

**30 Byron Road
Twyford
Wokingham
Berkshire
RG10 0AE**

Bat Emergence Survey

Report ref.: R3244_BES_a

Report Quality Control Information	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Mr P Dale to undertake a Bat Emergence Survey (BES) at 30 Byron Road in Twyford, Berkshire. The BES was commissioned to accompany a householder planning application to be submitted to Wokingham Borough Council seeking consent to remove the rear dormer windows and construct a two-storey rear extension.
- 1.1.2** The BES follows a Preliminary Roost Assessment for bats (PRA) conducted by Urban Tree Experts in January 2026 (Report ref.: SPH/NP/PEA-26/20.01). During the PRA no bat droppings were found within the loft voids of the house. Externally, several potential roost features were identified, including gaps beneath slipped clay roof tiles on the rear elevation and gaps beneath lifted hanging tiles covering the rear dormer window . Based on the findings in the PRA, the property was classified as moderate potential suitability for roosting bats. In line with good practice guidelines (Collins 2023), two dusk emergence survey visits were undertaken on the 22nd June and 13th July 2026.
- 1.1.3** During one of the BES surveys, one common pipistrelle (*Pipistrellus pipistrellus*) bat was recorded swarming and landing on the hanging tiles around the rear dormer. These findings suggest that the building acts as a summer day roost for an individual or small number of non-breeding common pipistrelle (*P. pipistrellus*) bats.
- 1.1.4** The development proposals will directly lead to the permanent damage and disturbance of the day roost within the property. Therefore, 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 or Earned Recognition Licence (WML-CL47) will be obtained.
- 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 Mr P Dale to undertake a Bat Emergence Survey (BES) at 30 Byron Road in Twyford, Berkshire.

2.1.2 The BES was commissioned to accompany a householder planning application to be submitted to Wokingham Borough Council seeking consent to remove the rear dormer windows and construct a two-storey rear extension.

2.1.3 The BES follows a Preliminary Roost Assessment for bats (PRA) conducted by Urban Tree Experts in January 2026 (Report ref.: SPH/NP/PEA-26/20.01). The PRA report states the following:

'No bats or evidence of bats were recorded during the survey of the property however, there are features on the property which provide crevice like features suitable for bats to roost and the presence or absence of bats could not be determined without further survey effort. The building was assessed as having a moderate potential to support roosting bats.'

The PRA report recommends the following:

'Based on the Bat Workers Manual and the Bat Surveys Good Practice Guidelines, two dusk emergence surveys must be undertaken on the property, between May and August, in order to establish the presence or absence of roosting bats in the building. The features identified will require three survey positions, 2 equipped with bat detectors and night vision cameras and 1 with a night vision camera only in order to cover the potential bat roosting features. If bats are seen emerging from or returning to the building to roost during either of the surveys, a further activity survey and mitigation will be required before the developments works can commence.'

2.2 Site Location and Context

2.2.1 The site comprises a detached brick built and rendered property with integral garage and rear single storey extension, located to the south of Byron Road in Twyford, Berkshire (OS grid reference: SU79137564).

2.2.2 The site is within a suburban setting, surrounded by similar residential properties and their associated gardens with scattered trees and hedgerows. The nearby surroundings consist of community allotment gardens approximately 80 metres to the

west, a railway line running approximately 160 metres to the north and Stanlake Meadow recreational grounds - an open area of grassland bordered by mature trees - situated approximately 230 metres to the north-east of the house. The River Loddon and its mature tree-lined banks, is situated approximately 385 metres to the south-west of the house and a large network of lakes with areas of woodland and open grassland, are situated approximately 430 metres to the south-west.

- 2.2.3** The wider area is primarily farmland with scattered trees and parcels of woodland, including ancient woodland. The closest parcel of ancient woodland, Sandpit Copse, is situated approximately 1600 metres to the south-west of the house.

2.3 Report Objectives

- 2.3.1** The aim of the BES is to characterise the confirmed bat roosts and determine if there are any additional roosts present in the property. 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 WML-C21 (BMCL), and Earned Recognition Licence (WML-CL47) (Level 1) allows ecologists to apply to become Registered Consultants to use these licences 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) was commissioned to carry out a search of pre-existing records held by them for the site and land within a 2km radius. In addition, the MAGIC website was used to search for previous European Protected Species (EPS) licenses granted within a 2km radius.

4.2 Emergence Survey

- 4.2.1** In line with good practice guidelines (Collins 2023), two dusk emergence survey visits were undertaken, and these were completed on the 22nd June and 13th July 2026. The survey visits were undertaken by bat surveyors: Vicky Potts (2025-85632-CL18-BAT), Lauren Hayward – a qualifying member of CIEEM - and Caroline Everett. Two surveyors covered all aspects of the property during each survey and an extra camera was used during the second survey on the 13th July 2026 – refer to emergence survey plan in **Section 5** below.
- 4.2.2** The equipment used during the survey included full-spectrum sampling bat detectors (Batlogger M and Batlogger M2) and infrared/thermal imaging night vision aids (Pixfra ARC A613 and Sony Handycam with infrared floodlights/torches). A still shot of the darkest point/viewpoint of the surveys 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 survey, the bat call recordings were processed and analysed using the BatExplorer computer software packages and the night vision video footage was reviewed with VLC Media Player.
- ### **4.3 Survey Limitations and Report Validity**
- 4.3.1** There was a rain shower at the start of the first survey; however, bats were still active before sunset and at typical emergence times, therefore it is considered that there were no significant constraints to the bat emergence surveys. The surveys 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. 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, summarised in **Tables 1 – 6** and **Photographs 1 & 2**, and illustrated in **Figure 1** below; the raw detector data is supplied in **Appendix 2**.

