipistrellus</i>	6
21:11	<i>Pipistrellus pipistrellus</i>	1
21:12	<i>Pipistrellus pipistrellus</i>	17
21:12	<i>Pipistrellus pipistrellus</i>	5
21:12	<i>Pipistrellus pipistrellus</i>	3
21:12	<i>Pipistrellus pipistrellus</i>	16
21:13	<i>Pipistrellus pipistrellus</i>	11
21:13	<i>Pipistrellus pipistrellus</i>	0
21:13	<i>Pipistrellus pipistrellus</i>	6
21:14	<i>Pipistrellus pipistrellus</i>	13
21:14	<i>Pipistrellus pipistrellus</i>	4
21:14	<i>Pipistrellus pipistrellus</i>	21
21:15	<i>Pipistrellus pygmaeus</i>	10
21:16	<i>Pipistrellus pipistrellus</i>	27
21:17	<i>Pipistrellus pipistrellus</i>	16
21:20	<i>Pipistrellus nathusii</i>	11
21:20	<i>Pipistrellus pipistrellus</i>	16
21:20	<i>Pipistrellus pipistrellus</i>	10
21:21	<i>Pipistrellus pipistrellus</i>	10
21:21	<i>Pipistrellus pipistrellus</i>	11
21:21	<i>Pipistrellus pipistrellus</i>	3
21:23	<i>Pipistrellus pygmaeus</i>	13
21:24	<i>Pipistrellus pipistrellus</i>	9
21:26	<i>Pipistrellus pipistrellus</i>	12
21:27	<i>Pipistrellus pipistrellus</i>	13
21:21	<i>Pipistrellus pipistrellus</i>	12
21:24	<i>Pipistrellus pipistrellus</i>	7
21:35	<i>Pipistrellus pipistrellus</i>	8
21:38	<i>Pipistrellus pipistrellus</i>	0

21:41	<i>Pipistrellus pipistrellus</i>	8
21:42	<i>Pipistrellus pipistrellus</i>	11
21:43	<i>Pipistrellus pipistrellus</i>	11
22:05	<i>Pipistrellus pipistrellus</i>	9

Surveyor location 3 – Batlogger M2

Time	Species	Calls [#]
21:12	<i>Pipistrellus pipistrellus</i>	1
21:13	<i>Pipistrellus pipistrellus</i>	1
21:15	<i>Pipistrellus pipistrellus</i>	5
21:16	<i>Pipistrellus pipistrellus</i>	11
21:16	<i>Pipistrellus pipistrellus</i>	5
21:20	<i>Pipistrellus pipistrellus</i>	11
21:20	<i>Pipistrellus pipistrellus</i>	1
21:21	<i>Pipistrellus pipistrellus</i>	6
21:21	<i>Pipistrellus pipistrellus</i>	10
21:24	<i>Pipistrellus pygmaeus</i>	12
21:24	<i>Pipistrellus pipistrellus</i>	5
21:26	<i>Pipistrellus pipistrellus</i>	4
21:27	<i>Pipistrellus pipistrellus</i>	3
21:28	<i>Pipistrellus pipistrellus</i>	6
21:30	<i>Pipistrellus pipistrellus</i>	20
21:31	<i>Pipistrellus pipistrellus</i>	9
21:34	<i>Pipistrellus pipistrellus</i>	1
21:35	<i>Pipistrellus pipistrellus</i>	3
21:37	<i>Pipistrellus pygmaeus</i>	2
21:40	<i>Pipistrellus pipistrellus</i>	1
21:40	<i>Pipistrellus pipistrellus</i>	4
21:42	<i>Pipistrellus pipistrellus</i>	5
21:43	<i>Pipistrellus pipistrellus</i>	1
21:43	<i>Pipistrellus pipistrellus</i>	8
22:05	<i>Pipistrellus pipistrellus</i>	2

Surveyor location 4 – Echo Meter Touch 2

Time	Species	Calls [#]
21:07	<i>Pipistrellus pipistrellus</i>	1
21:14	<i>Pipistrellus pipistrellus</i>	1
21:15	<i>Pipistrellus pipistrellus</i>	1
21:21	<i>Pipistrellus pipistrellus</i>	1
21:21	<i>Pipistrellus nathusii</i>	1
21:25	<i>Pipistrellus pipistrellus</i>	1
21:29	<i>Pipistrellus pipistrellus</i>	1
21:30	<i>Pipistrellus pygmaeus</i>	1
21:38	<i>Pipistrellus pipistrellus</i>	1
21:41	<i>Pipistrellus pipistrellus</i>	1
21:43	<i>Pipistrellus pipistrellus</i>	1
21:44	<i>Pipistrellus pipistrellus</i>	1

