



Netherby Cottage, Box
Bat Activity Surveys & Assessment
For Artel31

23rd October 2025

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1. Introduction

1.1 Commission

Ellendale Environmental Limited was commissioned by Artel31, on behalf of their client, to undertake bat activity surveys and an assessment for a building at Netherby Cottage, Hazelbury Hill, Box, SN13 8LB ('the site'). Proposed works to the building include the removal of urea-foam from the underside of the roof tiles to enable a second-floor space to be re-inhabited including placing a new floor, re-insulating and plaster boarding the ceiling. The historic water closet is also to be reinstated ('the proposed development').

This report has been written taking cognisance of previous surveys and reports at the site, namely:

- *Netherby Cottage Bat Roost Inspection Report* - Ben Mitchell BSc (Hons) MCIEEM, July 2025.

This previous bat roost inspection identified that the building has been used by brown long-eared bats *Plecotus auritus* as a roost, as evidenced by DNA analysis of dropping samples taken from inside the upper floor. Further bat activity surveys were therefore required of the building, to be undertaken following the BCT guidelines.

1.2 Site Details

The site is located to the south-east of Box, a large village and civil parish within the Cotswolds Area of Outstanding Natural Beauty in Wiltshire, England, approximately miles west of Corsham and five miles north-east of Bath at OS grid reference ST 82797 68596.



Figure 1: Site location



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1.3 Bat Conservation

British bats

There are 18 species of bats resident in Britain, 17 of which are known to breed. These are from two families, namely the Rhinolophidae (the two horseshoe bat species) and the 15 species of vesper/evening bats (the Vespertilionidae). All British bats are insectivorous and locate their prey using ultrasonic calls through a biological system known as echolocation.

During summer months, female bats form nursery colonies in trees and buildings, where they raise infants. In the winter, males and females hibernate in trees, buildings and underground structures.



Conservation status of British bats

The general consensus in Britain and Europe is that virtually all bat species are declining and are vulnerable. Our understanding of population status is poor, as there is very little historical data for most bat species. Certain species, such as the horseshoe bat, are better understood and have well documented contractions in range and population size.

Given this general picture of decline, the UK Government (within the UK Biodiversity Action Plan) has designated eight species of bats as priority species (these being soprano pipistrelle *Pipistrellus pygmaeus*, common pipistrelle *Pipistrellus pipistrellus* (Wales only) greater horseshoe bats *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*, barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, noctule *Nyctalus noctula* and brown long-eared bat). These plans provide an action pathway whereby the maintenance and restoration of former population levels are envisaged.

Legal status of British bats

All bats and their roosts in England were originally protected under the Wildlife & Countryside Act 1981. Subsequent amendments to the legislation for England (and Wales) has removed bats from most of the provisions of the Act; however, it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection; and/or
- Intentionally or recklessly obstruct access to any structure or place that a bat uses for shelter or protection.

All British bat species are listed in Annex IV of the EC Habitats Directive and are fully protected through The Conservation (Natural Habitats, &c.) Regulations 1994. All bat species found in England are classed as European protected species. They receive full protection under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).



These regulations make it an offence to:

- Deliberately capture, injure, or kill a bat;
- Harass a bat or group of bats;
- Disturb a bat in a roost (any structure or place it uses for shelter or protection);
- Disturb a bat while it is rearing or otherwise caring for its young
- Obstruct access to a bat roost or otherwise deny an animal use of a roost;
- Disturb a bat in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species; and/or
- Disturb a bat while it is migrating or hibernating.

The legislation, although not strictly affording protection to foraging grounds, does protect bat roost sites. Bat roosts are protected at all times of the year, regardless of whether or not bats are present at the time.

It's also an offence to:

- Damage or destroy a breeding site or resting place of such an animal (whether or not deliberately or recklessly); and/or
- Keep, transport, sell or exchange, or offer for sale or exchange any wild bat (or any part or derivative of one) obtained after 10th June 1994.

Where development is proposed that would result in an offence under the Habitats and Species Regulations, a European Protected Species (EPS) licence needs to be granted by Natural England (NE) to permit an act that would otherwise be unlawful. This provides for a specific derogation from the legislation, to prevent a legal infringement occurring.

To obtain an EPS licence for development it must be demonstrated that the purpose of the act to be licensed is for:

- *"Preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment"* (Regulation 55(2)(e)).



In addition, NE will not grant an EPS licence unless they are satisfied that:

- *“There is no satisfactory alternative”* (Regulation 55(9)(a)); and
- *“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”* (Regulation 55(9)(b)).



2. Methodology

2.1 Overview

Survey work undertaken in relation to a proposed development needs to be conducted under a scientific/conservation licence issued by, in this case, NE. The work is normally conducted by an environmental consultant and they will advise on the necessary course of further action with respect to licences, mitigation and compensation measures.

A number of recognised survey techniques are available to the consultant, such as:

- Natural England guidelines (A.J. Mitchell-Jones [2004], *Bat Mitigation Guidelines*, English Nature. ISBN 1 85716 781 3), which provide generic technical advice on bat mitigation; and
- Hundt L (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 4th Edition, Bat Conservation Trust, London. ISBN-13: 978-1-872745-96-1.

