

**Montana Cottage
School Hill
Wargrave
Berkshire
RG10 8DY**

Bat Emergence Survey

Report ref.: R3030_BES_a

Report Quality Control Information	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Vitor Monteiro and Sophonn Monteiro to undertake a Bat Emergence Survey (BES) at Montana Cottage, School Lane in Wargrave, Berkshire. The survey was commissioned to accompany a planning application to be submitted to Wokingham Borough Council seeking consent for the construction of a new single residential dwelling following demolition of the existing dwelling.
- 1.1.2** The BES follows a Preliminary Roost Assessment (PRA) conducted by John Wenman Ecological Consultancy in October 2025 (Report ref.: R3030_PRA_a). During the PRA, no evidence of roosting bats was found however the roof void was not fully accessible, and therefore the absence of void-dwelling bats such as the *Plecotus* species could not be confirmed. Externally, several potential roost features were observed with gaps below hanging tiles on the dormer window and beneath lifted verge roof tiles on the eastern end of the roof. These potential roost sites are likely to offer sufficient space, shelter, protection and conditions for use by individual or small numbers of crevice-dwelling bats, such as locally recorded *Pipistrellus* species. The house was assigned moderate potential suitability for bats.
- 1.1.3** In line with good practice guidelines (Collins 2023), two dusk emergence survey visits were undertaken on the 7th and 28th May 2026, to confirm the presence or likely absence of bat roosts within the property. A maximum count of four common pipistrelle (*Pipistrellus pipistrellus*) bats were seen emerging from the property during the first survey, with a likely individual *Pipistrellus* sp. bat observed emerging from the property on the second survey. The survey findings demonstrate that the property supports an occasional day roost for small numbers of male or non-breeding common pipistrelle bats i.e. roost of low conservation significance.
- 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 Bat Mitigation Class Licence (Low Impact) (BMCL) WML-CL21 registration. Under the terms of a full EPS or 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 Vitor Monteiro and Sophonn Monteiro to undertake a Preliminary Roost Assessment (PRA) for bats at Montana Cottage, School Lane in Wargrave, Berkshire.
- 2.1.2** The survey was commissioned to accompany a full planning application to be submitted to Wokingham Borough Council seeking consent for the construction of a new single residential dwelling following demolition of the existing house.
- 2.1.3** The Bat Emergence Survey follows a Preliminary Roost Assessment (PRA) conducted by John Wenman Ecological Consultancy in October 2025 (Report ref.: R3030_PRA_a). The PRA report states the following:

The roof void and eaves space were of a size and dimension that provided an insufficient space for internal flight and therefore it is assumed to be unsuitable for regular use by void-dwelling bats, such as the locally recorded brown long-eared (Plecotus auritus). However, as the whole void couldn't be explored, the absence of this species couldn't be confirmed from the daylight walkover survey alone.

Externally, the potential crevice roost opportunities include; crevices associated with the hanging tiles on the dormer window and gaps beneath the lifted verge roof tiles. These potential roost sites are likely to offer sufficient space, shelter, protection and conditions for use by individual or small numbers of crevice-dwelling bats, such as the locally recorded common pipistrelle (P. pipistrellus) and soprano pipistrelle (P. pygmaeus). The features on the roof are unlikely to be of a size to be used by large numbers of roosting bats and due to the lack of evidence observed, it is considered unlikely that a maternity roost is present.

The house has been assigned moderate potential suitability for bats (see Appendix 1 for potential suitability categories).'

2.2 Site Location and Context

- 2.2.1** The site includes a detached residential house located on the western side of School Hill in Wargrave, Berkshire (central OS grid reference: SU 78966 78271).
- 2.2.2** The site is in a suburban setting surrounded by similar residential properties and their respective private gardens to the south and east and Robert Piggott C of E Junior School

on the northern boundary. Wargrave Chalk Pit, an area of mixed woodland and open grassland, is present approximately 28 metres to the west of the property. The wider landscape is primarily open agricultural farmland, with scattered trees and parcels of woodland. There is connective habitat to the River Thames situated approximately 700 metres to the northwest and the River Loddon approximately 1150 metres to the west of the property.

2.3 Report Objectives

- 2.3.1** The aim of the bat emergence survey is to determine the presence or 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 Berkshire and South Buckinghamshire Bat Group (BSBBG) 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 7th and 28th May 2026. The survey visits were undertaken by experienced bat surveyors Verity West (2025-86539-SCI-CL18), Andy Cruse, Hannah McEwen (Qualifying Member of CIEEM), Lauren Hayward (Qualifying Member of CIEEM) and Georgia Clifton-Dey. The surveyors covered all elevations of the building which had features suitable for bats - refer to emergence survey plan in **Section 5** below.
- 4.2.2** The equipment used during the surveys consisted of full-spectrum sampling bat detectors (Elekon Batlogger M2 and Echo Meter Touch 2 Pro) and thermal imaging night vision aids (Pixfra ARC A613) and infrared night vision aids (Nightfox Whisker with infrared floodlights). A still shot of the darkest point/viewpoint of the surveys has been included for the 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 survey, the bat call recordings were processed and analysed using the BatExplorer and Kaleidoscope computer software packages and the night vision video footage was reviewed in the 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, (particularly for detecting and characterising breeding roosts) 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 data search are detailed below. The bat emergence survey findings are described and summarised in **Tables 1 – 4**, **Photographs 1 - 5** and illustrated in **Figures 1 & 2** below; the raw detector data is supplied in **Appendix 2**.

5.2 Background Data Search

- 5.2.1** Two recent mitigation licence for bats has been granted by Natural England within a 2km radius of the site, granted in 2018 and 2020 covering the destruction of a Brown long eared (*Plecotus auritus*) and common pipistrelle (*Pipistrellus pipistrellus*) resting place approximately 1463 metres to the south, and 1468 metres to the north east (Case reference: 2020-44644-EPS-MIT, 2018-35667-EPS-MIT-1).
- 5.2.2** BSBBG held records for at least eight bat species within a 2km radius of the site. The closest records to the site were for common pipistrelle (*P. pipistrellus*), soprano pipistrelle (*P. pygmaeus*) and noctule (*Nyctalus noctula*) passes recorded by aural detectors at Wargrave Chalk Pit, approximately 60 metres from the site in 2018. A brown long-eared (*Plecotus auritus*) was recorded emerging from The Mount Care Home, approximately 130m to the north of the site in 2021, with serotine (*Eptesicus serotinus*), noctule (*N. noctula*), common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) passes recorded in 2024. A soprano pipistrelle (*P. pygmaeus*) was recorded emerging from a property 210 metres to the north-east of the property in 2024, where droppings were observed within the roof void.