5.2 Background Data Search

- 5.2.1** The BSBBG returned records for at least nine bat species: common pipistrelle (*P. pipistrellus*), soprano pipistrelle (*P. pygmaeus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), brown long-eared (*Plecotus auritus*), common noctule (*N. noctula*), Daubenton's bat (*Myotis daubentonii*), serotine bat (*Eptesicus serotinus*), Barbastelle bat (*Barbastella barbastellus*) and Natterer's bat (*Myotis nattereri*). The closest record is of an injured *P. pipistrellus* bat recorded at a property approximately 90 metres to the north-east of the site in November 2021. The most recent record is of *P. pipistrellus*, *P. pygmaeus*, *N. noctula* bats recorded during an emergence survey of a residential building on 6th July 2025 just over 1 kilometre to the north of the site.
- 5.2.2** The MAGIC search showed five bat mitigation licences have been granted within a 2-kilometre radius of the property in the last 10 years, for three different species including common pipistrelle (*P. pipistrellus*), soprano pipistrelle (*P. pygmaeus*) and brown long-eared bat (*P. auritus*). The nearest licence, approximately 650 metres north-east of the property, covered the destruction of a *P. pipistrellus* and *P. pygmaeus* resting place (Case ref.: 2020-49294-EPS-MIT).

5.3 Emergence Survey

22nd June 2026

- 5.3.1** No bats were observed emerging from the house during the first survey.

Table 1. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (%)	Rain	Temperature (°C)	
				Start	Finish
	3	100	Short shower of light rain for first half an hour	24	23
Start	21:09	Sunset	21:24	Finish	22:54

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

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	11	0	21:50 (26 mins)
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	5	0	21:42 (18 mins)
Noctule (<i>Nyctalus noctule</i>)	5	0	22:10 (46 mins)
Myotis sp. (<i>Myotis</i> sp.)	1	0	22:23 (59 mins)

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

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	49	0	21:28 (-4 mins)
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	34	0	21:41 (17 mins)
Noctule (<i>Nyctalus noctule</i>)	4	0	21:49 (25 mins)
Myotis sp. (<i>Myotis</i> sp.)	2	0	22:23 (59 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.

5.3.2 The first recorded bat was a common pipistrelle (*P. pipistrellus*) heard by the surveyor at Location 2 at 21:28 (4 minutes before sunset) and seen foraging within the rear garden from the west in a south-easterly direction, which falls within the typical emergence period for this species, indicating it was roosting nearby. Furthermore, soprano pipistrelle (*P. pygmaeus*) bats were first recorded at 21:41 (17 minutes after sunset) by the surveyor at Location 2, and noctule (*Nyctalus noctula*) bats was first heard at 21:49 (25 minutes after sunset) by the surveyor at Location 2, which falls within the typical emergence period for these species (Collins 2023), indicating they are also both roosting nearby.

5.3.3 The amount of activity was moderate with mostly common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) foraging activity at the front of the house and within the rear garden.

13th July 2026

5.3.4 One common pipistrelle (*P. pipistrellus*) bat was observed swarming for a couple of minutes and landing around the dormer window on the rear elevation of the house, by the surveyor at Location 2 at 22:00 (44 minutes after sunset), indicating this is an area used as a bat roost (**Photograph 1**).



Photograph 1. Common pipistrelle swarming at rear dormer at 22:00 and landing location shown by the star (Unmanned camera and seen by Surveyor Location 2).

Table 3. Weather conditions and survey timings

Weather	Wind (BF0-12)	Cloud cover (%)	Rain	Temperature (°C)	
	1 -3	25	None	Start	Finish
Start	21:01	Sunset	21:16	Finish	22:46

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

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	10	0	21:43 (27 mins)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	4	0	22:09 (53 mins)
Noctule (<i>Nyctalus noctule</i>)	6	0	22:32 (76 mins)
Myotis sp. (<i>Myotis</i> sp.)	2	0	22:10 (54 mins)

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

Species	Recordings*	Emergences†	Time of first call (minutes after sunset)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	121	Swarming at 22:00	21:39 (23 mins)
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	38	0	21:26 (10 mins)
Noctule (<i>Nyctalus noctule</i>)	26	0	21:32 (16 mins)
Myotis sp. (<i>Myotis</i> sp.)	6	0	22:29 (73 mins)
Long-eared species (<i>Plecotus</i> sp.)	2	0	22:29 (73 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.