For works which may impact bats, the developer must:

- Demonstrate that adequate surveys have been undertaken to establish the presence or absence of bats, to predict the potential impact on them, their resting sites or breeding roosts;
- Bring proposals forward that will integrate provision for bats into any design that will compensate and mitigate for any impact (if bats or their roosts are discovered); and
- Provide sufficient survey information that will support a licence application under the Habitats Directive should bats be discovered.

Where bat species are using a site, it will be necessary to mitigate the impacts of the development upon the population(s). These would include measures that remove or reduce any damaging effects on the animals or their roosts.



In most cases a package of compensation measures will be required to accommodate any loss of breeding or resting-places, and the timing of works will need to be synchronised with the life-cycles of the effected species.

This collective package of mitigation and compensation measures should allow the conservation status of the animals to be at least maintained. With careful thought, the conservation status may even be enhanced. This is usually most easily achieved by early ecological input into the project.

In the case of sites where bats are present, a development licence from NE will be required to conduct works affecting bats.

2.2 Bat Survey Licence

The activity surveys were led by Christopher Parsons, Associate Ecologist at Ellendale Environmental. Christopher holds a bat survey licence (Bat Survey Class Licence CL18 (Bat Survey Level 2), registration number CLS-2019-42561), with respect to the Conservation Regulations 1994. The licence is valid for all counties of England, until 31st October 2025. Christopher has over 10 years' professional experience of undertaking ecological surveys and working with bat species across the UK.

The surveys were assisted by Christopher Rawlins and Barry Parsons, who both have over five years' experience of undertaking bat activity surveys.

2.3 Survey Objectives

On the basis of the brief provided by the client, Ellendale Environmental conducted survey work to fulfil the following needs:

- Obtain baseline information on the habitat features suitable for bat species;
- Determine the presence/likely absence of bat species within the proposed development site and any activity at or near the site; and
- Determine the type, extent and pattern of detected usage.



2.4 Survey Methodology

Two dusk emergence/activity bat detector surveys were undertaken on Wednesday 6th August and Saturday 20th September 2025. The dusk surveys commenced 30 minutes before sunset (sunset was at approximately 20:48 and 20:11 respectively) and completed 90 minutes after sunset, when all bats will normally be expected to have exited their roost sites.

One dawn re-entry survey of the building was undertaken on Sunday 12th October 2025. The survey commenced 90 minutes before sunrise (sunrise was at approximately 06:38).

Mini time-expansion bat detectors (Pettersson D 240X and PeerSonic) were used to detect bat echolocation calls and identify species where possible. Time-expanded (x10) recordings are made using a portable Edirol digital recorder (Edirol R-07HR) that can be later analysed on bespoke software.

In addition, ORDRO 4K Camcorder Video InfraRed Night Vision Cameras and a pair of Nightfox Red HD Infrared Night Vision Goggles were used during the surveys, along with Anabat swift multi-spectrum bat detectors.

Weather was not a limiting factor in the activity surveys. The conditions are summarised in Table 1.

Table 1: Survey weather conditions for activity surveys

SURVEY DATE	TEMPERATURE (°C)	WIND SPEED (MPH)	CLOUD COVER/ PRECIPITATION
06/08/25	Start. 20.9 End 18.4	Avg. 0.0 Max. 0.0	40% cloud cover, dry, warm and still.
20/09/25	Start. 18.3 End 13.8	Avg. 0.9 Max. 1.6	10% cloud cover, warm and dry, with an occasional light breeze.
12/10/25	Start. 11.2 End 11.8	Avg. 0.0 Max. 1.0	20% cloud cover, warm and dry with an occasional light breeze.



2.5 Constraints

The surveys were not restricted, and full access was granted to external spaces around the building.

Whilst no biological survey can guarantee that all cues and signs of protected or notable species will be recorded, Ellendale Environmental is confident that all key fauna present during the surveys were noted.



3. Results

3.1 Site Description

Netherby Cottage is believed to date back to 1725 and is a Grade II Listed building comprising of three individual houses that have been combined into one property located on the corner of Hazlebury Hill along the western boundary. Quarry Hill is located along the northern boundary of the building and to the east is the former candle factory building and to the south are residential properties along Hazlebury Hill.

Photograph 1: showing a view of the building



The building has been extended over time resulting in a combination of older and more modern building typology and fabrics. The southern section has a more modern roof structure and clay tiles, and the northern roof section is comprised of stone roof tiles.



The southern loft section is separated from the north by a substantial dividing wall between the more modern roof area that has been converted into a dwelling space, and the currently vacant loft space in the northern section used for storage.

During a previous physical inspection of the building, numerous potential bat access/egress locations were found on the west section of the roof which is comprised of stone tiles. A cluster of ~12 droppings was present in the westernmost section. These have subsequently been identified using DNA analysis as brown long-eared bat droppings. The building was therefore assessed as having moderate potential to support roosts of conservation significance, beyond that of the brown long-eared roost. There is high potential for roosting bats to be present, but this is unlikely to support a roost of high conservation significance.