5.3 Emergence Survey

7th May 2026

- 5.3.1** A total of four bats were observed emerging from the property during the survey. The first bat observed emerging was a common pipistrelle (*P. pipistrellus*) bat that was observed by the surveyors at Location 1 and 2 from beneath a hip tile at the south western elevation 20:54 (**Photograph 1**). The surveyors at Location 2 and 3 recorded two common pipistrelle (*P. pipistrellus*) bats emerging from beneath the hanging tiles on the northern pitched dormer at 21.01 and 21.03, both bats flew southwest (**Photographs 2 and 3**). The surveyor at Location 1 recorded a common pipistrelle (*P. pipistrellus*) emerging from the eastern hip tiles at 21.05, where it flew east (**Photograph 4**).

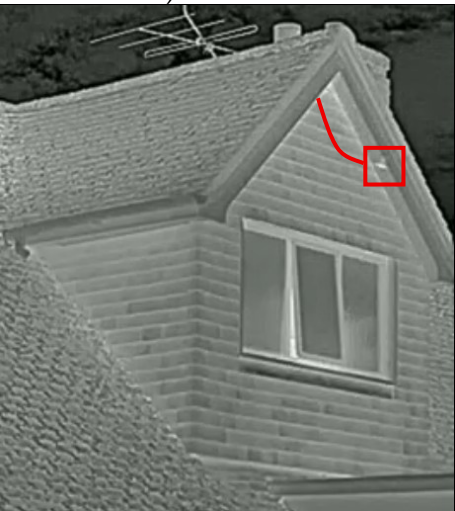
	
Photograph 1. Common pipistrelle emergence from below a hip tile at 20:54 (Surveyor Location 1; south-west elevation).	Photograph 2. Common pipistrelle emergence from apex of dormer at 21:01 (Surveyor Location 3; northern elevation).
	
Photograph 3. Common pipistrelle emergence from hanging tiles on dormer at 21:03 (Surveyor Location 3; northern elevation).	Photograph 4. Common pipistrelle emergence from apex of dormer at 21:01 (Surveyor Location 1; south-east elevation).

Table 1. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (oktas)	Rain	Temperature (°C)	
	0-1	95%	0	Start	Finish
Start	20:20	Sunset	20:35	Finish	22:05

Table 2a. Surveyor recordings at location 1 (VW)

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
<i>Pipistrellus pygmaeus</i>	19	0	20:43 (8 minutes)
<i>Pipistrellus pipistrellus</i>	88	1	20:54 (19 minutes)
<i>Plecotus auritus</i>	1	0	21:38 (63 minutes)

Table 2b. Surveyor recordings at location 2 (AC)

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
<i>Pipistrellus pipistrellus</i>	73	3	20:53 (18 minutes)

<i>Pipistrellus pygmaeus</i>	31	0	21:01 (26 minutes)
<i>Pipistrellus nathusii</i>	2	0	21:21 (46 minutes)
<i>Plecotus auritus</i>	1	0	21:38 (63 minutes)

Table 2c. Surveyor recordings at location 3 (LH)

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
<i>Pipistrellus pygmaeus</i>	11	0	21:16 (41 minutes)
<i>Pipistrellus pipistrellus</i>	5	2	21:20 (45 minutes)
Social Calls	1	0	21:54 (79 minutes)

*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 bat to be recorded during the survey was a soprano pipistrelle (*Pipistrellus pygmaeus*) that was heard but not seen by the surveyor at Location 1 at 20:43 (20 minutes after sunset). This was followed by a common pipistrelle (*P. pipistrellus*) that was heard but not seen by the surveyor at Location 2 at 20:53 (18 minutes after sunset). A brown long eared bat (*Plecotus auritus*) was recorded by both surveyors in Locations 1 and 2 at 21:38 (63 minutes after sunset). These recordings fall within the typical emergence periods for these species (Collins 2023), indicating the individuals likely emerged nearby. A Nathusius pipistrelle (*Pipistrellus nathusii*) was recorded commuting past Location 2 at 21:21 (46 minutes after sunset) which falls shortly outside of their typical emergence period.

5.3.3 Activity was moderate throughout the survey period, with foraging recorded between 21:01 and 21:27 at Locations 1 and 2 from *Pipistrellus* sp. within the rear garden, over the small pond and around the treeline.

28th May 2026

5.3.4 One bat emergence was recorded and observed from the soffit along the western hip at 21.33 (27 minutes after sunset) and flew south, by the surveyor at Location 1 (**Photograph 5**). No call was detected by either of the surveyors at Location 1 or 2; based on the emergence time period, and the size and flight shape it is thought to have been a *Pipistrellus* sp.



Photograph 5. Likely *Pipistrellus* sp. emergence from below barge board at 21:33 (Surveyor location 2; western elevation).

