

Faringdon
Tintagel Road
Wokingham
Berkshire
RG40 3JJ

Bat Emergence Survey

Report ref.: R2966_BES_a

Report Quality Control Information	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by Ms Shirleen Smallbone to undertake a Bat Emergence Survey (BES) of the bungalow Faringdon, Tintagel Road in Finchampstead, Berkshire. The survey was commissioned to accompany a planning application to be submitted to Wokingham Borough Council seeking consent for raising the roof, part double-storey and part single storey rear and side extensions and double storey front extension.
- 1.1.2** The survey follows a Bat Scoping Survey completed by Crossman Associates in April 2025 (Report reference: S1223.001). The preliminary survey found approximately 50 medium-sized bat droppings - resembling those typically deposited by a long-eared species (*Plecotus* spp.) - throughout the roof void, with an associated access point below the uPVC barge board on the rear elevation. The report recommended further survey work comprising two emergence surveys in accordance with the Good Practice Guidelines (Collins 2023).
- 1.1.3** Evening emergence surveys were carried out on the 29th July and 20th August 2025. No bats were observed emerging from the property during the surveys. A brown long-eared bat (*Plecotus auritus*) was seen and recorded passing along the western elevation close to the property during the first emergence survey, within the typical emergence window for the species. The viewpoint of the western gable was obscured because of the plot orientation and therefore the emergence of the bat from the property cannot be ruled out. Based on the evidence within the roof void, the property is likely to have been used occasionally as a day and/or transitional roost in the past and would likely continue to be used in the future.
- 1.1.4** The survey data demonstrates that the proposals will result in the disturbance and permanent loss of a brown long eared (*P. auritus*) transitional and/or day roost – a roost of low conservation significance.
- 1.1.5** 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**.

2 INTRODUCTION

2.1 Project Background

- 2.1.1** John Wenman Ecological Consultancy LLP was commissioned by Ms Shirleen Smallbone to undertake a Bat Emergence Survey (BES) of the bungalow Faringdon, Tintagel Road in Finchampstead, Berkshire.
- 2.1.2** The survey was commissioned to accompany a planning application to be submitted to Wokingham Borough Council seeking consent for raising the roof, part double-storey and part single storey rear and side extensions and double storey front extension (refer to proposed plans in **Appendix 3**).
- 2.1.3** The BES follows a Bat Scoping Survey completed by Crossman Associates in April 2025 (Report reference: S1223.001). The PRA report states the following:
- 2.1.4** *'The property has a spacious roof void and during the survey was found to have bat droppings attributable to long-eared bat, confirming an active roost of at least one bat species. The quantity of bat maintained. droppings is typical of a non-breeding day roost. The roof provides features suitable for roosting bats and include lifted roof and ridge wall tiles gaps. The property is a confirmed roost'*
- 2.1.5** The PRA report recommends the following:
- 'To fully characterise the type of roost, quantity and species of bat, pattern and usage of the loft and access points, further surveys will be necessary. At least two activity surveys will be undertaken. If bats are found and any discrepancies between the two surveys, may require a third survey to fully characterise the roost. Surveys are undertaken during the main bat activity period (May – September) with at least two of these surveys carried out between May – August and spread at least three weeks apart.'*

2.2 Site Location and Context

- 2.2.1** Faringdon – comprising a detached bungalow – is situated on the southern side of Tintagel Road in Wokingham, Berkshire approximately 2.75km to the south of Wokingham Town Centre (OS grid reference: SU 80486 65704).
- 2.2.2** The Bat Scoping Survey by Crossman Associates describes the site location as follows:
- 'The site comprises a detached bungalow which is in a residential area in Finchampstead, Wokingham, Berkshire. The property has a maintained garden. The*

property is adjoined on all sides by similar properties with maintained gardens. The environs are predominately residential/rural with a mix of medium/large properties. The wider landscape includes farmlands and woodlands.'

- 2.2.3** Deciduous woodland is present along the rear boundary of the site, which is extensive and connects to further woodland to the south. Sand Martins Golf Club is present approximately 590m to the north-west of the site, with open grassland, woodland parcels and ponds present around the course. There is Queens Mere lake approximately 840m to the east of the site, surrounded by deciduous and broadleaved woodland.

2.3 Report Objectives

- 2.3.1** The aim of the bat emergence survey 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 Pipistrellus social call 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** MAGIC was examined to locate granted European Protected Species licences within a 2km radius.

4.2 Emergence Survey

- 4.2.1** In line with Good Practice Guidelines (Collins 2023), two dusk emergence survey visits each separated by three weeks were undertaken on the property on the 29th July and 20th August 2025, and each survey was carried out by two experienced bat surveyors; Meghan Porter-Smith (CL17: 2023-11300-CL17-BAT), Jake Morgan (qualifying member of CIEEM) and Alex Porter-Smith. The two surveyors covered all aspects of the house during the surveys – refer to the locations in the emergence survey plans in **Section 5** below.
- 4.2.2** The equipment used during the surveys included full-spectrum sampling bat detectors (Batlogger Elekon M2/M) and infrared/thermal imaging night vision aids (Nightfox Whisker binoculars, Pixfra A316 and Sionyx Pro with infrared floodlights/torches). A still shot of the darkest point/viewpoint of the surveys has been included for all night vision aids used 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 computer software package. 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 the surveys were carried out 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 background data search are detailed below. The bat emergence survey findings for the property are summarised in **Section 5.3**, detailed within **Tables 1-4**, and illustrated in **Figure 1** below; the raw detector data is supplied in **Appendix 2**.