Photograph 2: showing a view of the western section of the building





3.2 Bat Activity Surveys

Dusk survey, 06/08/25

Bat activity was first recorded at 20:46, 20 minutes after sunset, when a common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site. This bat was recorded throughout the survey until the end and did not emerge from the building.

Table 2: Bat activity survey results, 06/08/25

TIME	OBSERVATIONS
20:46	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
20:55	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
20:58	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:12	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:13	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:19	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:20	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:29	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:30	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:33	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:36	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:37	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.
21:40 – End	A common pipistrelle bat was recorded and observed foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site.. The bat was recorded intermittently until the end of the survey.

No other species of bat was recorded and no bats were observed emerging from the building during the survey.



Dusk survey, 20/09/25

No bats were recorded or observed during the activity survey undertaken at the site on 20th September 2025.

Dawn survey, 12/10/25

No bats were recorded or observed during the activity survey undertaken at the site on 12th October 2025.



4. Conclusions

4.1 Conclusion

The surveys were not constrained, and full access was gained to the external spaces around the building for the activity surveys.

A previous physical survey of the building had identified numerous potential bat access/egress locations on the west section of the roof which is comprised of stone tiles. A cluster of ~12 droppings was present in the western most section which were subsequently identified using DNA analysis as brown long-eared bat droppings.

Two dusk emergence/activity surveys and one dawn re-entry/swarming survey for bats was undertaken in August, September and October 2025, in suitable weather conditions and within the survey window for bats.

During the surveys, bat activity was observed with common pipistrelle bats recorded foraging up and down past the house along Quarry Hill and Bulls Lane adjacent to the site. However, no bats were recorded emerging from the building during the surveys. Furthermore, no recordings of brown long-eared bats were made and none were observed during the surveys.

From the evidence collected on site and the results of a previous assessment, it is assessed that the building is being used by a small number of bats and the level of bat utilisation is assessed as being a spring and summer roost for a low number of non-breeding common adult bat species.

The overall relative nature conservation value is judged as **LOW** on the sliding scale of relative importance as described in Figure 4 of the Bat Mitigation Guidelines. This is due to the potential of a low number of rarer bat species and the suitability of the building to provide roosting for hibernating bats. The suggested level of proportionate mitigation is *“Flexibility over provision of bat box, access to building etc. No condition about timing or monitoring”*.



4.2 Main Recommendations

The following recommendations are made:

- A development licence for bats will be required from NE. The development licence will provide a legal basis by which the works can proceed. It will be necessary to provide a Method Statement and a Mitigation and Compensation Plan to a prescribed format to support this application. This report will provide much of the information that will be required to go into the licence application;
- It is recommended that mitigation features should be employed that will allow bat species access to suitable roosting habitat;
- It is recommended that the works on the building are restricted to a suitable time when bats will be least disturbed by the works;
- The roof and loft strip must be supervised by a licenced bat ecologist and if bats or roosts are encountered all works must stop immediately. The supervising bat ecologist will remove the bats to a pre-agreed bat roost/bat box; and
- Contractors should be given a briefing/toolbox talk and have a clear understanding that they must halt all works and call supervising bat ecologist if bats are encountered within the buildings.

4.3 Mitigation/Compensation

The mitigation/compensation scheme must be proportionate to the nature conservation value of the bat roost present in the building and it is considered that the bats present can be protected from harm or disturbance.

Mitigation features will be incorporated into the site that will continue to support roosting bats into the future, namely:

- At the outset of works, two Cavity Bat Boxes¹ will be placed in suitable locations around the western elevation of the building. The boxes will be placed in suitable locations and positioned so that they will not be impacted by the proposed works and will be located as high on the building as possible;

¹ [Cavity Bat Box | The Nestbox Company](#)



Figure 2: showing a cavity bat box



The FSC® Certified Cavity Bat Box is designed for those bat species which would naturally roost in cavities, such as brown long-eared bats, and has a larger open space in comparison with some crevice bat boxes.

The box has an apex roof with good 'holds' on the inside, enabling the bats to easily hold on and cluster. The inside temperature of the bat box makes a big difference to the bats, so the bat house has been designed, with ceramic heat sinks and black external colouration, to warm up faster and maintain a more stable internal temperature than other boxes.



Appendix 1 – Extract from the Bat Mitigation Guidelines

Figure 4 of the Bat Mitigation Guidelines:

Conservation significance	Roost status		Mitigation/compensation requirement (depending on impact)	
	Low	High	Low	High
	Feeding perches of common/rarer species		Flexibility over provision of bat-boxes, access to new buildings etc. No conditions about timing or monitoring	
	Individual bats of common species			
	Small numbers of common species. Not a maternity site			
	Feeding perches of Annex II species		Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements	
	Small numbers of rarer species. Not a maternity site			
	Hibernation sites for small numbers of common/rarer species		Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.	
	Maternity sites of common species			
	Maternity sites of rarer species		Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years.	
	Significant hibernation sites for rarer/rarest species or all species assemblages			
	Sites meeting SSSI guidelines		Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.	
	Maternity sites of rarest species			