Table 3. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (oktas)	Rain	Temperature (°C)	
	0-1	15-20%	Dry	Start	Finish
Start	20:51	Sunset	21:06	Finish	22:36

Table 4a. Surveyor recordings at location 1 (HM)

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
<i>Pipistrellus pygmaeus</i>	23	0	21:21 (15 minutes)
<i>Pipistrellus pipistrellus</i>	10	0	21:26 (20 minutes)
<i>Myotis spec.</i>	2	0	21:31 (25 minutes)
<i>Nyctalus noctula</i>	2	0	21:33 (27 minutes)
Social Calls	2	0	22:00 (54 minutes)

Table 4b. Surveyor recordings at location 2 (VW)

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
<i>Nyctalus noctula</i>	2	0	21:33 (27 minutes)
<i>Pipistrellus sp.</i>	-	1	-
<i>Pipistrellus pygmaeus</i>	22	0	21:37 (31 minutes)
<i>Pipistrellus pipistrellus</i>	9	0	21:43 (37 minutes)
<i>Pipistrellus nathusii</i>	1	0	21:53 (47 minutes)

Table 4c. Surveyor recordings at location 3 (GCD)

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
<i>Pipistrellus pygmaeus</i>	4	0	21:32 (26 minutes)
<i>Nyctalus noctula</i>	3	0	21:33 (27 minutes)
<i>Pipistrellus pipistrellus</i>	3	0	21:36 (30 minutes)
<i>Plecotus auritus</i>	1	0	21:53 (47 minutes)

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

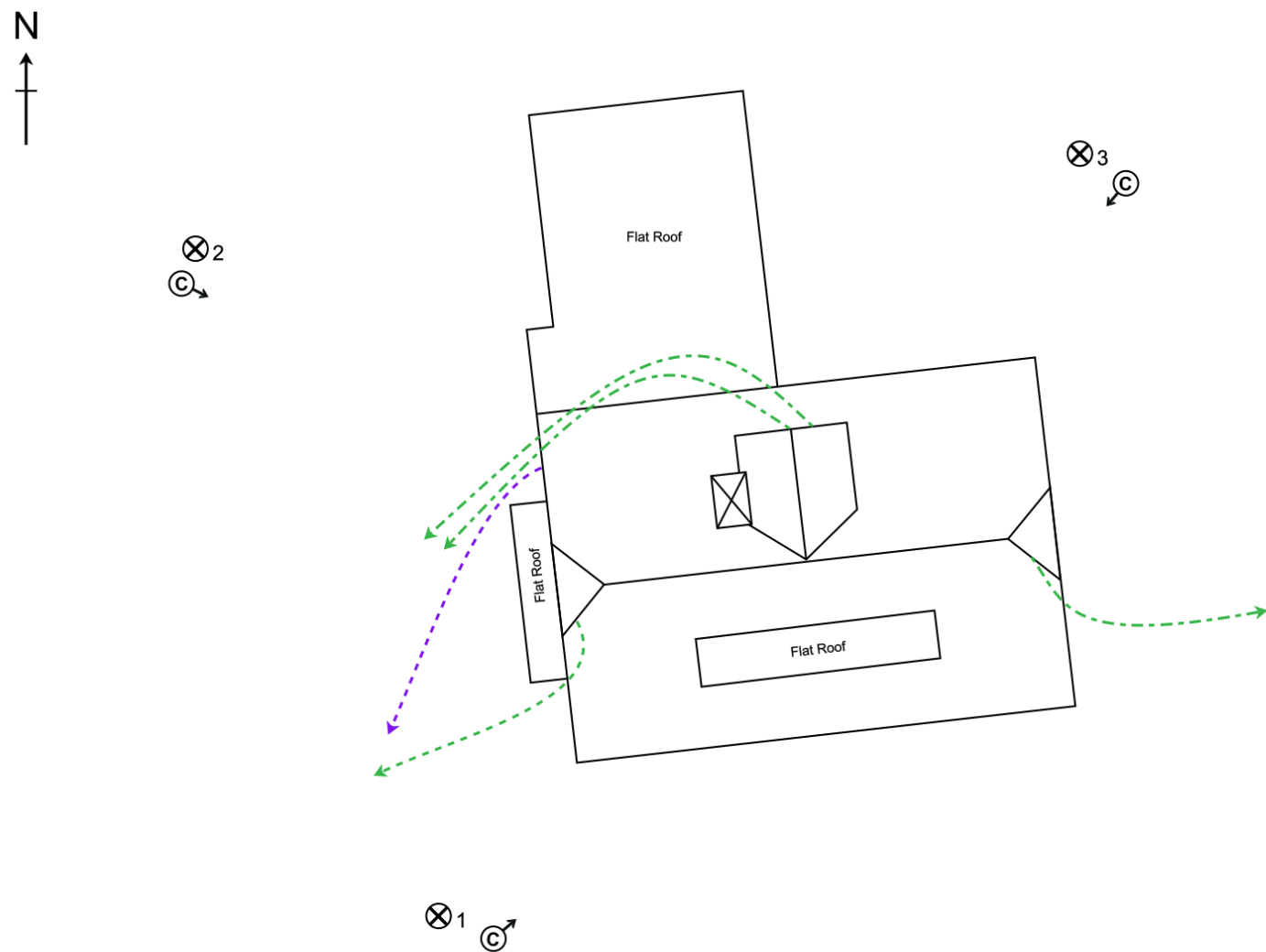
†confirmed by direct observation and/or night vision aid.

5.3.5 The first bat recorded during the survey was a soprano pipistrelle (*Pipistrellus pygmaeus*) that was heard by the surveyor at Location 1 at 21:21 (15 minutes after sunset). This was

closely followed by a common pipistrelle (*Pipistrellus pipistrellus*) that was heard and seen by the surveyor at Location 1 at 21:26 which flew from over the properties towards the trees on the northwest boundary (20 minutes after sunset). These recordings fall within the typical emergence period for these species (Collins 2023), indicating that they likely emerged nearby.

5.3.6 All surveyors recorded a noctule (*Nyctalus noctula*) at 21:33 commuting over the property, and the surveyor at Location 3 recorded a brown long-eared (*Plecotus auritus*) at 21:53 (47 minutes after sunset). These recordings fall within the typical emergence period for these species (Collins 2023), indicating that they likely emerged from nearby roosts.