9th June 2026

Surveyor Location 1 & 4 – Batlogger M1

Time	Species	Calls [#]
21:42:05	<i>Pipistrellus pipistrellus</i>	4
21:42:10	<i>Pipistrellus pipistrellus</i>	2
21:43:17	<i>Pipistrellus pipistrellus</i>	9
21:43:57	<i>Pipistrellus pipistrellus</i>	9
21:47:47	<i>Pipistrellus pipistrellus</i>	0
21:50:35	<i>Pipistrellus pipistrellus</i>	14
21:52:32	<i>Pipistrellus pipistrellus</i>	13
21:54:35	<i>Pipistrellus pipistrellus</i>	6
21:55:33	<i>Pipistrellus pipistrellus</i>	4
21:55:53	<i>Pipistrellus pipistrellus</i>	1
21:55:55	<i>Pipistrellus pipistrellus</i>	0
21:56:56	<i>Pipistrellus pipistrellus</i>	18
21:57:16	<i>Pipistrellus pipistrellus</i>	18
22:12:10	<i>Pipistrellus pipistrellus</i>	12
22:14:32	<i>Pipistrellus pipistrellus</i>	9
22:16:03	<i>Pipistrellus pipistrellus</i>	7
22:20:13	<i>Pipistrellus nathusii</i>	5
22:28:48	<i>Pipistrellus pipistrellus</i>	2
22:32:01	<i>Pipistrellus pipistrellus</i>	5
22:32:05	<i>Pipistrellus pipistrellus</i>	1
22:41:13	<i>Pipistrellus pygmaeus</i>	5
22:41:17	<i>Pipistrellus pygmaeus</i>	4
22:41:35	<i>Pipistrellus pipistrellus</i>	0
22:41:41	<i>Pipistrellus pipistrellus</i>	1
22:42:05	<i>Pipistrellus pipistrellus</i>	11
22:44:13	<i>Pipistrellus pipistrellus</i>	1
22:44:24	<i>Pipistrellus pipistrellus</i>	2
22:44:27	<i>Pipistrellus pipistrellus</i>	7
22:44:46	<i>Pipistrellus pipistrellus</i>	2
22:44:50	<i>Pipistrellus pipistrellus</i>	1
22:46:32	<i>Pipistrellus pipistrellus</i>	0
22:46:42	<i>Pipistrellus pipistrellus</i>	1
22:46:55	<i>Pipistrellus pipistrellus</i>	1
22:47:00	<i>Pipistrellus pipistrellus</i>	6
22:47:35	<i>Pipistrellus pipistrellus</i>	3
22:48:10	<i>Pipistrellus pipistrellus</i>	21
22:48:39	<i>Pipistrellus pipistrellus</i>	18
22:49:01	<i>Pipistrellus pipistrellus</i>	8
22:49:18	<i>Pipistrellus pipistrellus</i>	37
22:50:12	<i>Pipistrellus pipistrellus</i>	3
22:50:16	<i>Pipistrellus pipistrellus</i>	2
22:50:22	<i>Pipistrellus pipistrellus</i>	0

22:50:39	<i>Pipistrellus pipistrellus</i>	2
22:51:12	<i>Pipistrellus pipistrellus</i>	1
22:51:15	<i>Pipistrellus pipistrellus</i>	1
22:51:30	<i>Pipistrellus pipistrellus</i>	0
22:51:48	<i>Pipistrellus pipistrellus</i>	1
22:51:51	<i>Pipistrellus pipistrellus</i>	3
22:51:58	<i>Pipistrellus pipistrellus</i>	8
22:52:09	<i>Pipistrellus pipistrellus</i>	1
22:52:32	<i>Pipistrellus pipistrellus</i>	2
22:52:35	<i>Pipistrellus pipistrellus</i>	12
22:53:31	<i>Pipistrellus pipistrellus</i>	9
22:53:44	<i>Pipistrellus pipistrellus</i>	3
22:53:46	<i>Pipistrellus pipistrellus</i>	3
22:53:51	<i>Pipistrellus pipistrellus</i>	16
22:54:00	<i>Pipistrellus pipistrellus</i>	16
22:54:20	<i>Pipistrellus pipistrellus</i>	2