5.2 Background Data Search

5.2.1 A search on MAGIC for Granted EPS Licences within the last 10 years and within 2km of the site returned four licences for two species: common pipistrelle (*Pipistrellus pipistrellus*) and brown long-eared (*Plecotus auritus*) roosts. The closest licence to the site was granted for the destruction of a resting place used by brown long-eared bats, approximately 880m to south-west of the site (Reference number: 2014-4890-EPS-MIT-2, Licensable period: 04/07/2015-31/12/2015). The next closest licence was granted for the destruction of a common pipistrelle resting place approximately 1km to the east of the site (Reference number: 2015-9568-EPS-MIT-1, Licensable period: 07/10/2016-01/04/2020).

5.2.2 JWEC hold records from previous surveys conducted in the local area of common pipistrelle (*P. pipistrellus*), soprano pipistrelle (*P. pygmaeus*), serotine (*E. serotinus*), noctule (*N. noctula*) and brown long-eared (*P. auritus*), detected using aural detectors during evening emergence surveys within a 1km radius and roosts for common pipistrelle and brown long-eared bats at properties within a 500m radius of the site.

5.3 Emergence Survey

29th July 2025

5.3.1 No bats were recorded emerging from the property during the emergence survey.

Table 1. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (oktas)	Rain	Temperature (°C)	
	1	8/8	None	Start	Finish
Start	20:40	Sunset	20:55	Finish	22:25

Table 2a. Surveyor recordings at location 1

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Soprano pipistrelle	2	0	20:49 (-6)
Common pipistrelle	41	0	20:49 (-6)
Noctule	2	0	21:24 (29)
Serotine	1	0	22:01 (66)

Table 2b. Surveyor recordings at location 2

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	92	0	20:52 (-3)
Soprano pipistrelle	2	0	20:52 (-3)
Noctule	9	0	21:24 (29)
Brown long-eared	5	0	21:40 (45)

*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 bats recorded during the survey was a soprano pipistrelle (*P. pygmaeus*) and then closely followed by a common pipistrelle (*P. pipistrellus*) both recorded at 20:49 (6 minutes before sunset), passing unseen at Surveyor Location 1. Common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) bats were both recorded emerging from beneath hanging tiles on the rear elevation of the neighbouring house to the west of the property at 20:52 (3 minutes before sunset) at Surveyor Location 2, and commuting to the woodland to the south.

5.3.3 A brown long-eared (*P. auritus*) bat pass was recorded and observed passing the western side of the property at Surveyor Location 2 at 21:40 (45 minutes after sunset), which is within the typical emergence time for the species; indicating the bat is likely roosting nearby. Several brown long-eared passes were recorded between 21:49 and 21:52. Noctule (*N. noctula*) bat were first recorded passing unseen at 21:24 at both Surveyor Locations, which is outside of the typical emergence time for the species. There were frequent common pipistrelle (*P. pipistrellus*) foraging passes observed over the rear garden at Surveyor Location 2 and occasional unseen passes recorded at Surveyor Location 1, presumed to be commuting bats along the lane to the north of the property.

20th August 2025

5.3.4 No bats were recorded emerging from the property during the survey.

Table 3. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (oktas)	Rain	Temperature (°C)	
	2	4/8	Dry	Start	Finish
Start	19:59	Sunset	20:14	Finish	21:44

Table 4a. Surveyor recordings at location 1

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	31	0	20:31 (17)
Soprano pipistrelle	2	0	20:53 (39)

Table 4b. Surveyor recordings at location 2

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle	137	0	20:27 (13)

Soprano pipistrelle	2	0	20:35 (21)
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*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 common pipistrelle (*P. pipistrellus*) at 20:27 (13 minutes after sunset), which was recorded passing unseen at Surveyor Location 2. Common pipistrelle bats were then observed emerging from under hanging tiles on the dormer windows to the rear of the neighbouring property to the west of the site at 20:30, 20:32 and 20:33, and therefore it was presumed the first unseen bat also emerged from the neighbouring property. Soprano pipistrelle (*P. pygmaeus*) were first recorded at 20:35, 21 minutes after sunset, at Surveyor Location 2, which is within the typical emergence time for the species, and therefore assumed to have likely emerged from a roost nearby. Common pipistrelle foraging passes were observed around the rear of the site until the end of the survey, with intermittent passes recorded to the front of the site.

