ASTUTE ECOLOGY

Ecological Consultants

BAT SURVEYS AND OUTLINE MITIGATION

WOODMANCOTE PARISH HALL AND SCHOOL COTTAGE, BRIGHTON ROAD, WOODMANCOTE, WEST SUSSEX, BN5 9SR

Report Reference: AE23.118
June 2023

Client	Anita and Bill Eastwood	
Site:	Woodmancote Parish Hall And School Cottage, Brighton Road, Woodmancote, West Sussex, BN5 9SR	
Grid Ref:	TQ 23297 14782	
Report Ref:	AE23.118	
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1 Summary

- Astute Ecology were commissioned by Anita and Bill Eastwood to undertake three dusk emergence surveys and a single dawn re-entry survey in order to confirm presence or likely absence of summer bat roosts within a building known as Woodmancote Parish Hall And School Cottage, Brighton Road, Woodmancote, West Sussex, BN5 9SR.

- Two Brown Long Eared Bats (BLE); one hibernating within Loft Space 2 (LS2), and a single dead BLE hanging from timber panelling on the ground floor of a washroom was recorded in January 2023.

- The dusk emergence surveys over May and June 2023 recorded a transient summer day roost for a single Soprano Pipistrelle (SP) emerging from a gappy tile on the eastern facing pitched roof.

- Without mitigation, the proposed works to the building will result in the destruction and loss of the BLE Hibernation Roost and SP Summer transient day roost.

- To ensure full compliance with the law, a European Species Mitigation Licence (EPSL) Mitigation Licence will be in place prior to proposed building works. As part of the licence application process a Method Statement detailing the mitigation which will be implemented under the licence will prepared by a suitably qualified ecologist and submitted to Natural England. As a consequence, the mitigation agreed during the licence application process will take precedence over the mitigation outlined in the Mitigation Strategy proposed in this current document.

- Planning permission will need to be secured before the EPSL can be applied for. Data from this report will be required to inform the EPSL work schedule and mitigation.

- It was noted that one of the loft spaces (where no evidence of bats, but multiple roost features were recorded) has been removed since the initial Assessment by Arbtech In January 2023.

- No internal or external works to the building are to go ahead until the EPSL is in place and a Level 2 Ecologist is on site. Failure to do so may result in an offence and death or injury to roosting bats which is punishable by fines and prison sentences.

- All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat, or intentionally kill, injure, or take any bat.

2 Introduction

2.1 Astute Ecology were commissioned by Anita and Bill Eastwood to undertake three bat emergence and a single dawn survey in order to confirm presence or likely absence of summer bat roosts, in order to provide further information for a planning application and Natural England Licence application pertaining to a building known as Woodmancote Parish Hall And School Cottage, Brighton Road, Woodmancote, West Sussex, BN5 9SR.

2.2 The building is the subject of a proposed planning application for the partial demolition and extension of the property including renovation works to the existing roofs. The building features two lofts: Loft Space 1 (LS1) and Loft Space 2 (LS2).

2.3 The building has previously been subjected to a Preliminary Roost Assessment (PRA) on the 12th January 2023 by Arbtech Consulting Ltd which recorded multiple Potential Roost Features (PRF's) and two Brown Long Eared Bats (BLE): one hibernating within LS2, and a single dead BLE hanging from timber panelling on the ground floor of a washroom. Arbtech Consulting also undertook two hibernation surveys on the 6th February 2023 and 22nd February 2023, during which inspections and static detector (x2 Song Meter SM4) recordings suggested the hibernating bat left the building on the 12th February 2023. The dead bat was no longer present, having been removed by the client.

2.4 Including outlining the potential impacts to the hibernation roost in LS2 from development, The PRA stated that "*The proposed development will result in the renovation of the entire building, including the demolition and rebuild of ground floor extensions, the removal of LS1 to convert into a vaulted ceiling, and repairs to the roof coverings. This could result in in destruction of crevice dwelling bat roost features and could cause disturbance, death or injury to bats*". Three further surveys comprising dusk and dawn surveys were recommended.

2.5 This report details the outcome of three further dusk emergence surveys including a single dawn survey undertaken in accordance with BCT Bat Survey Guidelines (Collins 2016) and Interim BCT Guidance Note (May 2022), and a daytime assessment of the building for further signs and evidence of bats. The report also serves to detail an analysis of the results to inform and update recommendations and mitigation, where relevant, in order to prevent any breaches in legislation relevant to protected British bat species.