5.3.5 The first bat recorded a soprano pipistrelle (*P. pygmaeus*) heard by the surveyor at Location 2 at 21:26 (10 minutes after sunset) and common pipistrelle (*P. pipistrellus*) bats were first recorded by the surveyor at Surveyor Location 2 at 21:39 (23 minutes after sunset), which falls within the typical emergence period of both species (Collins 2023), indicating that these species are likely to be roosting nearby. Furthermore,

noctule (*Nyctalus noctula*) bats was first heard at 21:32 (16 minutes after sunset) by the surveyor at Location 2, which falls within the typical emergence period for this species (Collins 2023), indicating it is roosting nearby. However, a *Myotis* species (*Myotis* sp.) bat was first recorded 22:10 (54 minutes after sunset) by the surveyor at Location 1, which, subject to the species, which cannot be confirmed from the calls, falls late within or after the typical emergence period for these species (Collins 2023).

- 5.3.6** The amount of activity was generally high throughout the survey, especially at the rear of the house, and recorded by the surveyor at Location 2, consisting mostly of *P. pipistrellus* and *P. pygmaeus* with several bats commuting from the eastern side of the garden suggesting a nearby roost. There was also frequent *N. noctule* foraging activity over the rear garden and along the western and northern (front) elevations of the house.

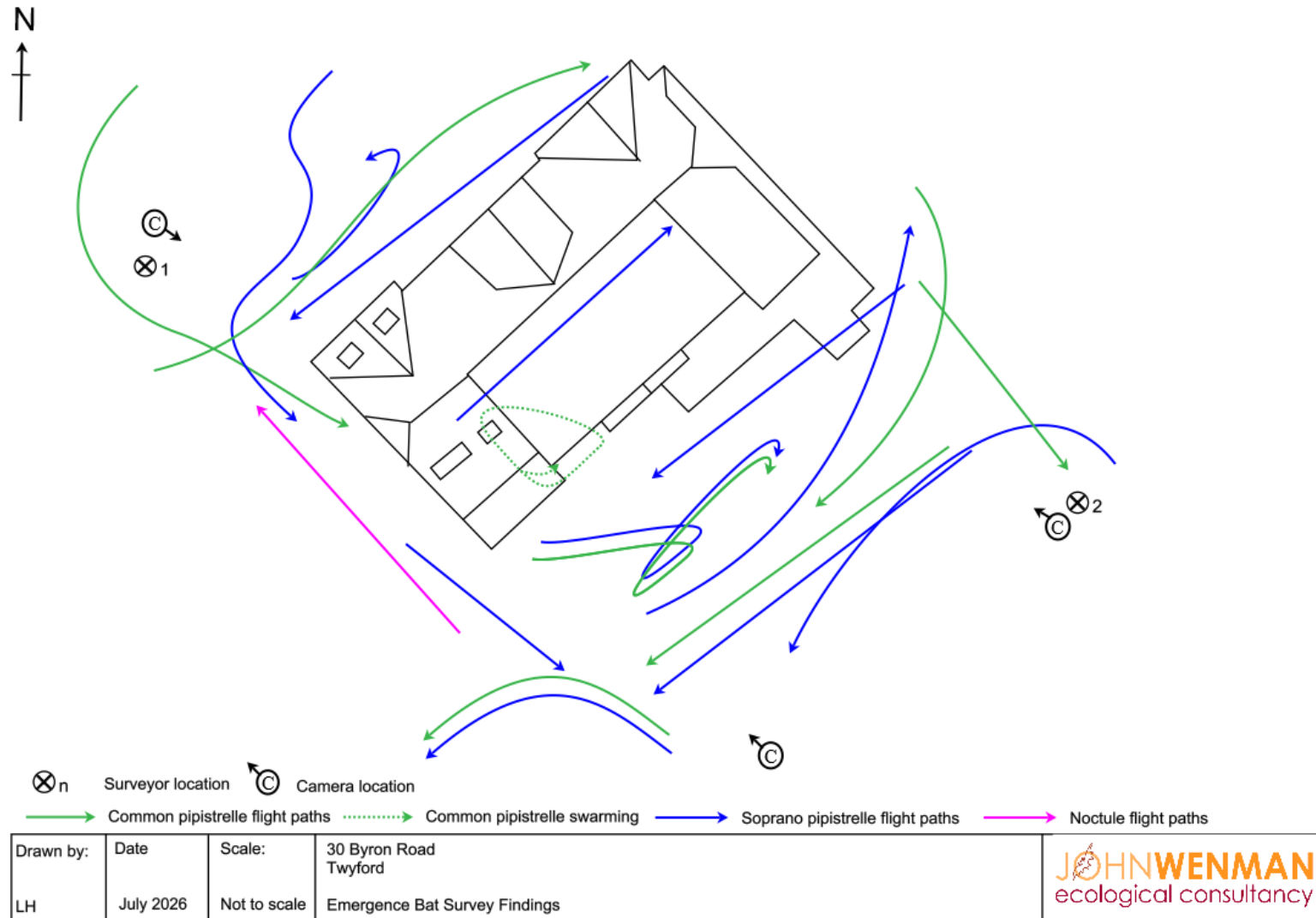


Figure 1 – Bat Emergence Survey Findings – Swarming Location and Flight Paths

6 DISCUSSION AND RECOMMENDATIONS

6.1 Assessment of Bat Roost Status

6.1.1 During the second emergence survey, one common pipistrelle bat (*Pipistrellus pipistrellus*) was recorded swarming and landing around the dormer window on the rear elevation of the house (**Photograph 1**). This behaviour suggests there is a historic, current and/or potential future bat roost. These findings suggest that the building acts as a day roost (i.e. summer resting place used by individual or small groups of male or non-breeding bats) for common pipistrelle bats (*P. pipistrellus*).

