



BJ Collins

PROTECTED SPECIES SURVEYORS

PROTECTED SPECIES (BAT) SURVEYS

OUTBUILDING AT WOODSIDE FARM
HEATH ROAD
BAGWORTH
LEICESTERSHIRE

A report to:

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Lead Surveyor:	Mr Patrick A Collins BSc (Hons)

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The evidence which we have prepared and provided is true and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

RELIANCE - The report describes the conditions and ecological features on the site (and possibly its environs) at the time of survey and that this may (is likely to) change over time. Reliance upon the findings of this report should be determined in accordance with the Chartered Institute of Ecology and Environmental Management guidance on the longevity of ecological surveys, see Advice Note (April 2019) *On the Lifespan of Ecological Reports and Surveys* CIEEM.

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SUMMARY

This report has been prepared by BJ Collins – Protected Species Surveyors Limited to review and assess the likely ecological impacts of the proposed development at Woodside Farm, Bagworth.

The development plan will involve the conversion of the existing outbuilding to a residential property, including extension works and a new driveway.

A Preliminary Bat Roost Assessment and Phase II Emergence and Activity Surveys were undertaken in the summer of 2024, within the active survey season for bats.

Bats

The preliminary bat roost assessment identified evidence of bat activity within the building, in the form of scattered droppings, and potential roost features externally, categorising the building as being of at least “Low Bat Roost Suitability” as per the Good Practice Guidelines (Collins 2023).

This level of categorisation demands the requirement from the guidelines for follow-up emergence and activity surveys, which were undertaken in July and August 2024, to provide confidence in the presence/absence of roosting bats and to categorise any roost which may be present.

The Phase II Emergence and Activity Surveys identified active roosting by two Common pipistrelle bats in the south facing gable end, therefore the development project will require the submission for a European Protected Species Derogation Licence. The presence of individual roosting by common bat species qualifies the building for registration under the Bat Low Impact Class Licence – CL21.

The application for any EPS licence must be supported with a mitigation strategy which will include actions to protect bats from harm during the works and provide permanent roosting habitat in the long-term in the same or similar location in the final design.

The mitigation strategy for the development proposal is outlined in Section 5 of this report,

1. INTRODUCTION

1.1 Background to Commission

BJ Collins Protected Species Surveyors Limited was commissioned by The Art of Building Limited, on behalf of the site owners, to provide ecological support in relation to the development proposal for the outbuilding at Woodside Farm, Bagworth (hereafter, the 'site').

The ecological support comprised a protected species survey, focussed on bats, consisting of a Preliminary Bat Roost Assessment and Phase II Emergence and Activity Surveys.

All surveys were undertaken in the summer of 2024, within the active survey season for bats.

1.2 Description of Project

The development plan will involve the conversion of the existing outbuilding to a residential dwelling, including a change to the roof frame, and extensions work, as well as the construction of a new driveway.

1.3 Purpose of this Report

The purpose of this report is to review and assess the likely ecological impacts of the proposed development and to ensure works remain lawful. Legislation can be found appended (1) to this report.

1.4 Site Description

The site (indicated by the yellow boundary illustrated in Figure 1 below) is located south of Bagworth, Leicestershire (central Ordnance Survey Grid Reference (OSGR) SK 4457 3065) and comprises a detached outbuilding, adjacent to the dwelling and outbuildings of Woodside Farm.

The site is immediately adjacent to Bagworth Heath Woods to the east and further deciduous woodland to the west. The wider surrounding area is dominated by an agricultural landscape with further areas of woodland, which provides a variety of commuting routes and foraging opportunities for bat species in the locality. There is also an area of standing water located 400m north of the site.



Figure 1: The location of the site, encircled in yellow, in relation to the surrounding landscape, courtesy of Google Earth. North to top of page.

2. METHODOLOGY

2.1 Desktop Study

The desktop study involved a review of publicly available information including the UK Government's MAGIC¹ website and Google Earth Pro².

- The MAGIC database was used to establish the presence of statutory designated sites of nature conservation interest, as well as area of optimal habitat such as ancient woodland, and previously granted protected species licences within a 2.5 km radius of the site.
- Google Earth Pro was used to review recent and historical aerial photography of the site and surrounding area, and to provide ecological context for the results of the site assessment.

2.2 Preliminary Bat Roost Assessment

A Preliminary Bat Roost Assessment of the outbuilding was undertaken on the 27th of June 2024. This survey was completed in accordance with the Good Practice Guidelines (Collins 2023), comprising a visual inspection of all areas of the building (formerly referred to as a bat scoping survey).