2.5 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Astute Ecology. The surveys are based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site. This report pertains to this information only. The legislation relevant to protected species within the United Kingdom is summarised within Appendix 2.

3 Methodology

3.1 Daytime assessment

The Building was checked on each survey by a level 2 licensed bat ecologist internally and externally for evidence of bats including checks for feeding remains, bat droppings and staining around potential access points and within the lofts.

3.2 Dusk Emergence and Dawn Re-entry Surveys

Three dusk emergence surveys supported by a single dawn (within 24 hours of the second dusk survey) was undertaken in suitable conditions (Table 1). During the surveys, all elevations and aspects of the building considered to hold potential roost features were visually observed by surveyors whilst using handheld, static bat detectors and Infra-Red (IR) equipment to identify any bats potentially emerging from the building and to record activity, species and call type. Full spectrum Static detectors were also deployed within the building during and between surveys. A map of surveyor and equipment positions is included within Appendix 3. The surveys were undertaken in accordance with BCT Bat Survey Guidelines (Collins 2016) and Interim BCT Guidance Note (May 2022).

Table 1. *Survey conditions*

Date	**Sunset**	**Start**	**Finish**
02/05/2023 – Dusk Emergence	20:23	20:00	22:20
Weather:	Temperature:	16°C	15 °C
	Humidity:	71%	77%
	Cloud cover:	3/8	3/8
	Wind:	None	None
	Precipitation:	None	None
Date	**Sunset**	**Start**	**Finish**
23/05/2023 – Dusk Emergence	20:55	20:30	22:50
Weather:	Temperature:	19°C	17 °C
	Humidity:	61%	72%
	Cloud cover:	2/8	2/8
	Wind:	None	None
	Precipitation:	None	None
Date	**Sunrise**	**Start**	**Finish**
24/05/2023 – Dawn re-entry	05:02	03:15	05:20
Weather:	Temperature:	16°C	16 °C
	Humidity:	75%	75%
	Cloud cover:	2/8	2/8
	Wind:	None	None

	Precipitation:	None	None
Date	**Sunset**	**Start**	**Finish**
17/06/2023 – Dusk Emergence	21:17	20:45	23:15
Weather:	Temperature:	20°C	18 °C
	Humidity:	64%	70%
	Cloud cover:	4/8	4/8
	Wind:	None	None
	Precipitation:	None	None

3.2 **Surveyors**

Survey carried out by Andrew Bird BSc. (Hons.) Senior Ecologist, Natural England WML-A34 – Level 2 Bat Licence Number: 2018-37905-CLS-CLS, Amber Wood BSc (Hons.), Jennifer Shuttleworth and Oliver Bexon Assistant Ecologists.

3.3 **Reporting**

This report was prepared in accordance with the Chartered Institute of Ecology and Environmental Management; Guidelines on Ecological Report Writing. CIEEM (2017).

3.4 **Equipment used:**

- 4 x Echometer Touch 2 Pro with iPad
- 4 x Bat Box Duet with headphones
- 3 x SM4BAT FS with SMM-U2 microphone
- 5 x Sony FDR-AX53 with Night-shot
- 10 x Night-Fox XB5 IR Torches
- 2 x Andoer IR Lamps
- X2 Night-Fox Whisker IR Night Vision Binoculars
- X4 Infra-red (unbranded) security lamps
- Torches, Thermometers, and Hygrometers, Tripods, Power banks

3.4.1 **Night Vision Equipment**

IR cameras were used during the survey except in areas where artificial light provides sufficient recording vision. Night vison video footage was reviewed after the survey on PC monitors.

3.5 **Limitations**

No limitations to the survey were encountered. It should be noted that whilst every effort has been made to provide a comprehensive description and survey of the site, no investigation could ensure the complete characterisation and prediction of the natural environment during a ‘snapshot’ study.

3.6 **Report Lifespan**

Given the transient nature of the subject, we would consider the survey results contained to be accurate for 12 months from the last survey.

4 Results

4.1 Daytime Inspections

The building still features multiple Potential Roost Features (PRF's) assessed during the previous PRA by Arbtech Ltd. No evidence of bats was recorded within or on the building during the daytime surveys. It was noted on the first survey that LS1 had been completely removed and the roof was visible from the ground. Additionally the wooden panelling on the ceiling of the ground floor washroom where a dead bat was previously found, had also been removed.