6.1.2 Common pipistrelle (*P. pipistrellus*) are crevice-dwelling species that are one of the most abundant and widespread bats in Great Britain. This species occurs in almost any habitat type and is well adapted to the built environments; they are one of the species most regularly reported roosting in houses and churches (Mathews *et al.* 2018). Day roosts of this species 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

6.2.1 The survey data demonstrates that the planning application seeking consent to remove the rear dormer windows and construct a two-storey rear extension, will result in the destruction of a common pipistrelle bat (*P. pipistrellus*) day roost. In the absence of mitigation measures, the works could cause disturbance, injury and or death of bats.

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 or Earned Recognition Licence (WML-CL47) (Level 1). Under the terms of a full EPSML or BMCL/Earned Recognition Licence, 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 PROPOSALS

- 7.1.1** Before the licensable work commences i.e. removal of hanging tiles associated with the roost site, 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. The presence of one day roost falls under the criteria for the BMCL.
- 7.1.2** Before the soft strip begins, the licensed ecologist or 'Registered Consultant' if working under the BMCL/Earned Recognition Licence, will give a toolbox talk to the contractors on site detailing bats are present, the legislation protecting bats, the location of the roost site in 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).
- 7.1.4** The hanging tiles covering the rear dormer window will be carefully removed by gloved hands under the supervision of a licensed ecologist, or Registered Consultant if working under the BMC/Earned Recognition Licence. 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, further roosting opportunities will be created within the extended property to include bat access roof tiles or an integrated bat box, as close to the existing roosting location as possible.
- 7.1.6** Any insulation/lining to be used under the new roof will either be a bituminous 1F felt or a bat safe roofing membrane with a certificate that proves that it has passed Natural England's 'snagging propensity test'.

8 REFERENCES

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

Collins, J (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

Mathews F., Kubasiewicz L.M., Gurnell J., Harrower C.A., McDonald R.A., Shore R.F. (2018). *A Review of the Population and Conservation Status of British Mammals*. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough.

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

Reason, P.F. and Wray, S. (2025). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. CIEEM, Ampfield.

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

22nd June 2026



Sony Handycam at Surveyor Location 1.



Pixfra ARC A613 at Surveyor Location 2.

13th July 2026



Pixfra ARC A613 at Surveyor Location 1.



Pixfra ARC A613 at Surveyor Location 2.



Pixfra ARC A613 (unmanned).

APPENDIX 2 – BAT EMERGENCE SURVEY RAW DATA TABLES

22nd June 2026

Surveyor Location 1 – Batlogger M

Time	Species	Number of calls [#]
21:42	<i>Pipistrellus pygmaeus</i>	5
21:50	<i>Pipistrellus pipistrellus</i>	2
21:50	<i>Pipistrellus pipistrellus</i>	1
21:52	<i>Pipistrellus pygmaeus</i>	5
22:10	<i>Nyctalus noctula</i>	4
22:10	<i>Nyctalus noctula</i>	3
22:13	<i>Pipistrellus pipistrellus</i>	9
22:15	<i>Pipistrellus pipistrellus</i>	1
22:15	<i>Pipistrellus pygmaeus</i>	6
22:17	<i>Pipistrellus pygmaeus</i>	13
22:23	<i>Myotis spec.</i>	4
22:31	<i>Pipistrellus pipistrellus</i>	2
22:35	<i>Pipistrellus pipistrellus</i>	10
22:36	<i>Pipistrellus pipistrellus</i>	0*
22:40	<i>Pipistrellus pipistrellus</i>	3
22:41	<i>Pipistrellus pygmaeus</i>	5
22:45	<i>Pipistrellus pipistrellus</i>	2
22:46	<i>Pipistrellus pipistrellus</i>	8
22:47	<i>Pipistrellus pipistrellus</i>	9
22:52	<i>Nyctalus noctula</i>	1
22:52	<i>Nyctalus noctula</i>	2
22:53	<i>Nyctalus noctula</i>	4