The methodology included examining the building for potential roost features and assessing the likelihood of these features being used by bats. This involved searching for evidence of bat roosting in the form of feeding remains, droppings, staining, worn surfaces and the bats themselves (alive or dead).

Equipment used included collapsible ladders, a powerful torch, camera, and binoculars.

2.3 Emergence and Activity Surveys

In accordance with the Good Practice Guidelines (Collins 2023), the outbuilding was subject to Emergence and Activity surveys in the active season of 2024. The surveys were carried out on the 29th of July and the 27th of August 2024. The emergence surveys began 15 minutes prior to sunset and lasted for 105 minutes each.

The surveys were completed by deploying one experienced and licensed bat ecologist, and one assistant bat worker, to cover all elevations of the survey building simultaneously. The surveyors used a range of equipment including the Anabat Scout and Echometer Touch Pro full spectrum bat detectors and recording units.

Night vision aids (NVA's) were utilised alongside the surveyors. These included the Canon XA20 digital camcorders with night vision recording paired with Dedolight Infrared Floodlighting and Nightfox XB5 Pro Infrared Torches, and the Guide IR TrackIR Pro 19 thermal imaging monocular.

2.4 Weather Conditions (Phase II Surveys)

Ambient temperature was measured with an ETI Hygro-Therm hygrometer and wind was measured as per the Beaufort scale.

Table 1: Weather data from the Emergence and Activity surveys.

Date	Sunset/ Sunrise	Temperature (°C)		Cloud Cover (%)		Wind (Beaufort)		Precipitation
		Start	End	Start	End	Start	End	
29/07/2024	21:02	17.3	16.9	60	60	1	1	None
27/08/2024	20:04	19.4	15.4	80	100	1	2	Light Rain after 21:15

¹ Multi-Agency Geographic Information for the Countryside. Available at www.magic.defra.gov.uk/magicmaps.aspx

² Google Earth Pro 7.3.6.9345

2.5 Survey Constraints

The surveyor did not encounter any significant constraints upon the survey effort. Weather was favourable for a visual inspection with plenty of natural light, and all areas of the building and garden were accessed.

2.6 Personnel

The Preliminary Bat Roost Assessment was carried out and led by Mr. P A Collins BSc (Hons), a Level 2 licensed bat ecologist (Natural England License Number: 2022-10788-CL18-BAT), assisted by Ms. R J Gibbs MSc.

The first emergence and activity survey on the 29th of July was led by Mr. A Orrell FdSC (Natural England License: 2019-41107-CLS-CLS), assisted by Ms. D Orrell.

The second emergence and activity survey on the 27th of August was carried out by Mr. P A Collins assisted by Mr. J Edinborough MSc.

3. RESULTS

3.1 Desktop Study

3.1.1 Statutory and Non-statutory Designations

There are no Statutory and Non-statutory designated sites present within a 2.5 km radius of the site.

3.1.2 Ancient Woodland

There are no areas of Ancient Woodland present within a 2.5 km radius of the site.

Several areas of Deciduous Woodland are present, mainly to the north of the site.

3.1.3 Protected Species Licensing

Two previous granted European Protected Species Licences were identified within a 2.5km radius. First, 1.5km northeast, pertaining to the impact on a Common pipistrelle (*Pipistrellus pipistrellus*) breeding site in 2011, and the second 1.7km north, pertaining to the impact on a Soprano pipistrelle (*Pipistrellus pygmaeus*) and Brown long-eared (*Plecotus auritus*) resting site in 2012.

3.2 Preliminary Bat Roost Assessment

3.2.1 Building Description

The outbuilding is a large breeze block construction with a steel frame, timber purlins, and timber wall plate. The roofing is of concrete fibre, with uPVC guttering. There are timber framed windows and stable doors on the eastern elevation, and a large metal sliding door at the southern elevation.



Photograph 1: The building taken from the south-west showing the breezeblock construction and large vehicle access doorway on the southern elevation.

3.2.2 Internal Assessment

Evidence of bats flying within the building was identified in the form of approximately 5 individual droppings found scattered throughout. Droppings were typical of a bat in flight due to their varied size and shape but were considered most similar to those typical of the Pipistrelle bats.

The internal void comprised three workshops along the eastern elevation at ground floor level, and a first-floor storage area.



Photograph 2: An example of the scattered droppings found within the building.



Photograph 3: The internal void of the building showing the steel frame with timber purlins and the workshops at ground floor level with storage area above.

3.2.3 External Assessment

No evidence of bat roosting or bat activity was found associated with the external fabric of the outbuilding.

Potential roost features were identified, consisting of gaps between the wall and timber barge board along the western elevation, gaps between the overlapping roof sheet and wall on the north and south elevations, and gaps in the rotting timber stable door on the eastern elevation.



