



## PRELIMINARY BAT ROOST ASSESSMENT

**Barn at Wychwood Lodge  
Swinbrook  
Oxfordshire**

**Final Report  
25<sup>th</sup> June 2021**

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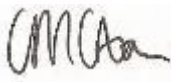

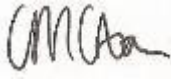
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## QUALITY ASSURANCE

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27.05.21	Survey conducted	Catherine Coton ACIEEM Senior Ecologist	
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The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Every reasonable attempt has been made to comply with BS42020 (Biodiversity: Code of practice for planning and development); the CIEEM Guidelines for Ecological Report Writing (CIEEM, 2017) and Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good practice guidelines 3rd edition (Collins, 2016). If compliance has not been achieved, justification/explanation has been given.

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## SUMMARY

- A Preliminary Bat Roost Assessment was undertaken of a barn at Wychwood Lodge, Swinbrook in Oxfordshire in May 2021. The assessment was required in connection with proposals for conversion of the building to provide living accommodation.
- The purpose of this report is to identify and describe the potential impacts of the works on bats; to identify the need for further surveys and whether a Natural England protected species licence application may be required; and to set out required mitigation, enhancement and compensation measures.
- The site is in a rural area on the edge of the village of Swinbrook, surrounded by arable and pastoral farmland with pockets of woodland and a network of hedgerows, streams and the River Windrush nearby. These habitats provide a range of foraging, commuting and roosting opportunities for bat species. The data search revealed records of at least six bat species in the area, although no roost locations are known.
- The site comprises a stone-built barn within the grounds of Wychwood Lodge. The first floor has previously been converted to provide a gym, with a raked ceiling and rooflights; the eastern roof slope has been re-clad in concrete tiles while the western roof slope is clad in slates. There is a single-storey lean-to extension on the east elevation.
- There are a very small number of small gaps around the building exterior, at the eaves, around a ground floor doorway and potentially under slates on the western roof slope. However, the rest of the building is very well-sealed. Overall, the barn is considered to offer 'low-negligible' suitability for bat roosting. No evidence of bats was found and the small gaps identified were all heavily cobwebbed, suggesting they have not been disturbed for some time.
- The features with bat roost potential will be retained as existing as a result of the proposed works, with the exception of the gaps around the ground floor doorway. Impacts on bats are considered very unlikely, so no further surveys are recommended, but precautionary measures will be implemented during works to ensure compliance with protected species legislation. Should additional works be required in future that would impact on potential roost features (e.g. re-roofing/adding rooflights to western roof slope) then further bat activity surveys may be required.
- Planning policy requires that developments result in biodiversity net gain, so recommendations are made for ecological enhancements to be incorporated into the development proposals.
- The results of this assessment are valid for a maximum of two years from the date it was carried out (June 2021). Should the works to the building be delayed beyond this date, the survey must be updated; it should also be noted that regulatory authorities may require updated surveys within a shorter timescale.

# 1 INTRODUCTION

## 1.1 *Background*

A Preliminary Bat Roost Assessment was carried out of a barn at Wychwood Lodge, Swinbrook in Oxfordshire on 27<sup>th</sup> May 2021. The site is located at an approximate central OS grid reference of SP 2814 1257. The survey and assessment were required in connection with proposals for conversion of the barn to provide living accommodation.

## 1.2 *Personnel*

The assessment and reporting were carried out by Catherine Coton ACIEEM of Swift Ecology Ltd. Catherine is employed as a Senior Ecologist with Swift Ecology Ltd and is an experienced habitat surveyor and holder of a Natural England level 2 survey licence for bats (Class Licence reference 2017-31902-CLS-CLS). Catherine has over seven years' experience working as an ecologist and has undertaken numerous bat surveys and has prepared subsequent reports with appropriate recommendations.