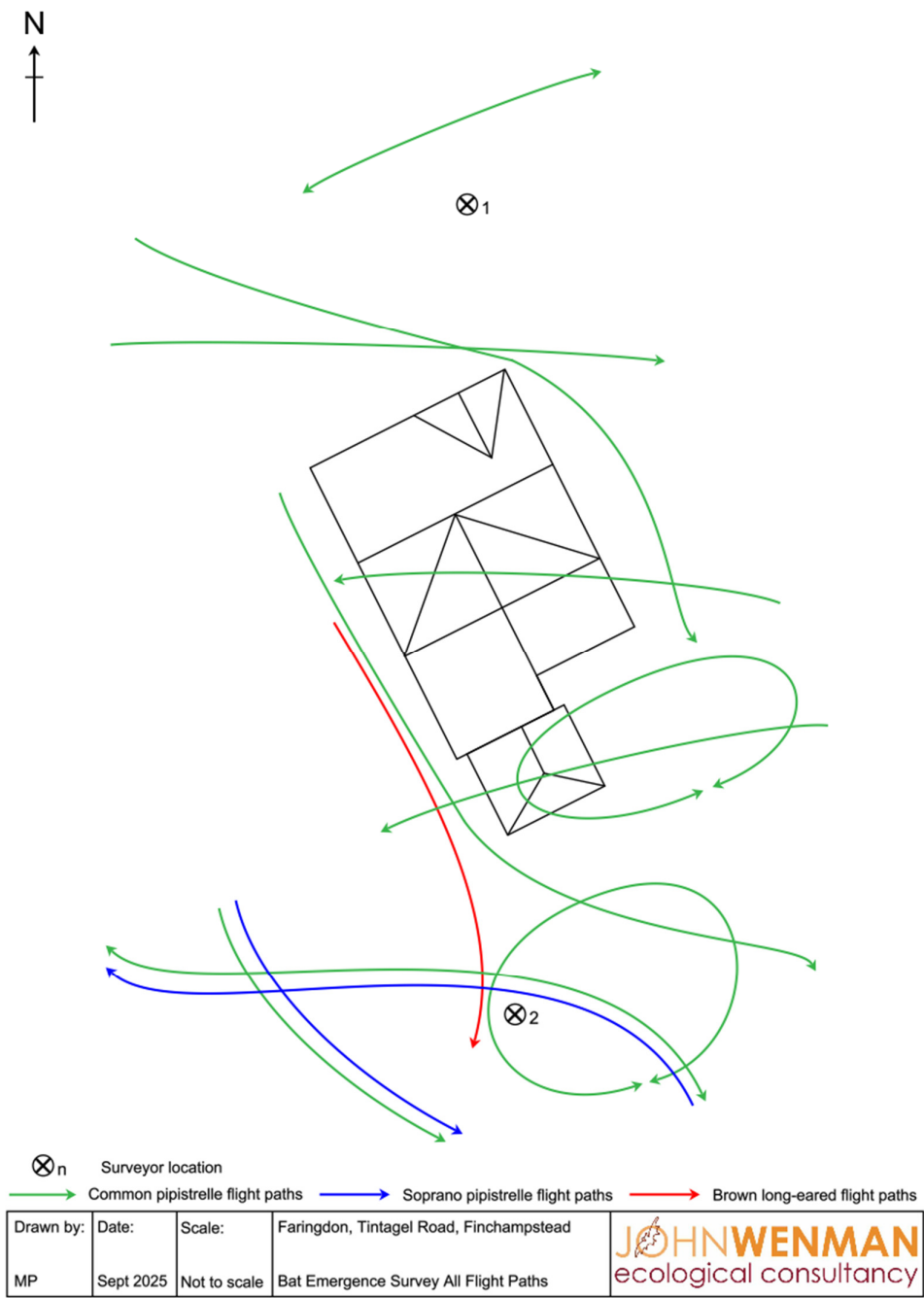


Figure 1. Bat Emergence Survey – All Recorded Bat Flight Paths

6 DISCUSSION AND RECOMMENDATIONS

6.1 Assessment of Bat Roost Status

6.1.1 During the survey, no bats were observed emerging from the property; however a brown long-eared (*Plecotus auritus*) bat was recorded and observed passing the western side of the property around the typical emergence time for the species, which suggests that the bat emerged from a roost nearby. The viewpoint of the western gable was obscured because of the plot orientation and proximity of the neighbouring property and therefore the emergence of the bat from the property cannot be ruled out. The number of droppings observed during the PRA suggests that the property has been used previously by individual or small numbers of long eared bats (*Plecotus* sp.).

6.1.2 The survey findings indicate that the property is likely to be used occasionally as a day and/or transitional roost by brown long-eared bats (*Plecotus auritus*) (to be confirmed by DNA analysis); brown long-eared bats can utilise a number of day and transitional roosts within their territory. Brown long-eared bats are widespread and commonly occurring throughout the UK and frequently found in residential dwellings (Matthews *et al.* 2018). Day roosts used by brown long-eared (*P. auritus*) bats are considered to be of low conservation significance (Mitchell-Jones 2004).

6.2 Impact of Proposals and Recommendations

6.2.1 The survey data demonstrates that the proposed extensions as detailed in **Appendix 3**, will result in the permanent destruction of a brown long-eared (*P. auritus*) day roost within the void of the property. Furthermore, in the absence of mitigation, the works could lead to the disturbance and/or injury of bats if present at the time of construction.

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

7 MITIGATION AND COMPENSATION PROPOSALS

- 7.1.1** Before the licensable work commences i.e. removal of roof coverings and barge board associated with potential roost access point, 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** 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 roost within the property, 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.
- 7.1.3** The soft strip will be undertaken outside of the winter hibernation season (mid-November to February) to minimise the risk of disturbing torpid bats. A woodcrete bat box will be fixed to a suitable mature tree or purpose-built pole on site 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). A pre-works loft check will be carried out by the licensed ecologist or 'Registered Consultant' prior to the works impacting the roof void commencing. If bat(s) are discovered within the void, the licensed ecologist or Registered Consultant would capture the bat(s) and transfer it/them directly to the bat box erected in advance of the works.
- 7.1.4** The barge board, roof tiles and ridge tiles at the rear elevation of the property will be carefully removed by gloved hands under the supervision of a licensed ecologist, or Registered Consultant if working under the BMCL until the void is deemed open and unsuitable for roosting bats. If a bat is found during work to the remainder of the work when the ecologist is not present, work will stop immediately, and a licensed ecologist will be called back to site to provide further advice.
- 7.1.5** A dedicated bat loft will be created within the pitched extension on the rear elevation of the house, with a bat access ridge tile installed to create access for void-dwelling bats (see **Figure 2** below). The floor should be boarded and the roof will be lined with a bitumen and hessian (Type 1F) felt with a corresponding gap in the felt created by the bat access tile. The void will not be used for storage and access should be avoided or kept to a minimum, so to avoid disturbing any roosting bats.