Surveyor Location 2 – Batlogger M

Time	Species	Number of calls [#]
21:28	<i>Pipistrellus pipistrellus</i>	7
21:41	<i>Pipistrellus pygmaeus</i>	3
21:41	<i>Pipistrellus pygmaeus</i>	11
21:41	<i>Pipistrellus pipistrellus</i>	10
21:42	<i>Pipistrellus pygmaeus</i>	2
21:46	<i>Pipistrellus pipistrellus</i>	3
21:46	<i>Pipistrellus pygmaeus</i>	2
21:47	<i>Pipistrellus pygmaeus</i>	8
21:48	<i>Pipistrellus pygmaeus</i>	8
21:49	<i>Nyctalus noctula</i>	1
21:50	<i>Pipistrellus pipistrellus</i>	18
21:51	<i>Pipistrellus pygmaeus</i>	5
21:52	<i>Pipistrellus pipistrellus</i>	3
21:52	<i>Pipistrellus pipistrellus</i>	3
21:52	<i>Pipistrellus pipistrellus</i>	20
21:52	<i>Pipistrellus pygmaeus</i>	16

21:53	<i>Pipistrellus pipistrellus</i>	10
21:55	<i>Pipistrellus pipistrellus</i>	12
21:55	<i>Pipistrellus pipistrellus</i>	2
21:56	<i>Pipistrellus pipistrellus</i>	5
21:56	<i>Pipistrellus pygmaeus</i>	3
21:56	<i>Nyctalus noctula</i>	1
21:57	<i>Pipistrellus pygmaeus</i>	6
21:59	<i>Pipistrellus pygmaeus</i>	11
22:01	<i>Pipistrellus pipistrellus</i>	6
22:01	<i>Pipistrellus pipistrellus</i>	5
22:01	<i>Pipistrellus pipistrellus</i>	10
22:01	<i>Pipistrellus pygmaeus</i>	9
22:06	<i>Pipistrellus pygmaeus</i>	6
22:07	<i>Pipistrellus pipistrellus</i>	11
22:08	<i>Pipistrellus pygmaeus</i>	8
22:09	<i>Pipistrellus pygmaeus</i>	11
22:09	<i>Nyctalus noctula</i>	10
22:09	<i>Pipistrellus pygmaeus</i>	9
22:10	<i>Pipistrellus pygmaeus</i>	13
22:13	<i>Pipistrellus pygmaeus</i>	18
22:13	<i>Pipistrellus pygmaeus</i>	5
22:14	<i>Pipistrellus pygmaeus</i>	18
22:15	<i>Pipistrellus pipistrellus</i>	4
22:15	<i>Pipistrellus pipistrellus</i>	17
22:15	<i>Pipistrellus pygmaeus</i>	11
22:15	<i>Pipistrellus pygmaeus</i>	11
22:18	<i>Pipistrellus pygmaeus</i>	24
22:18	<i>Pipistrellus pipistrellus</i>	16
22:19	<i>Pipistrellus pygmaeus</i>	12
22:22	<i>Pipistrellus pipistrellus</i>	31
22:22	<i>Pipistrellus pipistrellus</i>	24
22:22	<i>Pipistrellus pipistrellus</i>	27
22:22	<i>Pipistrellus pipistrellus</i>	2
22:22	<i>Pipistrellus pipistrellus</i>	8
22:22	<i>Pipistrellus pipistrellus</i>	16
22:22	<i>Pipistrellus pygmaeus</i>	7
22:22	<i>Pipistrellus pipistrellus</i>	107
22:23	<i>Myotis spec.</i>	10
22:23	<i>Pipistrellus pipistrellus</i>	68
22:23	<i>Pipistrellus pipistrellus</i>	40
22:23	<i>Pipistrellus pipistrellus</i>	3
22:23	<i>Pipistrellus pygmaeus</i>	16
22:23	<i>Pipistrellus pipistrellus</i>	53
22:24	<i>Pipistrellus pipistrellus</i>	3
22:24	<i>Pipistrellus pygmaeus</i>	13
22:25	<i>Pipistrellus pipistrellus</i>	42
22:25	<i>Pipistrellus pipistrellus</i>	15

22:26	<i>Pipistrellus pygmaeus</i>	35
22:27	<i>Pipistrellus pipistrellus</i>	7
22:27	<i>Pipistrellus pipistrellus</i>	6
22:27	<i>Pipistrellus pipistrellus</i>	11
22:28	<i>Pipistrellus pipistrellus</i>	19
22:29	<i>Pipistrellus pipistrellus</i>	19
22:30	<i>Pipistrellus pipistrellus</i>	3
22:31	<i>Pipistrellus pipistrellus</i>	22
22:34	<i>Pipistrellus pygmaeus</i>	24
22:34	<i>Pipistrellus pipistrellus</i>	5
22:35	<i>Pipistrellus pipistrellus</i>	8
22:36	<i>Pipistrellus pygmaeus</i>	2
22:37	<i>Pipistrellus pygmaeus</i>	46
22:39	<i>Pipistrellus pipistrellus</i>	49
22:39	<i>Myotis spec.</i>	7
22:39	<i>Pipistrellus pygmaeus</i>	8
22:39	<i>Pipistrellus pipistrellus</i>	28
22:40	<i>Pipistrellus pipistrellus</i>	17
22:45	<i>Pipistrellus pipistrellus</i>	15
22:46	<i>Pipistrellus pygmaeus</i>	24
22:47	<i>Pipistrellus pipistrellus</i>	9
22:50	<i>Pipistrellus pipistrellus</i>	4
22:50	<i>Pipistrellus pygmaeus</i>	27
22:52	<i>Pipistrellus pipistrellus</i>	7
22:52	<i>Nyctalus noctula</i>	3
22:53	<i>Pipistrellus pipistrellus</i>	10