4.2 Dusk Emergence and Dawn Re-entry Surveys

- A single Soprano Pipistrelle was recorded emerging from a gappy tile on an eastern facing pitched roof on the first survey only and is thus considered to be a transient summer day roost. No other bats (Table 2, Figure 1, Figure 2). No other bats were recorded emerging or entering the building by surveyors and no emergences or re-entries were captured on IR cameras.
- Static detectors placed within LS2 recorded very faint calls of Common Pipistrelle which were considered to be recordings of bats flying outside – this was also apparent where recordings made during the dusk and dawn surveys not associated with any emergence/re-entry closely time-matched the faint calls recorded externally.
- Activity in the local area was moderate with occasional foraging and passes by seven different species, including: Common Pipistrelle (CP), Soprano Pipistrelle (SP), Brown Long Eared (BLE), Noctule (NOC), Barbastelle (B), Myotis (M) and Common Serotine (CS). The tables below summarise the results of the survey undertaken.

Table 2: *Results of Dusk Emergence Survey (02/05/23 – Sunset 20:23))*

Time	Activity
20:34	X1 SP EMERGENCE from gappy tile on east facing area of pitched roof.
20:35	X1 NOC Heard Not Seen (HNS) 12 Seconds (12)
20:36	X1 NOC HNS 8S
20:36	X1 SP Foraged north of building 10S
20:41	X1 NOC HNS 4S
20:45	X1 CP Foraged around and over the building 30S
20:48	X1 CP Foraged around and over the building 30S
20:49 – 20:55	X1 CP intermittent HNS
20:58 – 21:02	X1 CP intermittent HNS and occasional foraging around building
21:04	X1 CS flew from east to west across site
21:08	X1 CP HNS

21:09	X1 SP HNS
21:12-21:27	X1 CP intermittent HNS

Table 3: *Results of Dusk Emergence (23/05/22 -Sunset 20:55) and Dawn Re-entry (24/05/23 – Sunrise 05:02)*

Time	**Activity**
Dusk:	**Dusk:**
21:30	X1 CP HNS 3S
21:32	X1 CP Foraged east of building 5S
21:42 -21:45	X2 CS foraged in loop passing high over northern section of site
21:46	X1 CP Foraged east of building 4S
21:47	X1 B HNS 5S
21:48	X1 B HNS 5S
21:53	X1 BLE HNS 4S
21:53	X1 MYO HNS 5S
21:58	X1 CS HNS 10S
22:00	X1 CS HNS 14S
22:03	X1 CO HNS
22:06	X1 CS HNS 10S
22:10-22:15	X1 CP intermittent HNS
22:17	X1 SP HNS
Dawn:	**Dawn:**
04:03-04:05	X1 CP HNS intermittent
04:23	X1 CS HNS 6S
04:23 – 04 33	X1 CP HNS intermittent
04:36 – 04:38	X1 CP Foraging northern area of site