Photograph 4: The gaps at the wall plate on the western elevation and the gaps behind the overlapping roof sheet on the southern elevation, considered to be of at least a “low suitability” to roosting bats.

3.2.4 Building Suitability

The building was assessed as being of at least “Low Bat Roost Suitability” as per the Good Practice Guidelines (Collins 2023). Due to the presence of a scattering of droppings which may or may not occur when the vehicular doorway is kept open, and the potential roost features which could at least offer opportunistic roosting for crevice dwelling bat species.

3.3 Emergence and Activity Surveys

3.3.1 29th of July 2024

Two *Pipistrellus* bats were seen to emerge from the southern gable of the building at 21:30hrs and 21:38hrs. The bats emerged and flew straight to the woodland to the east. Neither surveyor picked up echolocation by bats at these times.

The first recording of a *Pipistrellus* bat was at 21:44hrs when the surveyor to the north-west observed a Soprano pipistrelle bat making a commuting pass in front of them. Bats of this species were recorded a further 7 times between the two surveyors between 21:53hrs-22:01hrs and between 22:27hrs and 22:31hrs.

The most abundant species during the survey was the Common pipistrelle, first recorded at 21:56hrs to the north-west of the building. Bats of this species were recorded more than 40 times throughout the remainder of the survey including a period of continuous foraging between 22:14hrs-22:24hrs along the western boundary.

Other species recorded during the survey comprised the Noctule (*Nyctalus noctula*), first recorded at 21:03hrs, and went on to be documented over 30 times between the surveyors. This included a period of foraging to the north of the site between 21:03hrs and 21:25hrs.

3.3.2 27th of August 2024

Two Common pipistrelle bats were observed emerging from behind the overhanging fascia on the southern elevation of the building. The bats emerged from two locations along the gable end at

20:10hrs and 20:22hrs. On this occasion, echolocation calls by Common pipistrelle were recorded at the times of emergence.

Common pipistrelle was the most abundant species recorded during the survey, with more than 60 passes documented between the two surveyors. This included foraging loops recorded to the east and a period of more than 25 passes to the south-west between 20:41hrs-20:49hrs.

Soprano pipistrelle bats were also recorded on many occasions throughout the survey by the two surveyors, including foraging passes to the south-west between 20:43hrs-20:48hrs, in a similar pattern as the Common pipistrelle bats. Soprano pipistrelle was first recorded at 20:28hrs.

Other species recorded during the survey comprised commuting passes over the site by Noctule bats, as well as an individual echolocation call by a Leisler's (*Nyctalus leisleri*) to the north at 21:05hrs, and three observations of Brown long-eared (*Plecotus auritus*) bats to the north at 20:29 and 20:38.

4. EVALUATIONS AND RECOMMENDATIONS

4.1 Roosting Bats

Evaluation

The preliminary bat roost assessment identified evidence of bat activity within the building, in the form of scattered droppings, and potential roost features externally, categorising the building as suitable for bat roosting, which demands the requirement for further survey.

The Phase II Emergence and Activity Surveys identified active roosting by two Common pipistrelle bats from the south facing gable end, as well as opportunistic foraging within the building, particularly when the access door is left open overnight.

The development project will therefore require a European Protected Species Derogation Licence in order to remain lawful. The presence of individual roosting by common bat species categorises the roost as being of “low conservation significance” (Reason and Wray 2023) and the building qualifies for registration under the Bat Low Impact Class Licence – CL21.

Recommendations

Bats are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under Schedules 5 & 6 of the Wildlife and Countryside Act 1981 (as amended). See Appendix 1 for further details on legislation.

The submission for a European Protected Species Derogation Licence (EPS) will be required for this development proposal. Full planning consent is required before an EPS licence can be applied for and all conditions relating to wildlife must be formally discharged.

The application for any EPS licence must be supported with a mitigation strategy which will include actions to protect bats from harm during the works and provide permanent roosting habitat in the long-term in the same or similar location in the final design.

Any licence application has to be supported by bat emergence surveys from the most recent active season, May to September annually. Therefore if the design proposal is delayed beyond May 2025 then further survey may be required in support of the application.

The mitigation strategy for the development proposal is outlined in Section 5 of this report.

5. BAT MITIGATION STRATEGY

A European Protected Species Derogation Licence (EPS) is required in support of the redevelopment of this building. An EPS licence application is issued subject to Natural England's satisfaction with a submitted mitigation strategy, and in the correct format.

The fundamentals of the mitigation strategy are to safeguard roosting bats from harm during works and to provide permanent alternative roosting habitat or continued roosting, proportionate to the species and roosts identified during the surveys.