5.3.7 Activity was low throughout the survey period and primarily comprised *P. pipistrellus* foraging passes across the northwestern elevation and over the linear trees in the rear garden.



 n Surveyor location		 Night vision aid location		 Common pipistrelle emergence	 <i>Pipistrellus</i> sp. emergence
Drawn by:	Date	Scale:	Montana Cottage, School Hill Wargrave		
HM	June 2026	Not to scale	Bat Emergence Survey Findings - Emergences		
					

Figure 1 – Bat Emergence Survey Findings – Recorded Emergence Flight Paths

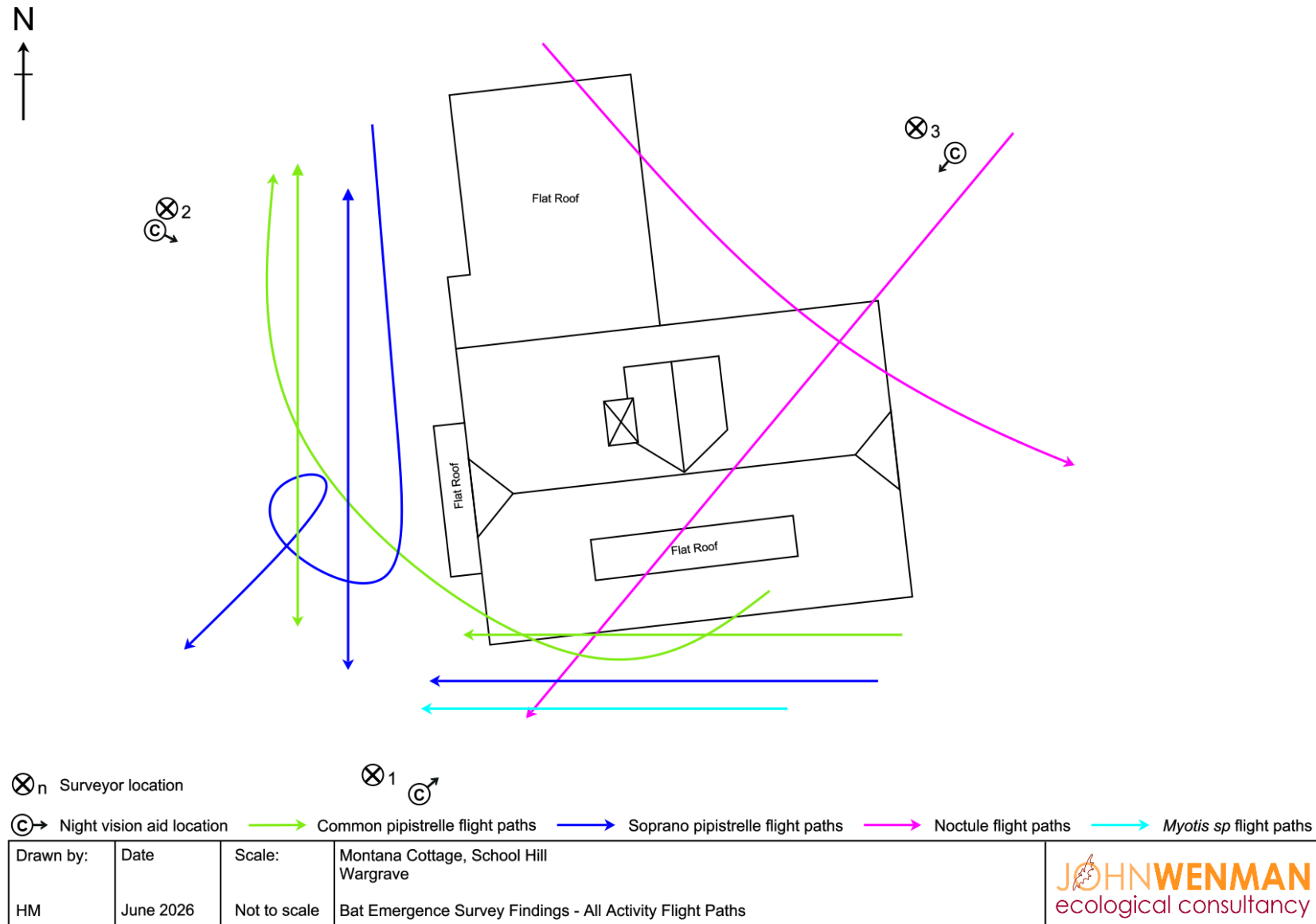


Figure 2 – Bat Emergence Survey Findings – All Recorded Bat Activity Flight Paths

6 DISCUSSION AND RECOMMENDATIONS

6.1 Assessment of Bat Roost Status

- 6.1.1** During the emergence surveys, a maximum count of four common pipistrelle (*P. pipistrellus*) were observed emerging from the property. Two common pipistrelle bats were recorded emerging from below hanging tiles on the northern dormer, one from below hip tiles at the south-eastern hip, and one from below hip tiles at the western hip tiles. The species were confirmed by surveyors as the emerging bat passed overhead. A silent bat was recorded emerging from below the soffit on the western elevation, and due to the time and size, it was determined to be a likely *Pipistrellus* sp. These findings 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 common pipistrelle (*P. pipistrellus*) bats, using four access points.
- 6.1.2** Soprano pipistrelle (*P. pygmaeus*) were also recorded within their typical emergence periods during both survey visits (Collins 2023), indicating that this species is also highly likely to be roosting nearby, especially considering the high-quality flight paths and the areas of woodland, open grassland and nearby River Thames and River Loddon provides foraging opportunities.
- 6.1.3** Common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) are crevice-dwelling species that are of the most abundant and widespread bats in Great Britain. These species occur in almost any habitat type and are well adapted to the built environments; they are species most regularly reported roosting in houses and churches (Mathews *et al.* 2018).
- 6.1.4** Day roosts used by common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) 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 2025).

6.2 Impact Assessment

Overview

- 6.2.1** The proposed development involves seeking consent for the demolition of the existing property. The impacts of these proposals have been assessed in accordance with the mitigation hierarchy during construction and post development, as follows:

Construction Phase

- 6.2.2** The development proposals will result in the permanent destruction of all confirmed

common pipistrelle (*P. pipistrellus*) access points and roosting crevices and therefore could result in the potential injury or harm during construction works in the absence of mitigation.

Post Development

- 6.2.3** The development proposals will lead to the long term loss of roosts and associated access points for a common pipistrelle day roost and therefore replacement crevice roosting opportunities should be included within the proposed new dwelling.

Recommendations

- 6.2.4** The survey data shows that the development proposals will result in the loss of a common pipistrelle (*P.pipistrellus*) day roost, for a small number of individual or non-breeding bats.
- 6.2.5** A European Protected Species (EPS) Mitigation Licence will be required to allow the work to proceed lawfully, and the survey findings show that the house 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.