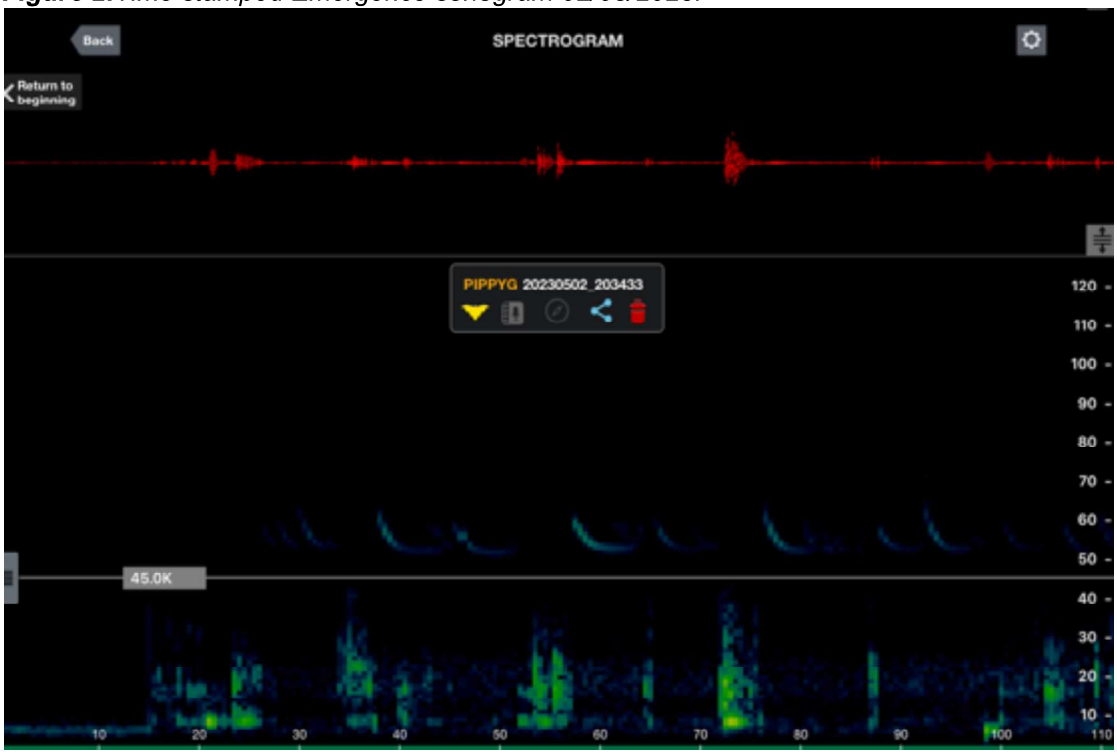
Table 3: *Summary of Dusk Emergence Survey (17/06/23 – Sunset 21:17)*

Time	Activity
21:34	X1 CP Foraged north east of building 11S
21:39	X1 CP Foraged around building 15S
21:45	X1 CP HNS
21:47	X1 CS passing high over northern section of site 11S
21:48 – 21:50	X1 CP Foraged within western and northern section of site
21:55	X1 SP HNS

Figure 1: *Soprano Pipistrelle Emergence location (Gappy tile in red box).*



Figure 2:*Time stamped Emergence sonogram 02/05/2023.*



5 Evaluation and Recommendations

5.1 **Roosting bats**

- The building features multiple Potential Roost Features (PRF's) and two Brown Long Eared Bats (BLE): one hibernating within LS2, and a single dead BLE hanging from timber panelling on the ground floor of a washroom was recorded in January 2023.

- The dusk emergence surveys over May and June 2023 recorded a transient summer day roost for a single Soprano Pipistrelle emerging from a gappy tile on the eastern facing pitched roof.

- Without mitigation, the proposed works to the building will result in the destruction and loss of the BLE Hibernation Roost and SP Summer transient day roost.

- The roost have low conservation significance, however the proposed works to the building will only be legally permitted under the terms of a European Protected Species Mitigation licence (EPSL) issued by Natural England.

- Therefore an EPSL must be granted from Natural England in order to allow works to proceed legally. Data from this report will be required to inform the EPSL work schedule and mitigation

- The EPSL will need to be compiled and submitted by a suitably licenced and experienced bat mitigation ecologist and will need to show that the works can proceed with minimal impact to bats and the long-term favourable conservation status of local populations can be maintained

- Planning permission will need to be secured before the EPSL can be applied for.

- Bats are highly mobile and can change roost sites and character throughout the year and from season to season. If the proposed works to the site do not begin within 12 months of the final bat survey, it will be necessary to conduct a re-survey to determine if the characteristics of the roosts on site have changed.

- All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat or intentionally kill, injure or take any bat.

6 Outline Mitigation

6.1 Mitigation Strategy

- The roosts have low conservation significance, however proposed works to the building will only be permitted under the terms of a European Protected Species Mitigation licence issued by Natural England. The development can proceed with minimal impact to bats and the long-term favourable conservation status of local populations can be maintained via the mitigation and avoidance measures outlined below to safeguard individual bats, to temporarily mitigate and then compensate for the loss of roosts.

- To ensure full compliance with the law, once planning has been granted, an EPS Mitigation Licence in relation to Bats will be in place prior to works commencing within the Application Site. As part of the licence application process a Method Statement detailing the mitigation which will be implemented under the licence will prepared by a suitably qualified ecologist and submitted to Natural England. As a consequence, the mitigation agreed during the licence application process will take precedence over the mitigation outlined in the Mitigation Strategy proposed in this current document.