Surveyor location 2 – Batlogger M1

Time	Species	Calls [#]
21:42:02	<i>Pipistrellus pipistrellus</i>	2
21:43:29	<i>Pipistrellus pygmaeus</i>	16
21:48:51	<i>Pipistrellus pipistrellus</i>	0
21:49:21	<i>Pipistrellus pipistrellus</i>	0
21:50:59	<i>Pipistrellus pipistrellus</i>	0
21:56:49	<i>Pipistrellus pipistrellus</i>	0
22:43:17	<i>Pipistrellus pygmaeus</i>	11
22:43:20	<i>Pipistrellus pygmaeus</i>	23
22:50:19	<i>Pipistrellus pipistrellus</i>	35
22:51:01	<i>Pipistrellus pygmaeus</i>	1
22:55:28	<i>Pipistrellus pipistrellus</i>	0

Surveyor location 3 & 5 – Echo Meter Touch 2

Time	Species	Calls [#]
21:40:49	<i>Pipistrellus pipistrellus</i>	1
21:42:03	<i>Pipistrellus pipistrellus</i>	1
21:42:17	<i>Pipistrellus pipistrellus</i>	1
21:42:46	<i>Pipistrellus pipistrellus</i>	1
21:43:42	<i>Pipistrellus pygmaeus</i>	1
21:49:22	<i>Pipistrellus pipistrellus</i>	1
21:54:22	<i>Pipistrellus pipistrellus</i>	1
21:54:44	<i>Pipistrellus pipistrellus</i>	1
21:55:44	<i>Pipistrellus pipistrellus</i>	1
21:55:49	<i>Pipistrellus pipistrellus</i>	1
22:11:02	<i>Pipistrellus pipistrellus</i>	1
22:14:54	<i>Pipistrellus pipistrellus</i>	1
22:14:59	<i>Pipistrellus pipistrellus</i>	1
22:19:00	<i>Pipistrellus nathusii</i>	1
22:27:35	<i>Pipistrellus pipistrellus</i>	1
22:30:52	<i>Pipistrellus pipistrellus</i>	1

22:31:12	<i>Pipistrellus pipistrellus</i>	1
22:40:59	<i>Pipistrellus pipistrellus</i>	1

Surveyor location 6 – Batlogger M1

Time	Species	Calls [#]
21:40:50	<i>Pipistrellus pipistrellus</i>	31
21:42:06	<i>Pipistrellus pipistrellus</i>	2
21:42:46	<i>Pipistrellus pipistrellus</i>	14
21:43:42	<i>Pipistrellus pygmaeus</i>	5
21:46:34	<i>Pipistrellus pipistrellus</i>	10
21:47:30	<i>Pipistrellus pipistrellus</i>	3
21:47:44	<i>Pipistrellus pipistrellus</i>	4
21:47:50	<i>Pipistrellus pipistrellus</i>	6
21:49:24	<i>Pipistrellus pipistrellus</i>	1
21:49:29	<i>Pipistrellus pipistrellus</i>	2
21:51:11	<i>Pipistrellus pipistrellus</i>	1
21:54:21	<i>Pipistrellus pipistrellus</i>	16
21:54:44	<i>Pipistrellus pipistrellus</i>	2
21:55:48	<i>Pipistrellus pipistrellus</i>	6
21:56:16	<i>Pipistrellus pipistrellus</i>	2
22:11:00	<i>Pipistrellus pipistrellus</i>	0
22:14:58	<i>Pipistrellus pipistrellus</i>	22
22:18:49	<i>Pipistrellus pygmaeus</i>	9
22:19:01	<i>Pipistrellus nathusii</i>	7
22:27:34	<i>Pipistrellus pipistrellus</i>	12
22:30:52	<i>Pipistrellus pipistrellus</i>	6
22:40:05	<i>Pipistrellus pygmaeus</i>	8
22:42:33	<i>Pipistrellus pipistrellus</i>	8
22:43:28	<i>Pipistrellus pipistrellus</i>	2
22:44:02	<i>Pipistrellus pipistrellus</i>	3
22:44:02	<i>Pipistrellus pygmaeus</i>	1
22:47:58	<i>Pipistrellus pipistrellus</i>	2