7 MITIGATION PROPOSALS

- 7.1.1** Following the grant of planning consent, before the licensable work begins i.e. removal of hanging tile cladding and hip tiles, 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 hanging tiles on the northern dormer, removal of the hip tiles and removal of the soffit along the western elevation, 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 garden 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** 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 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** In the long-term, compensatory roosting opportunities will be incorporated into the final design and will correspond to the location of the existing day roosts by installing two single integrated bat tube/boxes, such as the 1FR Schwegler Bat Tube (or suitable equivalent), into the newly designed property.
- 7.1.6** Any new roof lining installed will be bitumen and hessian (Type 1F) felt or a breathable membrane that meets Natural England's testing regime for bat safe membranes e.g. TLX Batsafe.

8 REFERENCES

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APPENDIX 1 – DARKEST POINT OF SURVEY AND/OR VIEWPOINT FOR NIGHT VISION AIDS

7th May 2026



Pixfra ARC A613 at Surveyor Location 1.



Pixfra ARC A613 at Surveyor Location 2



Pixfra ARC A613 at Surveyor Location 3.

28th May 2026



Nightfox Whisker at Surveyor Location 1.



Pixfra ARC A613 at Surveyor Location 3.



Pixfra ARC A613 at Surveyor Location 2

APPENDIX 2 – BAT EMERGENCE SURVEY RAW DATA TABLES

7th May 2026

Surveyor Location 1 – Batlogger M2

Time	Species	Number of Calls [#]
20:43	<i>Pipistrellus pygmaeus</i>	5
20:51	<i>Pipistrellus pygmaeus</i>	6
20:54	<i>Pipistrellus pipistrellus</i>	8
20:58	<i>Pipistrellus pipistrellus</i>	5
20:58	<i>Pipistrellus pipistrellus</i>	7
20:58	<i>Pipistrellus pipistrellus</i>	36
20:58	<i>Pipistrellus pygmaeus</i>	1
21:00	<i>Pipistrellus pipistrellus</i>	2
21:00	<i>Pipistrellus pipistrellus</i>	4
21:00	<i>Pipistrellus pipistrellus</i>	1
21:01	<i>Pipistrellus pipistrellus</i>	2
21:01	<i>Pipistrellus pipistrellus</i>	3
21:01	<i>Pipistrellus pipistrellus</i>	1
21:01	<i>Pipistrellus pygmaeus</i>	12
21:01	<i>Pipistrellus pipistrellus</i>	1
21:02	<i>Pipistrellus pipistrellus</i>	33
21:03	<i>Pipistrellus pipistrellus</i>	11
21:04	<i>Pipistrellus pygmaeus</i>	5
21:04	<i>Pipistrellus pipistrellus</i>	54
21:05	<i>Pipistrellus pipistrellus</i>	45
21:05	<i>Pipistrellus pipistrellus</i>	42
21:05	<i>Pipistrellus pipistrellus</i>	37
21:05	<i>Pipistrellus pipistrellus</i>	14
21:05	<i>Pipistrellus pipistrellus</i>	36
21:06	<i>Pipistrellus pipistrellus</i>	49
21:06	<i>Pipistrellus pipistrellus</i>	3
21:06	<i>Pipistrellus pipistrellus</i>	56
21:06	<i>Pipistrellus pipistrellus</i>	48
21:07	<i>Pipistrellus pipistrellus</i>	20
21:07	<i>Pipistrellus pipistrellus</i>	5
21:10	<i>Pipistrellus pipistrellus</i>	43
21:10	<i>Pipistrellus pipistrellus</i>	27
21:10	<i>Pipistrellus pipistrellus</i>	43
21:10	<i>Pipistrellus pipistrellus</i>	46
21:11	<i>Pipistrellus pipistrellus</i>	31
21:11	<i>Pipistrellus pipistrellus</i>	34
21:11	<i>Pipistrellus pipistrellus</i>	40
21:11	<i>Pipistrellus pipistrellus</i>	39
21:11	<i>Pipistrellus pipistrellus</i>	1
21:12	<i>Pipistrellus pipistrellus</i>	42

21:12	<i>Pipistrellus pipistrellus</i>	32
21:12	<i>Pipistrellus pipistrellus</i>	28
21:12	<i>Pipistrellus pipistrellus</i>	45
21:13	<i>Pipistrellus pipistrellus</i>	41
21:13	<i>Pipistrellus pipistrellus</i>	42
21:13	<i>Pipistrellus pipistrellus</i>	25
21:13	<i>Pipistrellus pipistrellus</i>	38
21:13	<i>Pipistrellus pipistrellus</i>	34
21:14	<i>Pipistrellus pipistrellus</i>	34
21:14	<i>Pipistrellus pipistrellus</i>	30
21:14	<i>Pipistrellus pipistrellus</i>	4
21:14	<i>Pipistrellus pipistrellus</i>	31
21:14	<i>Pipistrellus pipistrellus</i>	31
21:15	<i>Pipistrellus pipistrellus</i>	1
21:15	<i>Pipistrellus pipistrellus</i>	40
21:15	<i>Pipistrellus pipistrellus</i>	46
21:15	<i>Pipistrellus pipistrellus</i>	32
21:15	<i>Pipistrellus pipistrellus</i>	34
21:16	<i>Pipistrellus pipistrellus</i>	36
21:16	<i>Pipistrellus pipistrellus</i>	29
21:16	<i>Pipistrellus pipistrellus</i>	25
21:16	<i>Pipistrellus pipistrellus</i>	15
21:16	<i>Pipistrellus pipistrellus</i>	6
21:17	<i>Pipistrellus pipistrellus</i>	16
21:17	<i>Pipistrellus pipistrellus</i>	1
21:17	<i>Pipistrellus pipistrellus</i>	14
21:17	<i>Pipistrellus pipistrellus</i>	4
21:17	<i>Pipistrellus pipistrellus</i>	23
21:17	<i>Pipistrellus pipistrellus</i>	37
21:18	<i>Pipistrellus pipistrellus</i>	61
21:18	<i>Pipistrellus pipistrellus</i>	30
21:18	<i>Pipistrellus pipistrellus</i>	39
21:18	<i>Pipistrellus pipistrellus</i>	38
21:18	<i>Pipistrellus pipistrellus</i>	34
21:19	<i>Pipistrellus pipistrellus</i>	16
21:19	<i>Pipistrellus pipistrellus</i>	27
21:19	<i>Pipistrellus pipistrellus</i>	54
21:19	<i>Pipistrellus pipistrellus</i>	55
21:19	<i>Pipistrellus pipistrellus</i>	54
21:20	<i>Pipistrellus pipistrellus</i>	43
21:20	<i>Pipistrellus pipistrellus</i>	39
21:20	<i>Pipistrellus pipistrellus</i>	18