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Surveyor Location 1 – Batlogger M2

Time	Species	Number of calls [#]
21:43	<i>Pipistrellus pygmaeus</i>	9
21:50	<i>Pipistrellus pygmaeus</i>	8
21:58	<i>Pipistrellus pygmaeus</i>	5
22:09	<i>Pipistrellus pipistrellus</i>	12
22:09	<i>Pipistrellus pygmaeus</i>	6
22:09	<i>Pipistrellus pipistrellus</i>	6
22:10	<i>Myotis spec.</i>	24
22:10	<i>Pipistrellus pygmaeus</i>	8
22:16	<i>Pipistrellus pipistrellus</i>	11
22:24	<i>Pipistrellus pygmaeus</i>	20
22:25	<i>Pipistrellus pygmaeus</i>	18
22:26	<i>Pipistrellus pygmaeus</i>	5
22:27	<i>Pipistrellus pipistrellus</i>	17
22:32	<i>Nyctalus noctula</i>	3
22:32	<i>Nyctalus noctula</i>	1
22:32	<i>Nyctalus noctula</i>	2
22:32	<i>Nyctalus noctula</i>	5
22:32	<i>Nyctalus noctula</i>	6
22:32	<i>Nyctalus noctula</i>	5
22:34	<i>Myotis spec.</i>	11
22:40	<i>Pipistrellus pygmaeus</i>	8
22:40	<i>Pipistrellus pygmaeus</i>	20

Surveyor Location 2 – Batlogger M

Time	Species	Number of calls [#]
22:33	<i>Nyctalus noctula</i>	3
21:26	<i>Pipistrellus pygmaeus</i>	6
21:32	<i>Nyctalus noctula</i>	8
21:39	<i>Pipistrellus pipistrellus</i>	4
21:41	<i>Pipistrellus pipistrellus</i>	14
21:42	<i>Pipistrellus pipistrellus</i>	2
21:44	<i>Pipistrellus pipistrellus</i>	1
21:45	<i>Pipistrellus pygmaeus</i>	10
21:47	<i>Pipistrellus pipistrellus</i>	8
21:47	<i>Pipistrellus pygmaeus</i>	16
21:48	<i>Pipistrellus pygmaeus</i>	13
21:48	<i>Pipistrellus pygmaeus</i>	13
21:48	<i>Pipistrellus pygmaeus</i>	8
21:48	<i>Pipistrellus pipistrellus</i>	8
21:48	<i>Pipistrellus pygmaeus</i>	11
21:49	<i>Pipistrellus pipistrellus</i>	4
21:49	<i>Pipistrellus pygmaeus</i>	6
21:50	<i>Pipistrellus pygmaeus</i>	4

21:50	<i>Pipistrellus pipistrellus</i>	5
21:51	<i>Pipistrellus pipistrellus</i>	4
21:51	<i>Pipistrellus pipistrellus</i>	9
21:51	<i>Pipistrellus pipistrellus</i>	9
21:52	<i>Pipistrellus pipistrellus</i>	2
21:52	<i>Pipistrellus pipistrellus</i>	10
21:52	<i>Pipistrellus pipistrellus</i>	7
21:53	<i>Pipistrellus pipistrellus</i>	7
21:54	<i>Pipistrellus pipistrellus</i>	11
21:55	<i>Pipistrellus pygmaeus</i>	8
21:56	<i>Pipistrellus pygmaeus</i>	2
21:56	<i>Pipistrellus pipistrellus</i>	6
21:56	<i>Pipistrellus pygmaeus</i>	19
21:56	<i>Pipistrellus pygmaeus</i>	0*
21:57	<i>Pipistrellus pipistrellus</i>	17
21:58	<i>Pipistrellus pygmaeus</i>	2
21:58	<i>Pipistrellus pipistrellus</i>	9
21:58	<i>Pipistrellus pipistrellus</i>	8
21:59	<i>Pipistrellus pipistrellus</i>	0*
21:59	<i>Pipistrellus pipistrellus</i>	2
21:59	<i>Pipistrellus pipistrellus</i>	2
21:59	<i>Pipistrellus pygmaeus</i>	2
22:00	<i>Pipistrellus pipistrellus</i>	9
22:00	<i>Pipistrellus pipistrellus</i>	2
22:00	<i>Pipistrellus pipistrellus</i>	6
22:00	<i>Pipistrellus pipistrellus</i>	1
22:00	<i>Pipistrellus pipistrellus</i>	4
22:00	<i>Pipistrellus pipistrellus</i>	8
22:00	<i>Pipistrellus pipistrellus</i>	9
22:00	<i>Pipistrellus pipistrellus</i>	4
22:00	<i>Pipistrellus pipistrellus</i>	3
22:00	<i>Pipistrellus pygmaeus</i>	4
22:00	<i>Pipistrellus pipistrellus</i>	3
22:00	<i>Pipistrellus pipistrellus</i>	4
22:00	<i>Pipistrellus pipistrellus</i>	3
22:00	<i>Pipistrellus pipistrellus</i>	0*
22:01	<i>Pipistrellus pipistrellus</i>	4
22:01	<i>Pipistrellus pipistrellus</i>	3
22:01	<i>Pipistrellus pipistrellus</i>	1
22:01	<i>Pipistrellus pipistrellus</i>	20
22:01	<i>Pipistrellus pipistrellus</i>	4
22:01	<i>Pipistrellus pipistrellus</i>	4
22:01	<i>Pipistrellus pygmaeus</i>	2
22:01	<i>Pipistrellus pygmaeus</i>	4
22:01	<i>Pipistrellus pipistrellus</i>	1
22:01	<i>Pipistrellus pipistrellus</i>	9
22:01	<i>Pipistrellus pipistrellus</i>	16