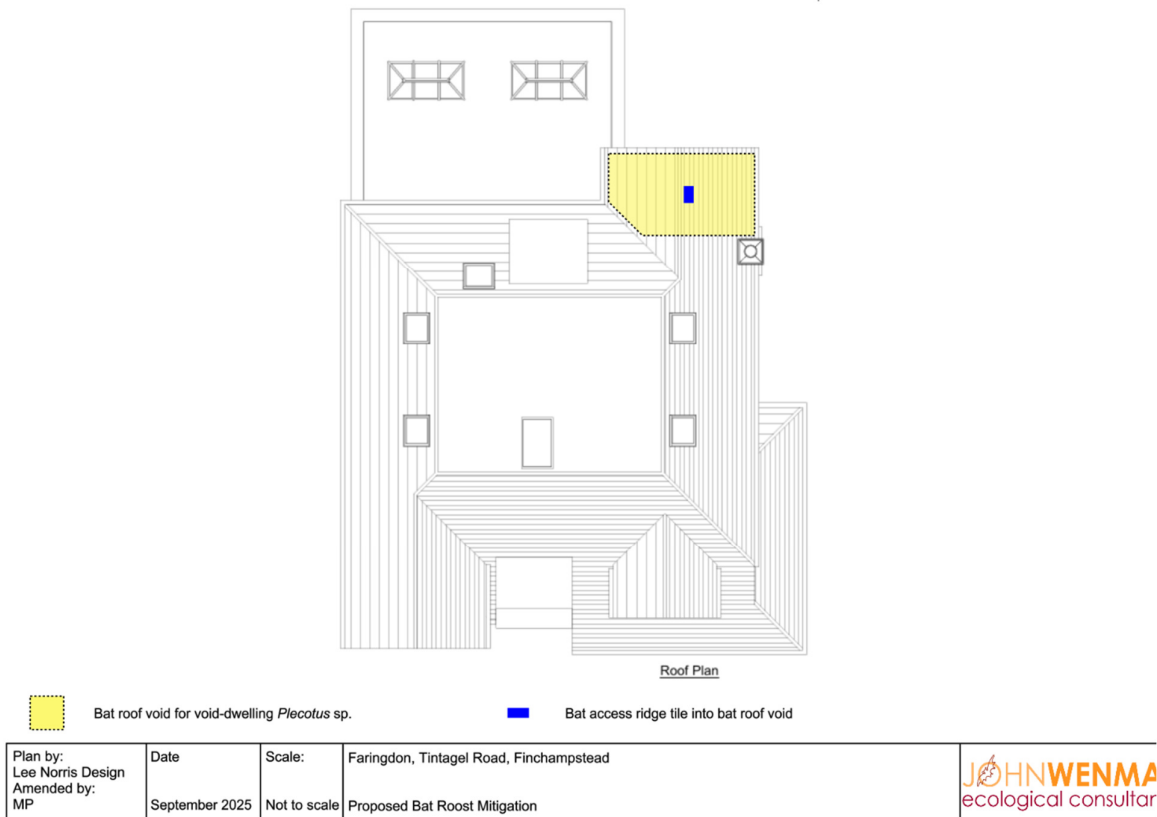


Figure 2. Proposed Bat Roost Mitigation

- 7.1.6** The entire new roof will also be lined with 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.
- 7.1.7** As there were high level of pipistrelle bat activity recorded throughout both surveys, there are opportunities for further bat roost enhancements within the site, for example installing an integral bat tube or external bat box (Schwegler 1FR bat tube or equivalent) on the new rear gable of the building.

8 REFERENCES

CIEEM (2019b). *Advice Note on the Lifespan of Ecological Reports and Surveys*. CIEEM, Winchester.

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Mitchell-Jones, A. J. & McLeish, A. P. (2004). *Bat Workers' Manual (3rd edition)*. JNCC, Peterborough.

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APPENDIX 1 – DARKEST POINT OF SURVEY FOR NIGHT VISION AIDS

29th July 2025



Nightfox Whisker at Surveyor Location 1.



Nightfox Whisker at Surveyor Location 2.

20th August 2025



Sionyx Aurora Pro at Surveyor Location 1



Pixfra A613 at Surveyor Location 2.

APPENDIX 2 – BAT EMERGENCE SURVEY RAW DATA TABLES

29th July 2025

Surveyor location 1 – Batlogger M2

Time	Species	Calls* [#]
20:49:18	<i>Pipistrellus pygmaeus</i>	3
20:49:56	<i>Pipistrellus pipistrellus</i>	6
21:01:30	<i>Pipistrellus pipistrellus</i>	5
21:03:02	<i>Pipistrellus pipistrellus</i>	10
21:03:38	<i>Pipistrellus pipistrellus</i>	11
21:16:17	<i>Pipistrellus pipistrellus</i>	2
21:16:56	<i>Pipistrellus pipistrellus</i>	8
21:20:24	<i>Pipistrellus pipistrellus</i>	10
21:22:06	<i>Pipistrellus pipistrellus</i>	10
21:23:17	<i>Pipistrellus pipistrellus</i>	14
21:23:54	<i>Pipistrellus pipistrellus</i>	7
21:24:44	<i>Pipistrellus pipistrellus</i>	15
21:24:50	<i>Nyctalus noctula</i>	4
21:26:10	<i>Pipistrellus pipistrellus</i>	6
21:26:13	<i>Pipistrellus pipistrellus</i>	13
21:26:30	<i>Pipistrellus pipistrellus</i>	11
21:27:07	<i>Pipistrellus pipistrellus</i>	6
21:27:27	<i>Pipistrellus pipistrellus</i>	15
21:27:41	<i>Pipistrellus pipistrellus</i>	21
21:28:13	<i>Pipistrellus pipistrellus</i>	5
21:29:11	<i>Pipistrellus pipistrellus</i>	10
21:29:43	<i>Pipistrellus pipistrellus</i>	6
21:35:05	<i>Pipistrellus pipistrellus</i>	11