## 1.3 *Ecological Context*

The site is a barn set within the grounds of Wychwood Lodge, on the northern edge of the village of Swinbrook, and approximately 2.6 km east of the town of Burford, in Oxfordshire. To the east, west and north, the site is surrounded by a mix of arable and pastoral farmland. To the south and south-west of the site, there are a range of detached dwellings set within large gardens. The River Windrush and several smaller watercourses create valuable wildlife corridors through the surrounding landscape, with associated wetland and meadows, which would provide foraging opportunities for bat species. There are also large blocks of woodland to the north and west of the site, the closest of which is 500 m to the north; these are likely to provide foraging and commuting opportunities, as well as potential roost locations for bats. There are no significant barriers to bat dispersal through the local area, and a network of hedgerows provides good connectivity between the site and semi-natural habitats in the local area.

The site and nearby landscape are illustrated in Figure 1.1.



Figure 1.1: Site location (red boundary) and surrounding landscape

#### **1.4 Purpose of Report**

The purpose of this report is to identify and describe the potential impacts of the works on bats; to identify the need for further surveys; to determine whether a Natural England protected species licence application is required in relation to bats; and to outline the mitigation, enhancement and compensation measures required to ensure compliance with nature conservation legislation and planning policy, and to address any potentially significant ecological effects. The report also provides information on the legislative requirements relating to bats. In addition, impacts on other protected species are considered.

The legal protection and planning policies relevant to the species mentioned in this report are detailed in Appendix 1.

## 2 METHODS

### 2.1 Background Data Search

A background data search of records held by Thames Valley Environmental Records Centre (TVERC) was undertaken in May 2021 for records of bats within a 2 km radius of the site.

Reference was also made to Natural England's MAGIC website<sup>1</sup> for records of granted Natural England protected species bat licences within a 2 km radius of the site.

### 2.2 Preliminary Bat Roost Assessment

#### 2.2.1 General

The survey of the barn was undertaken on 27<sup>th</sup> May 2021 by Catherine Coton of Swift Ecology Ltd. Weather conditions at the time of the survey are shown in Table 2.1.

Table 2.1: Survey conditions

Date	Approximate start time	Weather conditions
27.05.21	12:15 pm	17°C, dry and sunny, with 30% cloud and little wind (Beaufort F1)

#### 2.2.2 Assessment of Bat Roost Potential: Buildings

The barn was assessed for its potential to support bats or bat roosts according to industry standard guidelines (Collins, 2016). This involves a consideration of various factors including:

- Light levels
- Temperature regime and protection from weather
- Access to the interior of the building or to other suitable roost sites
- Potential roost sites
- Building construction
- Habitat context

Based on these factors, an assessment was made of whether the barn might support bats, and the type and number of roosts that might be present. The barn was assigned a roost potential category (Collins, 2016) according to the criteria outlined in Table 2.2 below, based on the results of the assessment.

<sup>1</sup> <https://magic.defra.gov.uk/MagicMap.aspx>

*Table 2.2: Guidelines for assessing the potential suitability of buildings/structures for roosting bats (based on Collins, 2016).*

<b>Category</b>	<b>Category description</b>
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A building or structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A building or structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
High	A building or structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Known roost	Building or structure currently supporting bats (based on presence of bats, or evidence of use such as droppings, carcasses etc.).

### **Survey for Signs of Bats**

A detailed inspection was made of the exterior and interior of the barn for any evidence of bat use, such as live or dead bats, droppings, scratch marks, staining and prey remains (e.g. moth or butterfly wings), and in some cases the absence of cobwebs. Large quantities of cobwebs in roof voids or at access points tend to be suggestive of no bat use, although this evidence is not conclusive.

Features identified as possible bat access points or potential roosting locations were thoroughly searched where possible, using powerful torches, binoculars and an endoscope to facilitate the process.

### **2.3 Limitations**

The preliminary bat roost assessment was undertaken in good light and weather conditions and there were no significant constraints. It should be noted that a preliminary bat roost assessment cannot rule out bat presence, as bats may roost in areas that are not accessible other than by a destructive search.



## 3 RESULTS

### 3.1 Background Data Search

TVERC provided 19 records of bats within a 2 km radius of the site, recorded between 1996 and 2018, including at least six species (common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, brown long-eared bat *Plecotus auritus*, Natterer's bat *Myotis nattereri*, Daubenton's bat *M. daubentonii* and lesser horseshoe bat *Rhinolophus hipposideros*), as well as indeterminate species records. No details of roosts are known, but the closest record is of a foraging brown long-eared bat recorded approximately 400 m south of the site in 1996.