21:20	<i>Pipistrellus pipistrellus</i>	21
21:20	<i>Pipistrellus pipistrellus</i>	13
21:20	<i>Pipistrellus pipistrellus</i>	62
21:20	<i>Pipistrellus pygmaeus</i>	8
21:21	<i>Pipistrellus pygmaeus</i>	55
21:21	<i>Pipistrellus pipistrellus</i>	5
21:21	<i>Pipistrellus pygmaeus</i>	5
21:21	<i>Pipistrellus pipistrellus</i>	32
21:21	<i>Pipistrellus pygmaeus</i>	1
21:22	<i>Pipistrellus pipistrellus</i>	16
21:22	<i>Pipistrellus pipistrellus</i>	29
21:22	<i>Pipistrellus pipistrellus</i>	35
21:22	<i>Pipistrellus pipistrellus</i>	14

21:23	<i>Pipistrellus pygmaeus</i>	8
21:23	<i>Pipistrellus pipistrellus</i>	13
21:27	<i>Pipistrellus pygmaeus</i>	14
21:38	<i>Plecotus auritus</i>	7
21:49	<i>Pipistrellus pygmaeus</i>	13
21:50	<i>Pipistrellus pygmaeus</i>	10
21:53	<i>Pipistrellus pygmaeus</i>	12
21:54	<i>Pipistrellus pygmaeus</i>	6
21:55	<i>Pipistrellus pygmaeus</i>	12
21:56	<i>Pipistrellus pygmaeus</i>	19
22:01	<i>Pipistrellus pygmaeus</i>	4
22:02	<i>Pipistrellus pygmaeus</i>	2
22:04	<i>Pipistrellus pipistrellus</i>	2

Surveyor Location 2 – EMT2 PRO

Time	Species
20:53	<i>Pipistrellus pipistrellus</i>
20:54	<i>Pipistrellus pipistrellus</i>
20:58	<i>Pipistrellus pipistrellus</i>
20:58	<i>Pipistrellus pipistrellus</i>
20:58	<i>Pipistrellus pipistrellus</i>
21:01	<i>Pipistrellus pipistrellus</i>
21:01	<i>Pipistrellus pygmaeus</i>
21:01	<i>Pipistrellus pipistrellus</i>
21:04	<i>Pipistrellus pipistrellus</i>
21:05	<i>Pipistrellus pipistrellus</i>
21:06	<i>Pipistrellus pipistrellus</i>
21:06	<i>Pipistrellus pipistrellus</i>
21:06	<i>Pipistrellus pipistrellus</i>
21:07	<i>Pipistrellus pipistrellus</i>
21:07	<i>Pipistrellus pipistrellus</i>
21:08	<i>Pipistrellus pygmaeus</i>
21:10	<i>Pipistrellus pipistrellus</i>
21:10	<i>Pipistrellus pipistrellus</i>
21:10	<i>Pipistrellus pipistrellus</i>
21:11	<i>Pipistrellus pipistrellus</i>
21:11	<i>Pipistrellus pipistrellus</i>
21:11	<i>Pipistrellus pipistrellus</i>
21:11	<i>Pipistrellus pipistrellus</i>
21:12	<i>Pipistrellus pipistrellus</i>
21:12	<i>Pipistrellus pipistrellus</i>
21:13	<i>Pipistrellus pipistrellus</i>
21:13	<i>Pipistrellus pipistrellus</i>
21:13	<i>Pipistrellus pipistrellus</i>

21:13	<i>Pipistrellus pipistrellus</i>
21:13	<i>Pipistrellus pipistrellus</i>
21:14	<i>Pipistrellus pipistrellus</i>
21:14	<i>Pipistrellus pygmaeus</i>
21:14	<i>Pipistrellus pipistrellus</i>
21:14	<i>Pipistrellus pipistrellus</i>
21:15	<i>Pipistrellus pipistrellus</i>
21:15	<i>Pipistrellus pipistrellus</i>
21:15	<i>Pipistrellus pipistrellus</i>
21:16	<i>Pipistrellus pygmaeus</i>
21:16	<i>Pipistrellus pygmaeus</i>
21:16	<i>Pipistrellus pygmaeus</i>
21:16	<i>Pipistrellus pipistrellus</i>
21:17	<i>Pipistrellus pygmaeus</i>
21:17	<i>Pipistrellus pipistrellus</i>
21:17	<i>Pipistrellus pipistrellus</i>
21:17	<i>Pipistrellus pygmaeus</i>
21:17	<i>Pipistrellus pipistrellus</i>
21:18	<i>Pipistrellus pipistrellus</i>
21:18	<i>Pipistrellus pipistrellus</i>
21:18	<i>Pipistrellus pipistrellus</i>
21:18	<i>Pipistrellus pipistrellus</i>
21:18	<i>Pipistrellus pipistrellus</i>
21:18	<i>Pipistrellus pipistrellus</i>
21:19	<i>Pipistrellus pygmaeus</i>
21:19	<i>Pipistrellus pipistrellus</i>
21:19	<i>Pipistrellus pipistrellus</i>
21:19	<i>Pipistrellus pipistrellus</i>
21:19	<i>Pipistrellus pipistrellus</i>