6.2 Provision of replacement roosts prior to works beginning

- At least Two Vivara Pro WoodStone Bat Boxes (or similar woodcrete made boxes) will be provided to mitigate the loss of roosting opportunities during the construction phase of the project. These boxes will be installed at c. 5 metres above the ground facing in south-westerly or south-easterly directions to receive full sunlight for at least part of the day, have open flight access and be protected from night time illumination. Bat boxes will need to be accessible by ladder and positioned before the dismantling of existing roost sites commence. The above given bat boxes usually last c. 25 years and must be left in-situ after completion of the development.

6.3 Timing of works

- Specific timing restrictions on proposed works are required due to the confirmed presence of a hibernation roost. Therefore, all works proposed to the building (including the roof, external walls and loft space) will only be undertaken between May and October (Incl.), in accordance with Mitchell-Jones (2004) *Bat Mitigation Guidelines.*

6.4 Supervised Soft Demolition of Roost Structures

- Prior to any disturbance of the areas known to contain bat roosts, all contractors and operatives involved will be given a formal briefing to make them aware of the presence of roosting bats and their legal duties with regards to bats.

- The bat-licensed (Level 2) ecologist will inspect relevant areas of the building for bats before there are any works to them. Any bats found will be captured by the bat-licensed ecologist by hand (using gloves) or a static net, placed into a cloth bag and relocated to a pre-installed bat box.

- Dismantling of the roost sites (by hand) will be conducted under the supervision of a bat-licensed ecologist who will be licensed to handle bats. For example, any tiles will be gently removed by hand in a vertical rather than horizontal sliding motion. Crevices will be inspected by endoscope by the licenced ecologist. Any bats found will be relocated to the bat boxes using the above method.

- Active bats will likely avoid the operations, however, if any bats are discovered during this process, works will stop until the bat(s) vacate the building or the licensed bat handler removes the bat(s) and relocates them to a pre-installed bat box.

- The dwellings will be released for redevelopment only when the project ecologist has confirmed that the building is clear of bats and that works can proceed without risk of harming or disturbing roosting bats.

- If a bat is discovered at unsupervised times, work will stop immediately, and the licensed ecologist will be called for advice. This advice may include leaving the bat to disperse on its own accord or waiting for a licensed handler to move the bat before works proceed.

6.5 **Roost replacement**

Additional Compensatory roosts to replace those lost during the development of the building are required as below:

- It is recommended that at least 2 bat tubes and or bat boxes suitable for pipistrelle and BLE to be installed on the southern elevation. The boxes/tubes structure would be a permanent installation, to be retained after redevelopment of the building.

- External lighting within the vicinity of the new roost entrances should be avoided as this could deter or prevent bats from using the boxes.

6.6 **Post-Development Check**

Post-development monitoring by a suitably qualified ecologist is required for two years, in accordance with Mitchell-Jones (2004) Bat Mitigation Guidelines. The named ecologist will visit the site, post-development, to check that compensatory roosts have been provided.

6.7 **Lighting Strategy**

Light sensitive species were recorded within the local area and on site, therefore a low impact lighting strategy is to be adopted for the site. The following measures should be implemented within the development to reduce impacts on foraging and commuting bats caused by artificial lighting:

- Direct any task lighting used during construction away from trees and hedges.
- Set any necessary security lighting on short timers with a sensitivity to large moving objects only.
- Use hoods, cowls or directional lighting to avoid light being directed at the sky or towards the boundary vegetation.
- Limit lighting times to provide dark periods; and low-pressure sodium security lights with glass glazing are recommended, as these produce the least amount of UV light. Avoid white and blue wavelengths of the light spectrum. The brightness of the lamps should be kept as low as feasibly possible.
- Construction work should be limited to daylight hours. Prohibiting night-time working will protect the site from the potential negative effects of noise, activity, and lighting.

Appendix 1. References

BCT (2022) Interim Guidance Note: *Use of night vision aids for bat emergence surveys and further comment on dawn surveys.* Online*:*

Bat Conservation Trust's '*Good Practice Survey Guidelines*' (Rev 2012).

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National Planning Policy Framework, (2012). http://www.communities.gov.uk/publications/planningandbuilding/nppf

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Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

Appendix 2. Legislation, Guidance and Methodology

Roosting Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended).

It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally, or recklessly disturb a bat or intentionally kill, injure or take any bat.

Appendix 3. Surveyor and Equipment Positions