A search of information available on Natural England's MAGIC Map application revealed no instances of mitigation licences for works impacting on bats within a 2 km radius of the site.

An absence of records does not mean that a particular species is not present, merely that it has not been recorded. Many species records are not obtainable from the sources utilised and therefore there may be further undetected records for such species on the site or in the local area.

### 3.2 Preliminary Bat Roost Assessment

#### **Building description**

The barn is a two-storey stone-built former livestock stable with gabled roof (Plates 3.1-3.4). The western roof slope is clad with slates, whilst the eastern elevation has been re-roofed with concrete tiles. The first floor has been converted and is now used as a gym, with a raked ceiling and rooflights (Plate 3.5); the ground floor is used for storage (Plate 3.6). There is a lean-to extension on the north elevation, which is constructed of stone with a glass panel roof and used as a sun room (Plates 3.4 and 3.7).

#### **Assessment of bat roost potential and survey for signs of bats**

Externally, the building is generally well-sealed. There are a few small gaps along the eaves on the west elevation (Plate 3.8), which might allow bats access to crevices at the wall top, but otherwise the external walls are sealed with mortar with no apparent gaps large enough for bats to access. The windows and doors on all elevations are well-fitted, with only a few very narrow gaps noted, except for the ground floor door on the south elevation where there are gaps around the frame and lintel (Plate 3.9); these gaps were notably cobwebbed, suggesting they have not been disturbed for some time, and an inspection using an endoscope found that they do not extend further into the wall.

The western roof slope is clad with slates, which are uneven in places and could offer a few potential crevices suitable for bat roosting. The eastern roof slope, with modern concrete tiles, is very well-sealed, with no lifted or missing tiles noted, and no gaps visible at the eaves. The ridge tiles appear to be well-fitted to the roof, and the gable verges at both ends (slate and concrete tiled sides) are completely sealed with mortar (Plate 3.10).

Internally, there are several cracks in the stonework walls in the ground floor, in the storage room and in the sunroom (Plate 3.7), although these are all shallow and exposed, and thereby offer

limited suitability for bat roosting. There are no roof voids, and the internal rooms are all light and open, with no dark, sheltered spaces suitable for bat roosting.

Overall, the barn is considered to offer 'low-negligible' suitability for bat roosting, with some potential for single crevice-dwelling bat species to use a few small external gaps at the eaves, around the ground-floor southern doorway and a few lifted slates on the west elevation.

No evidence of bats was found during the survey.



*Plate 3.1: North elevation*



*Plate 3.2: West elevation with slate roof pitch*



*Plate 3.3: South elevation*



*Plate 3.4: East elevation, with concrete-tiled roof pitch and glass-roofed lean-to extension*





*Plate 3.5: Barn ground floor used for storage, light from windows on west elevation*



*Plate 3.6: Barn first floor used as a gym, with raked ceiling and roof lights*



*Plate 3.7: Interior of extension, sun room, with shallow gaps in stonework wall*



*Plate 3.8: A few small gaps at eaves on western elevation*



*Plate 3.9: Gaps around ground floor door on south elevation*



*Plate 3.10: Well-sealed gable verges*

### **3.3 Other Species – Birds**

The barn offers a few opportunities suitable for bird nesting in the gaps around the ground floor doorway, and potentially in the few small gaps at the eaves. No birds' nests were found during the survey.

## 4 EVALUATION AND IMPACT ASSESSMENT

### 4.1 *Proposed Development*

The proposed development is to convert the barn to provide living accommodation. This will involve renovation of the interior. The external structure will mostly be retained as existing, with the addition of a new rooflight on the eastern (concrete-tiled) roof slope and reinstated ground floor door on the western elevation.

The following proposed plans prepared by APA dated June 2021 were used to assess the potential impacts of the development on bats and other protected species:

- 'Proposed barn ground floor plan' drawing number 501 L 02 11.
- 'Proposed barn first floor plan' drawing number 501 L 02 12.
- 'Proposed barn roof plan' drawing number 501 L 02 13.
- 'Proposed barn elevations' drawing number 501 L 02 14.
- 'Proposed barn elevations and section' drawing number 501 L 02 15.