21:35:14	<i>Pipistrellus pipistrellus</i>	7
21:39:16	<i>Pipistrellus pipistrellus</i>	26
21:39:38	<i>Pipistrellus pipistrellus</i>	9
21:40:03	<i>Pipistrellus pipistrellus</i>	3
21:41:04	<i>Pipistrellus pipistrellus</i>	22
21:43:40	<i>Pipistrellus pipistrellus</i>	11
21:44:04	<i>Pipistrellus pipistrellus</i>	5
21:45:23	<i>Pipistrellus pipistrellus</i>	11
21:46:09	<i>Pipistrellus pipistrellus</i>	13
21:49:44	<i>Pipistrellus pipistrellus</i>	18
21:54:59	<i>Pipistrellus pygmaeus</i>	7
22:00:32	<i>Pipistrellus pipistrellus</i>	14
22:01:22	<i>Eptesicus serotinus</i>	10
22:07:15	<i>Pipistrellus pipistrellus</i>	3
22:09:47	<i>Pipistrellus pipistrellus</i>	3
22:09:50	<i>Pipistrellus pipistrellus</i>	0 [^]
22:10:08	<i>Pipistrellus pipistrellus</i>	0 [^]
22:18:14	<i>Pipistrellus pipistrellus</i>	12
22:18:57	<i>Pipistrellus pipistrellus</i>	2
22:20:19	<i>Pipistrellus pipistrellus</i>	8
22:21:40	<i>Pipistrellus pipistrellus</i>	5
22:24:44	<i>Nyctalus noctula</i>	3
22:25:26	<i>Pipistrellus pipistrellus</i>	13

*NB. The number of calls per recording that are calculated by the BatExplorer Software during analysis of the data.

[^]NB. 0 calls were registered by BatExplorer Software but calls were confirmed by manual ID during analysis of data.

Surveyor location 2 – Batlogger Elekon M

Time	Species	Calls* [#]
20:52:34	<i>Pipistrellus pipistrellus</i>	3
20:52:41	<i>Pipistrellus pygmaeus</i>	4
20:57:45	<i>Pipistrellus pipistrellus</i>	19
21:00:06	<i>Pipistrellus pygmaeus</i>	6
21:00:29	<i>Pipistrellus pipistrellus</i>	4
21:04:36	<i>Pipistrellus pipistrellus</i>	1
21:06:20	<i>Pipistrellus pipistrellus</i>	14
21:11:48	<i>Pipistrellus pipistrellus</i>	11
21:14:22	<i>Pipistrellus pipistrellus</i>	15
21:15:49	<i>Pipistrellus pipistrellus</i>	30
21:16:08	<i>Pipistrellus pipistrellus</i>	2
21:17:17	<i>Pipistrellus pipistrellus</i>	5
21:18:53	<i>Pipistrellus pipistrellus</i>	3
21:18:56	<i>Pipistrellus pipistrellus</i>	13
21:19:56	<i>Pipistrellus pipistrellus</i>	15

21:20:25	<i>Pipistrellus pipistrellus</i>	3
21:20:53	<i>Pipistrellus pipistrellus</i>	17
21:21:06	<i>Pipistrellus pipistrellus</i>	20
21:21:53	<i>Pipistrellus pipistrellus</i>	16
21:22:04	<i>Pipistrellus pipistrellus</i>	2
21:22:27	<i>Pipistrellus pipistrellus</i>	19
21:23:03	<i>Pipistrellus pipistrellus</i>	9
21:23:05	<i>Pipistrellus pipistrellus</i>	15
21:23:31	<i>Pipistrellus pipistrellus</i>	4
21:23:33	<i>Pipistrellus pipistrellus</i>	13
21:23:40	<i>Pipistrellus pipistrellus</i>	15
21:23:47	<i>Pipistrellus pipistrellus</i>	1
21:23:52	<i>Pipistrellus pipistrellus</i>	3
21:24:20	<i>Nyctalus noctula</i>	1
21:24:34	<i>Pipistrellus pipistrellus</i>	7