22:01	<i>Pipistrellus pipistrellus</i>	7
22:01	<i>Pipistrellus pygmaeus</i>	11
22:01	<i>Pipistrellus pipistrellus</i>	6
22:02	<i>Pipistrellus pygmaeus</i>	17
22:02	<i>Pipistrellus pipistrellus</i>	1
22:02	<i>Pipistrellus pipistrellus</i>	5
22:02	<i>Pipistrellus pipistrellus</i>	2
22:02	<i>Pipistrellus pipistrellus</i>	15
22:02	<i>Pipistrellus pipistrellus</i>	2
22:03	<i>Pipistrellus pipistrellus</i>	1
22:03	<i>Pipistrellus pygmaeus</i>	0*
22:03	<i>Pipistrellus pipistrellus</i>	24
22:04	<i>Pipistrellus pipistrellus</i>	5
22:04	<i>Pipistrellus pipistrellus</i>	7
22:04	<i>Pipistrellus pipistrellus</i>	1
22:05	<i>Pipistrellus pipistrellus</i>	4
22:05	<i>Pipistrellus pipistrellus</i>	9
22:05	<i>Pipistrellus pygmaeus</i>	9
22:05	<i>Pipistrellus pipistrellus</i>	2
22:05	<i>Pipistrellus pipistrellus</i>	41
22:05	<i>Pipistrellus pipistrellus</i>	4
22:05	<i>Pipistrellus pipistrellus</i>	1
22:05	<i>Pipistrellus pipistrellus</i>	17
22:06	<i>Pipistrellus pipistrellus</i>	6
22:06	<i>Pipistrellus pipistrellus</i>	2
22:06	<i>Pipistrellus pygmaeus</i>	7
22:06	<i>Pipistrellus pipistrellus</i>	2
22:06	<i>Pipistrellus pipistrellus</i>	52
22:07	<i>Pipistrellus pipistrellus</i>	17
22:07	<i>Pipistrellus pipistrellus</i>	8
22:07	<i>Pipistrellus pipistrellus</i>	15
22:08	<i>Pipistrellus pygmaeus</i>	1
22:08	<i>Pipistrellus pipistrellus</i>	17
22:09	<i>Pipistrellus pipistrellus</i>	14
22:11	<i>Pipistrellus pygmaeus</i>	2
22:11	<i>Pipistrellus pipistrellus</i>	9
22:11	<i>Pipistrellus pygmaeus</i>	2
22:13	<i>Pipistrellus pygmaeus</i>	2
22:13	<i>Pipistrellus pipistrellus</i>	65
22:14	<i>Pipistrellus pipistrellus</i>	4
22:14	<i>Pipistrellus pipistrellus</i>	10
22:14	<i>Pipistrellus pipistrellus</i>	37
22:14	<i>Pipistrellus pipistrellus</i>	1
22:14	<i>Pipistrellus pipistrellus</i>	6
22:14	<i>Pipistrellus pipistrellus</i>	6
22:14	<i>Pipistrellus pipistrellus</i>	50
22:14	<i>Pipistrellus pipistrellus</i>	4