### 4.2 *Bats*

The barn is considered to offer 'low-negligible' suitability for bat roosting. Potential roost features are limited to a few small external gaps at the eaves, around the ground-floor southern doorway and beneath a few uneven slates on the west elevation. These features have some suitability for single/small numbers of crevice-dwelling bat species. No evidence of bats has been found during the daytime inspection. The surrounding area includes a range of older, more complex buildings, which are likely to offer better opportunities for roosting.

The Bat Conservation Trust Good Practice Guidelines (Collins, 2016) recommend that for structures of 'low' roost suitability at least one dusk emergence or dawn re-entry survey should be conducted to give confidence in a negative result; however, it states that the number of surveys may be adjusted up or down to take account of site specific circumstances (Collins, 2016 Section 7.1.8); and that if a structure has 'low' suitability for bats, then the ecologist should make a professional judgement on how to proceed based on all the evidence available (Collins, 2016 Section 5.2.9).

In this case, the features with suitability for bat roosting will all be retained as existing with the exception of the shallow gaps around the ground floor door on the northern elevation. These gaps were heavily cobwebbed and did not lead into deeper cavities, so the likelihood of them being used by bats is considered to be very low given the numerous opportunities for roosting in the local area. The installation of a new rooflight on the eastern elevation will only affect the well-sealed concrete tiles, and will not impact on any potential roost features. Therefore, the risk of an offence being committed as a result of the proposed conversion of the barn is considered to be very low. No further surveys are required, but precautionary measures are recommended in Section 5.1.

If more substantial works to part of the building with suitability for bat roosting are required in future (e.g. re-roofing or alterations to the slate roof slope), this should be discussed with a suitably qualified ecologist. Additional surveys may be recommended.

The development will impact on a small area, with minimal changes to the existing building and no loss of potential foraging or commuting opportunities for bats. Whilst no adverse effects on bat usage of the site are predicted, precautionary recommendations regarding lighting are provided in Section 5.1, and recommendations for enhancements for bats are included in Section 5.3.

### **4.3 Birds**

The barn offers a few opportunities for bird nesting, but no nests were found during the survey. Nevertheless, precautions will need to be taken to avoid impacts upon breeding birds, as detailed in Section 5.2.

## 5 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Bats

The following precautionary measures will be adopted in order to ensure that bats are not harmed by the proposed works in the unlikely event that a roosting bat is present:

- A briefing will be given to contractors by a licensed bat ecologist about working where bats could be present. The briefing will cover:
  - that there is a low risk bats could be present;
  - the legislation relating to bats;
  - measures that will be used to protect them;
  - good working practices; and
  - what to do should bats be found in the absence of an ecologist.
- A pre-works inspection will be undertaken by a licensed bat ecologist to ensure no bats are present at the start of works. In the unlikely event any bat roosts are found, works will stop immediately, and Natural England will be consulted. Further surveys and a protected species licence may be required.
- If at any point during works a bat is discovered in the absence of the ecologist, contractors will stop work immediately and telephone an ecologist licensed to deal with bats. Telephone numbers of such will be held on site (Swift Ecology numbers: 01926 642541/07833 233347).
- Should any bats fall out of structures or be injured, they will be gently placed in a secure ventilated box (e.g. a cardboard box) by the contractor and left in a cool dark place, until appropriate advice can be sought. Bats should not be handled without gloves.
- A copy of these recommendations will be available to site workers and displayed on site.
- Any new lighting of the site should be designed to avoid increased nocturnal illumination levels, especially of potential bat commuting/foraging features within the adjacent gardens and fields. Please refer to '*Bats and artificial lighting in the UK; Guidance Note 08/18*' (Miles *et al.*, 2018) and '*Domestic exterior lighting: getting in right!; Guidance Note 09/19*' (Institute of Lighting Professionals, 2019) for further information.
- If re-roofing or alterations to the western (slate) roof slope are required in future, advice from an ecologist must be sought. It may be necessary to undertake at least one bat activity survey between May and August inclusive to determine the presence/likely absence of bats.