21:24:34	<i>Nyctalus noctula</i>	7
21:24:37	<i>Pipistrellus pipistrellus</i>	2
21:24:48	<i>Nyctalus noctula</i>	7
21:24:48	<i>Nyctalus noctula</i>	7
21:24:52	<i>Nyctalus noctula</i>	4
21:24:57	<i>Nyctalus noctula</i>	19
21:24:57	<i>Pipistrellus pipistrellus</i>	19
21:25:33	<i>Pipistrellus pipistrellus</i>	5
21:25:35	<i>Pipistrellus pipistrellus</i>	21
21:25:50	<i>Pipistrellus pipistrellus</i>	13
21:25:58	<i>Pipistrellus pipistrellus</i>	14
21:26:26	<i>Pipistrellus pipistrellus</i>	1
21:26:34	<i>Pipistrellus pipistrellus</i>	1
21:27:13	<i>Pipistrellus pipistrellus</i>	35
21:27:22	<i>Pipistrellus pipistrellus</i>	6
21:27:50	<i>Pipistrellus pipistrellus</i>	27
21:28:00	<i>Pipistrellus pipistrellus</i>	16
21:28:08	<i>Pipistrellus pipistrellus</i>	0 [^]
21:28:12	<i>Pipistrellus pipistrellus</i>	0 [^]
21:28:20	<i>Pipistrellus pipistrellus</i>	17
21:29:02	<i>Pipistrellus pipistrellus</i>	44
21:29:41	<i>Pipistrellus pipistrellus</i>	1
21:30:01	<i>Pipistrellus pipistrellus</i>	16
21:30:44	<i>Pipistrellus pipistrellus</i>	12
21:30:54	<i>Pipistrellus pipistrellus</i>	29
21:31:19	<i>Pipistrellus pipistrellus</i>	15
21:31:22	<i>Pipistrellus pipistrellus</i>	7
21:35:15	<i>Pipistrellus pipistrellus</i>	18
21:35:30	<i>Pipistrellus pipistrellus</i>	7
21:39:22	<i>Pipistrellus pipistrellus</i>	10
21:39:25	<i>Pipistrellus pipistrellus</i>	49
21:39:40	<i>Pipistrellus pipistrellus</i>	3
21:39:44	<i>Pipistrellus pipistrellus</i>	6
21:39:47	<i>Pipistrellus pipistrellus</i>	2
21:39:51	<i>Pipistrellus pipistrellus</i>	29
21:40:44	<i>Plecotus auritus</i>	9
21:42:16	<i>Pipistrellus pipistrellus</i>	18
21:42:37	<i>Pipistrellus pipistrellus</i>	12
21:44:08	<i>Pipistrellus pipistrellus</i>	11
21:45:29	<i>Pipistrellus pipistrellus</i>	16

21:45:34	<i>Pipistrellus pipistrellus</i>	12
21:45:38	<i>Pipistrellus pipistrellus</i>	22
21:45:57	<i>Pipistrellus pipistrellus</i>	18
21:46:16	<i>Pipistrellus pipistrellus</i>	1
21:46:18	<i>Pipistrellus pipistrellus</i>	1
21:49:25	<i>Plecotus auritus</i>	1
21:49:28	<i>Plecotus auritus</i>	13
21:49:32	<i>Plecotus auritus</i>	12
21:49:38	<i>Nyctalus noctula</i>	2
21:49:40	<i>Nyctalus noctula</i>	2
21:49:51	<i>Nyctalus noctula</i>	4
21:51:49	<i>Pipistrellus pipistrellus</i>	13
21:52:04	<i>Plecotus auritus</i>	13
21:59:09	<i>Pipistrellus pipistrellus</i>	8
22:00:35	<i>Pipistrellus pipistrellus</i>	15
22:07:14	<i>Pipistrellus pipistrellus</i>	3
22:09:05	<i>Pipistrellus pipistrellus</i>	21
22:10:02	<i>Pipistrellus pipistrellus</i>	28
22:10:02	<i>Pipistrellus pipistrellus</i>	28
22:10:02	<i>Pipistrellus pipistrellus</i>	28
22:10:54	<i>Pipistrellus pipistrellus</i>	3
22:11:27	<i>Pipistrellus pipistrellus</i>	19
22:12:04	<i>Pipistrellus pipistrellus</i>	1
22:12:07	<i>Pipistrellus pipistrellus</i>	12
22:13:17	<i>Pipistrellus pipistrellus</i>	7
22:14:25	<i>Pipistrellus pipistrellus</i>	7
22:14:32	<i>Pipistrellus pipistrellus</i>	1
22:17:24	<i>Pipistrellus pipistrellus</i>	13
22:18:00	<i>Pipistrellus pipistrellus</i>	22
22:19:03	<i>Pipistrellus pipistrellus</i>	4
22:20:00	<i>Pipistrellus pipistrellus</i>	20
22:20:22	<i>Pipistrellus pipistrellus</i>	2
22:20:26	<i>Pipistrellus pipistrellus</i>	4
22:20:37	<i>Pipistrellus pipistrellus</i>	36
22:21:49	<i>Pipistrellus pipistrellus</i>	20
22:22:54	<i>Pipistrellus pipistrellus</i>	0 [^]
22:24:40	<i>Nyctalus noctula</i>	13
22:25:24	<i>Pipistrellus pipistrellus</i>	5
22:25:32	<i>Pipistrellus pipistrellus</i>	8

*NB. The number of calls per recording that are calculated by the BatExplorer Software during analysis of the data.

[^]NB. 0 calls were registered by BatExplorer Software but calls were confirmed by manual ID during analysis of data.

20th August 2025

Surveyor location 1 – Batlogger M2

Time	Species	Calls* [#]
20:31:07	<i>Pipistrellus pipistrellus</i>	14
20:31:29	<i>Pipistrellus pipistrellus</i>	10
20:34:08	<i>Pipistrellus pipistrellus</i>	2
20:35:32	<i>Pipistrellus pipistrellus</i>	6
20:35:48	<i>Pipistrellus pipistrellus</i>	4
20:35:51	<i>Pipistrellus pipistrellus</i>	8
20:36:06	<i>Pipistrellus pipistrellus</i>	3
20:36:31	<i>Pipistrellus pipistrellus</i>	9
20:36:33	<i>Pipistrellus pipistrellus</i>	2
20:40:48	<i>Pipistrellus pipistrellus</i>	5
20:49:19	<i>Pipistrellus pipistrellus</i>	0 [^]
20:53:28	<i>Pipistrellus pygmaeus</i>	1
20:55:18	<i>Pipistrellus pygmaeus</i>	2
20:57:40	<i>Pipistrellus pipistrellus</i>	2
20:59:54	<i>Pipistrellus pipistrellus</i>	2
21:00:14	<i>Pipistrellus pipistrellus</i>	1