Temporary Roosting Habitat and Translocation

Upon the award of an EPS licence temporary roosting habitat in the form of timber bat boxes will need to be installed on trees outside the area of works. The purpose of these boxes is to provide a temporary roost environment for any bats found during the works.

Removal of the Roost Features by Soft Demolition

Roost features and potential roost features will need to be removed by hand under the supervision of a licensed bat ecologist. Any bats found will need to be transferred by hand to the timber bat boxes by the licensed bat ecologist.

Permanent Roost Provisions

The chosen permanent roost for this development project is the installation of two bat tubes within the walls of the south facing elevation of the converted building.

The enclosed bat tubes will be installed within the exterior walls as such that the access slot to the box fits flush with the wall to allow a bat to land below and crawl up into the box. An example of an installed Habitat box is provided in Figure 4 below.

Boxes can be purchased on the NHBS or Wildcare specialist sales websites, where suitable alternatives may also be available. Alternatives must be accepted by the ecologist in advance of purchase.



Figure 4: Examples of bat tubes fitted within the brickwork of an exterior wall, and within a white render.

Breathable Roofing Membranes

Scientific investigations (Waring et al., 2013) into bats roosting against breathable roofing membranes have found that bats become entangled in the loose fibres of the membrane resulting in death. The species most affected are the Pipistrelle bats which often gain access to the space underneath roof tiles and above the non-bitumen membranes. ALL non bitumen roofing membranes represent a threat to roosting bats in this way.

To this end, the redeveloped building cannot be covered with a modern breathable membrane, unless that membrane is provided with a certificate of compliance to tests to the satisfaction of Natural England.

Light Pollution Control

Exterior lighting has been shown to negatively impact upon emergence times and foraging opportunities for bats thereby reducing their fitness and ability to survive (Stone, Jones & Harris, 2009). It is therefore important that the entrance to the bat tubes remain unlit in the hours of darkness to enable bats to safely access and use these features.

The following recommendations for mitigation of artificial lighting have been extracted from the Guidance note 08/23: Bats and Artificial Lighting in the UK produced by the Bat Conservation Trust and Institution of Lighting Professionals (2023).

- Lighting units should use LED which emit a warm white light (less than 2700K) to reduce the blue light component known to attract insects.
- Lighting units should feature peak wavelengths 550nm to avoid the component of light that is most disturbing to bats.
- Lighting units should be mounted horizontally as such there is no upward tilt.
- External security lighting should be motion sensitive on a short timer (1 min).

6. REFERENCES

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

Institution of Lighting Professionals & Bat Conservation Trust (2023) **Guidance Note GN08/23 Bats and Artificial Lighting at Night**, Institution of Lighting Professionals, Rugby.

Reason, P.F. and Wray, S. (2023) **UK Bat Mitigation Guidelines**, a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Stone, E. L., Jones, G., & Harris, S. (2009). **Street lighting disturbs commuting bats.** *Current biology*, 19(13), 1123-1127.

Waring S.D., Essah E.A, Gunnell K., and Bonser R.H.C., (2013) Double Jeopardy: The Potential for Problems when Bats Interact with Breathable Roofing Membranes in the United Kingdom. **Architecture & Environment**, 1 (1): 1-13.

APPENDIX 1 – PROTECTED SPECIES LEGISLATION

Bats

All species of British bat and their roosts are protected under British law by the Wildlife and Countryside Act 1981 (as amended), and bats are classified as European Protected Species under the Conservation of Habitats and Species Regulations 2017 ('the 2017 Regulations'). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations (2019) which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

The legislation makes it an offence to kill, injure or disturb a bat and/or to damage or destroy a breeding site or resting place for a bat. It is also an offence to disturb the animals such that it impairs their ability to survive, to reproduce, to nurture their young, or such that it impairs their ability to hibernate or migrate. Under this legislation development work that could affect a bat or bat roost can only be permitted under a licence from Natural England.

Licences in respect of European Protected Species affected by development can be granted under Section 55(2) (e) of The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations (2019), for the purpose of 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.

Under section 55(9) of the Regulations licences can only be issued if Natural England is satisfied that:

- there is no satisfactory alternative to the work specification,
- and the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

Natural England aim to process EPS licence applications within 35 working days of receipt and Low Impact Class licenses are typically registered within 14 working days of receipt.

Biodiversity Net Gain

Under Schedule 7A of the Town and Country Planning Act 1990 (As inserted by Schedule 14 of the Environment Act 2021), Developers must deliver a Biodiversity Net Gain of 10%. This means a development will result in more or better-quality natural habitat than there was before development.