21:19	<i>Pipistrellus pipistrellus</i>
21:19	<i>Pipistrellus pipistrellus</i>
21:19	<i>Pipistrellus pipistrellus</i>
21:20	<i>Pipistrellus pipistrellus</i>
21:20	<i>Pipistrellus pipistrellus</i>
21:20	<i>Pipistrellus pipistrellus</i>
21:20	<i>Pipistrellus pygmaeus</i>
21:20	<i>Pipistrellus pipistrellus</i>
21:20	<i>Pipistrellus pipistrellus</i>
21:21	<i>Pipistrellus pipistrellus</i>
21:21	<i>Pipistrellus nathusii</i>
21:21	<i>Pipistrellus nathusii</i>
21:21	<i>Pipistrellus pipistrellus</i>
21:21	<i>Pipistrellus pipistrellus</i>
21:22	<i>Pipistrellus pipistrellus</i>
21:22	<i>Pipistrellus pipistrellus</i>
21:22	<i>Pipistrellus pipistrellus</i>
21:22	<i>Pipistrellus pipistrellus</i>
21:22	<i>Pipistrellus pipistrellus</i>
21:22	<i>Pipistrellus pipistrellus</i>
21:23	<i>Pipistrellus pipistrellus</i>
21:27	<i>Pipistrellus pygmaeus</i>
21:27	<i>Pipistrellus pygmaeus</i>
21:30	<i>Pipistrellus pygmaeus</i>
21:38	<i>Plecotus auritus</i>
21:42	<i>Pipistrellus pipistrellus</i>

21:43	<i>Pipistrellus pipistrellus</i>
21:43	<i>Pipistrellus pipistrellus</i>
21:49	<i>Pipistrellus pygmaeus</i>
21:50	<i>Pipistrellus pygmaeus</i>
21:50	<i>Pipistrellus pygmaeus</i>
21:50	<i>Pipistrellus pygmaeus</i>
21:51	<i>Pipistrellus pygmaeus</i>
21:51	<i>Pipistrellus pygmaeus</i>
21:53	<i>Pipistrellus pygmaeus</i>
21:54	<i>Pipistrellus pygmaeus</i>
21:54	<i>Pipistrellus pygmaeus</i>
21:54	<i>Pipistrellus pygmaeus</i>
21:55	<i>Pipistrellus pygmaeus</i>
21:56	<i>Pipistrellus pygmaeus</i>
21:56	<i>Pipistrellus pygmaeus</i>
21:56	<i>Pipistrellus pygmaeus</i>
22:00	<i>Pipistrellus pygmaeus</i>
22:02	<i>Pipistrellus pygmaeus</i>
22:03	<i>Pipistrellus pipistrellus</i>
22:04	<i>Pipistrellus pygmaeus</i>
22:04	<i>Pipistrellus pipistrellus</i>
22:04	<i>Pipistrellus pygmaeus</i>
22:04	<i>Pipistrellus pipistrellus</i>

Surveyor Location 3 – Batlogger M2

Time	Species	Number of Calls [#]
21:16	<i>Pipistrellus pygmaeus</i>	4
21:18	<i>Pipistrellus pygmaeus</i>	8
21:20	<i>Pipistrellus pygmaeus</i>	16
21:20	<i>Pipistrellus pipistrellus</i>	6
21:23	<i>Pipistrellus pygmaeus</i>	7
21:34	<i>Pipistrellus pipistrellus</i>	3
21:42	<i>Pipistrellus pipistrellus</i>	9
21:48	<i>Pipistrellus pygmaeus</i>	14
21:49	<i>Pipistrellus pipistrellus</i>	0
21:51	<i>Pipistrellus pygmaeus</i>	2
21:52	<i>Pipistrellus pygmaeus</i>	6
21:54	<i>Pipistrellus pygmaeus</i>	13
21:54	Social calls	2
21:54	<i>Pipistrellus pygmaeus</i>	15
22:03	<i>Pipistrellus pygmaeus</i>	4
22:03	<i>Pipistrellus pipistrellus</i>	9
22:03	<i>Pipistrellus pygmaeus</i>	4

28th May 2026

Surveyor Location 1 – Batlogger M2

Time	Species	Number of Calls [#]
21:26	<i>Pipistrellus pipistrellus</i>	5
21:21	<i>Pipistrellus pygmaeus</i>	7
21:31	<i>Myotis spec.</i>	4
21:33	<i>Nyctalus noctula</i>	16
21:36	<i>Pipistrellus pipistrellus</i>	12
21:38	<i>Nyctalus noctula</i>	3
21:40	<i>Pipistrellus pygmaeus</i>	14
21:40	<i>Pipistrellus pygmaeus</i>	13
21:41	<i>Pipistrellus pygmaeus</i>	10
21:42	<i>Pipistrellus pygmaeus</i>	9
21:43	<i>Pipistrellus pygmaeus</i>	19
21:43	<i>Pipistrellus pipistrellus</i>	14
21:46	<i>Myotis spec.</i>	9
21:46	<i>Pipistrellus pipistrellus</i>	7
21:49	<i>Pipistrellus pipistrellus</i>	9
21:50	<i>Pipistrellus pygmaeus</i>	13
21:50	<i>Pipistrellus pipistrellus</i>	8
21:51	<i>Pipistrellus pygmaeus</i>	17
21:52	<i>Pipistrellus pygmaeus</i>	9

21:58	<i>Pipistrellus pygmaeus</i>	13
21:58	<i>Pipistrellus pygmaeus</i>	33
22:00	<i>Pipistrellus pygmaeus</i>	4
22:00	Social Call	3
22:05	<i>Pipistrellus pygmaeus</i>	2
22:06	<i>Pipistrellus pygmaeus</i>	13
22:06	<i>Pipistrellus pygmaeus</i>	13
22:07	<i>Pipistrellus pipistrellus</i>	44
22:09	<i>Pipistrellus pygmaeus</i>	11
22:10	<i>Pipistrellus pygmaeus</i>	9
22:10	Social Call	1
22:10	<i>Pipistrellus pygmaeus</i>	7
22:10	<i>Pipistrellus pipistrellus</i>	18
22:19	<i>Pipistrellus pipistrellus</i>	20
22:20	<i>Pipistrellus pygmaeus</i>	15
22:21	<i>Pipistrellus pipistrellus</i>	6
22:23	<i>Pipistrellus pygmaeus</i>	11
22:23	<i>Pipistrellus pygmaeus</i>	13
22:25	<i>Pipistrellus pygmaeus</i>	2
22:33	<i>Pipistrellus pygmaeus</i>	14