21:01:50	<i>Pipistrellus pipistrellus</i>	6
21:01:55	<i>Pipistrellus pipistrellus</i>	2
21:02:37	<i>Pipistrellus pipistrellus</i>	15
21:13:28	<i>Pipistrellus pipistrellus</i>	15
21:17:05	<i>Pipistrellus pipistrellus</i>	6
21:21:58	<i>Pipistrellus pipistrellus</i>	14
21:23:17	<i>Pipistrellus pipistrellus</i>	6
21:24:39	<i>Pipistrellus pipistrellus</i>	3
21:25:05	<i>Pipistrellus pipistrellus</i>	6
21:27:14	<i>Pipistrellus pipistrellus</i>	1
21:28:58	<i>Pipistrellus pipistrellus</i>	6
21:29:40	<i>Pipistrellus pipistrellus</i>	1
21:31:14	<i>Pipistrellus pipistrellus</i>	1
21:36:18	<i>Pipistrellus pipistrellus</i>	3
21:37:48	<i>Pipistrellus pipistrellus</i>	1
21:40:50	<i>Pipistrellus pipistrellus</i>	1
21:43:52	<i>Pipistrellus pipistrellus</i>	9

*NB. The number of calls per recording that are calculated by the BatExplorer Software during analysis of the data.

[^]NB. 0 calls were registered by BatExplorer Software but calls were confirmed by manual ID during analysis of data.

Surveyor location 2 – Batlogger M2

Time	Species	Calls* [#]
21:19:27	<i>Pipistrellus pipistrellus</i>	3
20:27:49	<i>Pipistrellus pipistrellus</i>	1
20:30:25	<i>Pipistrellus pipistrellus</i>	13
20:32:46	<i>Pipistrellus pipistrellus</i>	15
20:33:56	<i>Pipistrellus pipistrellus</i>	9
20:34:10	<i>Pipistrellus pipistrellus</i>	10
20:34:37	<i>Pipistrellus pipistrellus</i>	4
20:35:20	<i>Pipistrellus pipistrellus</i>	5
20:35:34	<i>Pipistrellus pygmaeus</i>	9
20:41:23	<i>Pipistrellus pipistrellus</i>	5
20:42:55	<i>Pipistrellus pipistrellus</i>	10
20:44:41	<i>Pipistrellus pipistrellus</i>	1
20:45:15	<i>Pipistrellus pipistrellus</i>	9
20:45:18	<i>Pipistrellus pipistrellus</i>	5
20:45:21	<i>Pipistrellus pipistrellus</i>	0 [^]
20:46:47	<i>Pipistrellus pipistrellus</i>	14
20:48:36	<i>Pipistrellus pipistrellus</i>	21
20:49:28	<i>Pipistrellus pipistrellus</i>	8
20:53:55	<i>Pipistrellus pipistrellus</i>	7
20:55:04	<i>Pipistrellus pipistrellus</i>	6
20:55:17	<i>Pipistrellus pygmaeus</i>	18
20:55:17	<i>Pipistrellus pipistrellus</i>	18
20:56:05	<i>Pipistrellus pipistrellus</i>	25

20:56:57	<i>Pipistrellus pipistrellus</i>	10
20:57:51	<i>Pipistrellus pipistrellus</i>	10
20:58:09	<i>Pipistrellus pipistrellus</i>	4
20:58:31	<i>Pipistrellus pipistrellus</i>	5
20:59:20	<i>Pipistrellus pipistrellus</i>	15
20:59:50	<i>Pipistrellus pipistrellus</i>	7
20:59:59	<i>Pipistrellus pipistrellus</i>	7
21:01:03	<i>Pipistrellus pipistrellus</i>	4
21:01:33	<i>Pipistrellus pipistrellus</i>	8
21:02:02	<i>Pipistrellus pipistrellus</i>	10
21:02:18	<i>Pipistrellus pipistrellus</i>	8
21:03:11	<i>Pipistrellus pipistrellus</i>	8
21:03:26	<i>Pipistrellus pipistrellus</i>	10
21:03:44	<i>Pipistrellus pipistrellus</i>	11
21:04:01	<i>Pipistrellus pipistrellus</i>	11
21:04:15	<i>Pipistrellus pipistrellus</i>	13
21:04:27	<i>Pipistrellus pipistrellus</i>	11
21:05:24	<i>Pipistrellus pipistrellus</i>	15
21:05:42	<i>Pipistrellus pipistrellus</i>	29
21:05:55	<i>Pipistrellus pipistrellus</i>	6
21:06:13	<i>Pipistrellus pipistrellus</i>	9
21:06:36	<i>Pipistrellus pipistrellus</i>	13
21:06:53	<i>Pipistrellus pipistrellus</i>	10
21:07:14	<i>Pipistrellus pipistrellus</i>	10