22:15	<i>Pipistrellus pipistrellus</i>	12
22:15	<i>Pipistrellus pipistrellus</i>	0*
22:15	<i>Pipistrellus pipistrellus</i>	10
22:15	<i>Pipistrellus pipistrellus</i>	2
22:15	<i>Pipistrellus pipistrellus</i>	20
22:15	<i>Pipistrellus pipistrellus</i>	2
22:15	<i>Pipistrellus pipistrellus</i>	31
22:15	<i>Pipistrellus pipistrellus</i>	20
22:15	<i>Pipistrellus pipistrellus</i>	7
22:15	<i>Pipistrellus pipistrellus</i>	1
22:15	<i>Pipistrellus pipistrellus</i>	14
22:16	<i>Pipistrellus pygmaeus</i>	15
22:16	<i>Pipistrellus pipistrellus</i>	14
22:17	<i>Pipistrellus pipistrellus</i>	10
22:18	<i>Pipistrellus pipistrellus</i>	30
22:18	<i>Pipistrellus pipistrellus</i>	9
22:18	<i>Pipistrellus pipistrellus</i>	19
22:18	<i>Pipistrellus pygmaeus</i>	10
22:18	<i>Pipistrellus pipistrellus</i>	13
22:19	<i>Pipistrellus pipistrellus</i>	30
22:19	<i>Pipistrellus pipistrellus</i>	6
22:19	<i>Pipistrellus pipistrellus</i>	2
22:19	<i>Pipistrellus pygmaeus</i>	7
22:20	<i>Pipistrellus pipistrellus</i>	9
22:21	<i>Pipistrellus pygmaeus</i>	32
22:22	<i>Pipistrellus pygmaeus</i>	26
22:23	<i>Pipistrellus pipistrellus</i>	18
22:23	<i>Pipistrellus pygmaeus</i>	22
22:23	<i>Pipistrellus pipistrellus</i>	19
22:23	<i>Pipistrellus pipistrellus</i>	1
22:23	<i>Pipistrellus pygmaeus</i>	1
22:23	<i>Pipistrellus pygmaeus</i>	10
22:25	<i>Pipistrellus pipistrellus</i>	0*
22:25	<i>Pipistrellus pipistrellus</i>	5
22:25	<i>Pipistrellus pipistrellus</i>	32
22:26	<i>Pipistrellus pipistrellus</i>	4
22:26	<i>Pipistrellus pygmaeus</i>	3
22:27	<i>Pipistrellus pipistrellus</i>	10
22:27	<i>Pipistrellus pipistrellus</i>	7
22:28	<i>Pipistrellus pipistrellus</i>	14
22:29	<i>Myotis spec.</i>	40
22:29	<i>Plecotus spec.</i>	4
22:30	<i>Myotis spec.</i>	47
22:31	<i>Nyctalus noctula</i>	2
22:31	<i>Pipistrellus pipistrellus</i>	28
22:32	<i>Pipistrellus pipistrellus</i>	45
22:32	<i>Nyctalus noctula</i>	13

22:32	<i>Pipistrellus pygmaeus</i>	1
22:32	<i>Pipistrellus pipistrellus</i>	45
22:32	<i>Pipistrellus pipistrellus</i>	45
22:32	<i>Pipistrellus pipistrellus</i>	45
22:32	<i>Nyctalus noctula</i>	14
22:32	<i>Nyctalus noctula</i>	1
22:32	<i>Nyctalus noctula</i>	20
22:33	<i>Nyctalus noctula</i>	5
22:33	<i>Nyctalus noctula</i>	0*
22:35	<i>Myotis spec.</i>	19
22:37	<i>Myotis spec.</i>	21
22:38	<i>Nyctalus noctula</i>	4
22:38	<i>Plecotus spec.</i>	7
22:38	<i>Pipistrellus pygmaeus</i>	14
22:38	<i>Pipistrellus pipistrellus</i>	2
22:38	<i>Pipistrellus pipistrellus</i>	1
22:39	<i>Nyctalus noctula</i>	1
22:39	<i>Nyctalus noctula</i>	2
22:39	<i>Nyctalus noctula</i>	1
22:39	<i>Nyctalus noctula</i>	2
22:39	<i>Nyctalus noctula</i>	1
22:39	<i>Nyctalus noctula</i>	5
22:41	<i>Nyctalus noctula</i>	2
22:42	<i>Nyctalus noctula</i>	3
22:42	<i>Nyctalus noctula</i>	2
22:42	<i>Nyctalus noctula</i>	4
22:43	<i>Myotis spec.</i>	21
22:43	<i>Nyctalus noctula</i>	3
22:43	<i>Nyctalus noctula</i>	1
22:43	<i>Nyctalus noctula</i>	2
22:43	<i>Nyctalus noctula</i>	8
22:43	<i>Nyctalus noctula</i>	1
22:43	<i>Nyctalus noctula</i>	1
22:43	<i>Nyctalus noctula</i>	2
22:43	<i>Nyctalus noctula</i>	1
22:43	<i>Nyctalus noctula</i>	6
22:44	<i>Nyctalus noctula</i>	10
22:44	<i>Nyctalus noctula</i>	1
22:44	<i>Nyctalus noctula</i>	1
22:44	<i>Nyctalus noctula</i>	3
22:44	<i>Nyctalus noctula</i>	0*
22:45	<i>Myotis spec.</i>	13
22:45	<i>Nyctalus noctula</i>	2
22:45	<i>Nyctalus noctula</i>	9
22:33	<i>Nyctalus noctula</i>	3
21:26	<i>Pipistrellus pygmaeus</i>	6
21:32	<i>Nyctalus noctula</i>	8

21:39	<i>Pipistrellus pipistrellus</i>	4
21:41	<i>Pipistrellus pipistrellus</i>	14

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

** 0 calls is when the software has not been able to recognise individual calls (it being distant) and therefore cannot calculate the number of calls within the recording*