Surveyor Location 2 – Batlogger M2

Time	Species	Number of Calls [#]
21:33	<i>Nyctalus noctula</i>	14
21:37	<i>Pipistrellus pygmaeus</i>	10
21:40	<i>Pipistrellus pygmaeus</i>	10
21:40	<i>Pipistrellus pygmaeus</i>	11
21:41	<i>Pipistrellus pygmaeus</i>	6
21:41	<i>Pipistrellus pygmaeus</i>	5
21:43	<i>Pipistrellus pygmaeus</i>	10
21:43	<i>Pipistrellus pipistrellus</i>	4
21:51	<i>Pipistrellus pygmaeus</i>	7
21:52	<i>Pipistrellus pygmaeus</i>	11
21:53	<i>Pipistrellus nathusii</i>	10
22:04	<i>Pipistrellus pygmaeus</i>	15
22:06	<i>Pipistrellus pygmaeus</i>	2
22:06	<i>Pipistrellus pygmaeus</i>	5
22:07	<i>Pipistrellus pygmaeus</i>	5
22:09	<i>Pipistrellus pygmaeus</i>	2

22:09	<i>Pipistrellus pygmaeus</i>	3
22:10	<i>Pipistrellus pygmaeus</i>	8
22:10	<i>Pipistrellus pipistrellus</i>	12
22:11	<i>Pipistrellus pygmaeus</i>	14
22:19	<i>Pipistrellus pygmaeus</i>	1
22:20	<i>Pipistrellus pygmaeus</i>	11
22:21	<i>Pipistrellus pipistrellus</i>	12
22:21	<i>Pipistrellus pipistrellus</i>	11
22:23	<i>Pipistrellus pygmaeus</i>	15
22:25	<i>Pipistrellus pygmaeus</i>	1
22:25	<i>Pipistrellus pipistrellus</i>	14
22:28	<i>Pipistrellus pipistrellus</i>	3
22:28	<i>Pipistrellus pipistrellus</i>	8
22:29	<i>Pipistrellus pygmaeus</i>	10
22:32	<i>Pipistrellus pipistrellus</i>	1
22:33	<i>Pipistrellus pipistrellus</i>	6
22:33	<i>Nyctalus noctula</i>	8
22:33	<i>Pipistrellus pygmaeus</i>	5

Surveyor Location 3 – Batlogger Elekon 2

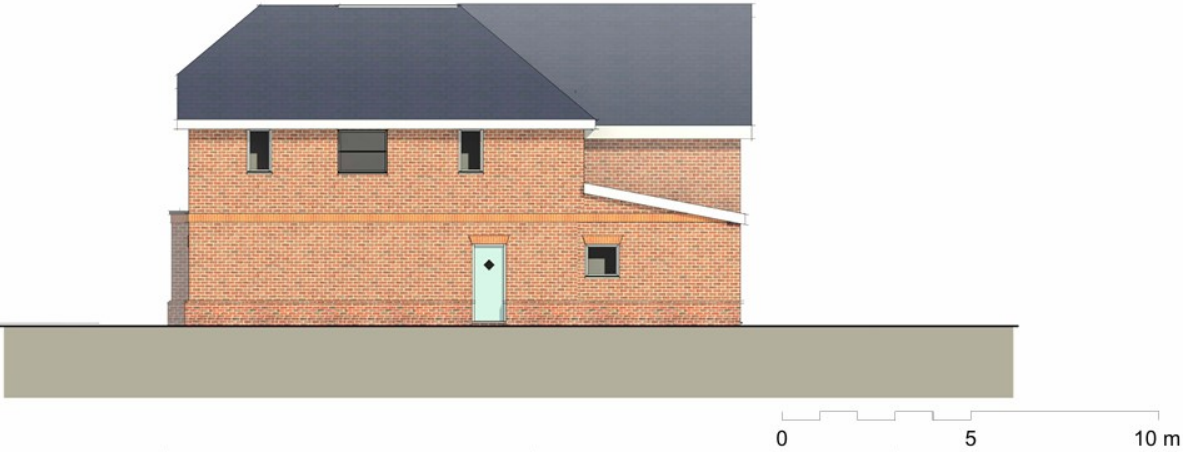
Time	Species Text	Number of Calls [#]
21:32	<i>Pipistrellus pygmaeus</i>	7
21:33	<i>Nyctalus noctula</i>	16
21:36	<i>Pipistrellus pipistrellus</i>	2
21:38	<i>Nyctalus noctula</i>	2
21:38	<i>Nyctalus noctula</i>	12
21:53	<i>Plecotus auritus</i>	3
22:07	<i>Pipistrellus pygmaeus</i>	8
22:15	<i>Pipistrellus pygmaeus</i>	14
22:19	<i>Pipistrellus pipistrellus</i>	22
22:19	<i>Pipistrellus pygmaeus</i>	29
22:28	<i>Pipistrellus pipistrellus</i>	25

APPENDIX 3 – PROPOSED ELEVATION PLANS

Front-East
1 : 100



Side-North
1 : 100



PROJECT		CLIENT		Proposed Elevations 1	
Montana Cottage, School Hill, Wargrave, Berkshire , RG108DY,		Vitor Monteiro			
REV	Date	Job Code:	Scale (if A3)	PL-04	
	02-2026	vsw-0525	1 : 100		

Rear-West
1 : 100



Side-South
1 : 100



PROJECT		CLIENT		Proposed Elevations 2
Montana Cottage, School Hill, Wargrave, Berkshire , RG108DY,		Vitor Monteiro		
REV	Date	Job Code:	Scale (if A3)	PL-05
	05-2025	vsw-0525	1 : 100	

APPENDIX 4 – PROPOSED BAT MITIGATION



■ Integrated Vivara Pro UK Build-in WoodStone® Bat Box (or suitable alternative) installed to match common pipistrelle emergence locations

Amended by:	Date	Scale:	Montana Cottage, School Hill Wargrave	
MP	June 2026	Not to scale	Proposed Bat Mitigation	