21:07:38	<i>Pipistrellus pipistrellus</i>	12
21:07:55	<i>Pipistrellus pipistrellus</i>	13
21:08:15	<i>Pipistrellus pipistrellus</i>	1
21:08:17	<i>Pipistrellus pipistrellus</i>	8
21:08:31	<i>Pipistrellus pipistrellus</i>	12
21:09:31	<i>Pipistrellus pipistrellus</i>	7
21:10:01	<i>Pipistrellus pipistrellus</i>	12
21:10:44	<i>Pipistrellus pipistrellus</i>	17
21:11:01	<i>Pipistrellus pipistrellus</i>	4
21:11:03	<i>Pipistrellus pipistrellus</i>	14
21:11:47	<i>Pipistrellus pipistrellus</i>	11
21:12:51	<i>Pipistrellus pipistrellus</i>	13
21:13:10	<i>Pipistrellus pipistrellus</i>	3
21:13:26	<i>Pipistrellus pipistrellus</i>	8
21:13:41	<i>Pipistrellus pipistrellus</i>	17
21:14:14	<i>Pipistrellus pipistrellus</i>	9
21:14:35	<i>Pipistrellus pipistrellus</i>	12
21:15:15	<i>Pipistrellus pipistrellus</i>	3
21:15:31	<i>Pipistrellus pipistrellus</i>	17
21:15:54	<i>Pipistrellus pipistrellus</i>	10
21:16:22	<i>Pipistrellus pipistrellus</i>	8
21:16:31	<i>Pipistrellus pipistrellus</i>	4
21:16:42	<i>Pipistrellus pipistrellus</i>	12
21:16:45	<i>Pipistrellus pipistrellus</i>	10
21:16:59	<i>Pipistrellus pipistrellus</i>	10
21:17:45	<i>Pipistrellus pipistrellus</i>	12
21:18:14	<i>Pipistrellus pipistrellus</i>	13
21:18:44	<i>Pipistrellus pipistrellus</i>	3
21:18:55	<i>Pipistrellus pipistrellus</i>	8
21:19:04	<i>Pipistrellus pipistrellus</i>	9
21:19:36	<i>Pipistrellus pipistrellus</i>	8
21:19:44	<i>Pipistrellus pipistrellus</i>	5
21:19:51	<i>Pipistrellus pipistrellus</i>	19
21:20:06	<i>Pipistrellus pipistrellus</i>	23
21:20:27	<i>Pipistrellus pipistrellus</i>	11
21:20:59	<i>Pipistrellus pipistrellus</i>	11
21:21:16	<i>Pipistrellus pipistrellus</i>	9
21:21:29	<i>Pipistrellus pipistrellus</i>	10
21:21:40	<i>Pipistrellus pipistrellus</i>	4
21:21:42	<i>Pipistrellus pipistrellus</i>	10
21:21:54	<i>Pipistrellus pipistrellus</i>	9
21:22:16	<i>Pipistrellus pipistrellus</i>	4
21:22:39	<i>Pipistrellus pipistrellus</i>	11
21:22:57	<i>Pipistrellus pipistrellus</i>	5
21:23:23	<i>Pipistrellus pipistrellus</i>	6

21:24:07	<i>Pipistrellus pipistrellus</i>	7
21:24:47	<i>Pipistrellus pipistrellus</i>	11
21:25:24	<i>Pipistrellus pipistrellus</i>	6
21:25:41	<i>Pipistrellus pipistrellus</i>	12
21:25:49	<i>Pipistrellus pipistrellus</i>	14
21:26:36	<i>Pipistrellus pipistrellus</i>	6
21:26:58	<i>Pipistrellus pipistrellus</i>	8
21:27:55	<i>Pipistrellus pipistrellus</i>	11
21:28:29	<i>Pipistrellus pipistrellus</i>	10
21:28:42	<i>Pipistrellus pipistrellus</i>	4
21:29:21	<i>Pipistrellus pipistrellus</i>	7
21:30:30	<i>Pipistrellus pipistrellus</i>	16
21:30:55	<i>Pipistrellus pipistrellus</i>	10
21:31:30	<i>Pipistrellus pipistrellus</i>	12
21:32:12	<i>Pipistrellus pipistrellus</i>	15
21:32:40	<i>Pipistrellus pipistrellus</i>	12
21:33:06	<i>Pipistrellus pipistrellus</i>	16
21:33:34	<i>Pipistrellus pipistrellus</i>	9
21:33:51	<i>Pipistrellus pipistrellus</i>	9
21:34:04	<i>Pipistrellus pipistrellus</i>	8
21:34:34	<i>Pipistrellus pipistrellus</i>	7
21:34:48	<i>Pipistrellus pipistrellus</i>	16
21:35:11	<i>Pipistrellus pipistrellus</i>	6
21:35:28	<i>Pipistrellus pipistrellus</i>	8
21:35:52	<i>Pipistrellus pipistrellus</i>	12
21:36:55	<i>Pipistrellus pipistrellus</i>	6
21:37:10	<i>Pipistrellus pipistrellus</i>	8
21:37:38	<i>Pipistrellus pipistrellus</i>	5
21:37:58	<i>Pipistrellus pipistrellus</i>	10
21:38:20	<i>Pipistrellus pipistrellus</i>	7
21:38:58	<i>Pipistrellus pipistrellus</i>	9
21:39:14	<i>Pipistrellus pipistrellus</i>	7
21:39:27	<i>Pipistrellus pipistrellus</i>	9
21:39:43	<i>Pipistrellus pipistrellus</i>	11
21:40:14	<i>Pipistrellus pipistrellus</i>	9
21:40:29	<i>Pipistrellus pipistrellus</i>	12
21:41:12	<i>Pipistrellus pipistrellus</i>	10
21:41:44	<i>Pipistrellus pipistrellus</i>	12
21:42:08	<i>Pipistrellus pipistrellus</i>	12
21:42:56	<i>Pipistrellus pipistrellus</i>	13
21:43:15	<i>Pipistrellus pipistrellus</i>	10
21:43:53	<i>Pipistrellus pipistrellus</i>	7
21:44:14	<i>Pipistrellus pipistrellus</i>	9
21:44:53	<i>Pipistrellus pipistrellus</i>	10
21:45:12	<i>Pipistrellus pipistrellus</i>	5

*NB. The number of calls per recording that are calculated by the BatExplorer Software during analysis of the data.
^NB. 0 calls were registered by BatExplorer Software but calls were confirmed by manual ID during analysis of data.

APPENDIX 3 – PROPOSED ELEVATIONS