### 5.2 Birds

The following precautionary measures will be adopted in order to ensure that nesting birds are not harmed or disturbed by the proposed works:

- It is recommended that works be undertaken outside of the bird nesting season of March-August inclusive. If this is not possible then works to the exterior of the building must be preceded by a nesting bird check by a suitably qualified ecologist. If any nesting birds are present, works will be delayed until the young have fledged and are no longer dependent on the nest.

### 5.3 Enhancements

Current planning policy requires that development projects minimise ecological damage and should contain elements of ecological enhancement. The Natural Environment White Paper (2011) and National Planning Policy Framework (2019) require that development results in net gains for biodiversity.

To increase the value of the site for biodiversity, consideration should be given to incorporating additional features for use by bats and birds into the design. A range of bat and bird boxes could be installed on site on the exterior of the barn or within retained trees near to the barn. All boxes must be installed according to manufacturer's instructions.

Bird box products that could be installed on the site include:

- Schwegler 1B nest box
- Schwegler 1SP sparrow terrace
- Schwegler 3S starling nest box



Figure 5.1: Schwegler 1B nest box, Schwegler 1SP sparrow terrace and Schwegler 3S starling nest box.

Suitable bat box products to be installed on the site include:

- Schwegler 1FF
- Bark boxes small crevice bat box
- Vivara Pro WoodStone bat box



Figure 5.3: Schwegler 1FF, Bark boxes small crevice bat box and Vivara Pro WoodStone bat box.

#### **5.4 Validity of Report**

The results of this assessment are valid for a maximum of two years from the date it was carried out (May 2021). Should the subsequent works to the barn be delayed beyond this date, the survey should be updated; it should also be noted that regulatory authorities may require updated surveys within a shorter timescale than two years.



## 6 RELEVANT LITERATURE

British Standard (2013). *BS 42020:2013: Biodiversity. Code of practice for planning and development.*

Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Ecological Report Writing.* CIEEM, Winchester.

Collins, J. (ed). (2016). *Bat Surveys for Professional Ecologists– Good Practice Guidelines, 3<sup>rd</sup> edition.* Bat Conservation Trust, London.

Institute of Lighting Professionals (2019). *Guidance Note 9/19 Domestic exterior lighting: getting it right!* Available from: <https://theilp.org.uk/publication/guidance-note-9-domestic-exterior-lighting-getting-it-right/> [Accessed 9<sup>th</sup> February 2021].

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Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines.* Natural England, Peterborough.

Ministry of Housing, Communities & Local Government (2019). *National Planning Policy Framework.* Available from: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/728643/Revised\\_NPPF\\_2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728643/Revised_NPPF_2018.pdf) [Accessed 28<sup>th</sup> February 2019].

## APPENDIX 1 – LEGISLATION AND PLANNING POLICY

### A1.1 Introduction

This section briefly lists legal protection/planning policy applying to the species mentioned in this report. It does not comprehensively reflect the text of the legislation/policy and it should not be relied upon in place of it. The following documents are relevant:

- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000 (in England and Wales);
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011), which underpins the UK Post-2010 Biodiversity Framework (JNCC & DEFRA, 2012);
- National Planning Policy Framework (MHCLG, 2019); and
- West Oxfordshire Local Plan (Main Modifications Consultation 2018).

### A1.2 Legislation

#### A1.2.1 Bats

All species of British bat (*Vespertilionidae* and *Rhinolophidae*) are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and receive some limited protection under Section 9. These species are also all listed as protected species in Schedule 2 of The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which gives them full protection under Regulation 43.

It is also an offence to set and use articles capable of catching, injuring or killing such species (for example a trap or poison), or knowingly cause or permit such an action.

Seven species of British bat are listed as species of principal importance for the purpose of conserving biodiversity in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

#### A1.2.2 Birds

All species of bird are protected under Section 1 (1) of the Wildlife and Countryside Act 1981 (as amended). Certain species are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and receive protection under Section 1(5). There are special penalties where offences are committed for any Schedule 1 species.

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 includes 49 bird species which are of principal importance for the purpose of conserving biodiversity in England.