# Preliminary Bat Roost Assessment & breeding birds survey

## Site: Barn at Spring Head Farm, Bolton by Bolton.

25th February 2025

**CLIENT:**

Richard Lund

Spring Head Farm

Bolton-by-Bowland

BB7 4LU

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10th March 2025

**Valid Until**

1st September 2026

## Summary

This report presents the results of a daylight preliminary bat roost assessment (PRA) undertaken on 25th February 2025, at the Poor parts barn at Spring Head Farm, Bolton by Bowland.

The work has been commissioned in connection with a planning application for conversion of the barn. The scope of the survey has primarily considered roosting and hibernating bats, breeding birds and barn owls.

**The survey** has identified that there is **moderate** roosting habitat for bats in the building, and therefore **two further surveys** are recommended. In addition, barn owl presence was confirmed in the building. Further survey effort will be required to determine the use of the barn by the owl.

**Further surveys and recommendations:**

| **Bats** |
| --- |
| Two further emergence surveys will be required. These should be carried out between May and September, a minimum of 3 weeks apart, and aimed at capturing the activity of bats through the peak season. If a bat roost is confirmed, then a further survey may be required to inform a Natural England Protected Species Mitigation Licence Application. In addition, if bats are found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted to seek further advice. |
| **Birds** |
| Barn owl surveys required to determine how the building is being used, and to inform suitable mitigation. |

For full justification of these recommendations, please go straight to section 4.0 Conclusions, Impacts and Recommendations. Otherwise, the full report starts below.

## Contents

# 1.0 Introduction and Context

## 1.1 Background

Carol Edmondson of Ark Ecology was commissioned by Mr John Metcalfe of Rural Futures on behalf of his client Mr Richard Lund, to carry out a Potential Bat Roost Survey (PRA) at Spring Head Farm, Bolton-by-Bowland BB7 4LU in February 2025.

The survey building was a small out barn set just off the road approx. 0.5 mile from the main farmhouse & buildings.

From this point forward, the land encompassed by the red-line boundary of the survey map (appendix 1) is termed '**the Site**'.

## 1.2 Context

A bat survey has been deemed necessary to support a planning application due to the nature of the proposed building and location of the Site. In addition, the presence or absence of barn owl *Tyto alba* and nesting birds has been taken into consideration, along with other local wildlife.

## 1.3 Scope of the report

This report provides a description of all features suitable for roosting bats and evaluates those features in the context of the Site and wider environment. It further documents any physical evidence collected or recorded during the Site survey that establishes the presence of roosting bats. It provides information on constraints to the proposals as a result of roosting bats, and summarises the requirements for any further surveys, to inform subsequent mitigation proposals, achieve planning or other statutory consent, and to comply with current wildlife legislation.

The aim of the assessment was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how they could use the Site. Due to the transient nature of bats, this report is not able to definitively ascertain the absence of bats, rather the absence of *evidence* of use by bats either prior to or at the time of the survey.

To achieve this, the following steps have been taken:

- A desk study has been carried out, including information from MAGiC website
- A field survey has been undertaken, including an external survey and internal inspection where possible.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on European Protected Species Mitigation Licensing where appropriate.

A survey plan is presented in Appendix 1, the proposed Project Plan is included in Appendix 2 (where available).

The assessment is informed by the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2023).

# 2.0 Methodology

## 2.1 Desk Study methodology

Desk and internet-based resources were used to obtain background information about known bat habitat and occurrences in an approx. 2km surrounding radius.

The resources used for the desk study were as follows:

- Google Earth Pro (http://earth.google.co.uk) for aerial photographs
- Multi-Agency Geographic Information for the Countryside (MAGIC) collaborative database website (http://magic.defra.gov.uk/MagicMap.aspx), for information on statutory designations.

## 2.2 Site Survey methodology

All features that will be impacted by the project proposals were assessed for their bat roosting and/or commuting habitat. The surveyor systematically surveyed all features suitable for signs of bat activity by non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building for potential access/egress points, and for signs of bat use. An internal inspection of the building was also made where possible, including areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope & torch. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

## 2.3 Breeding birds and other incidental observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls.

## 2.4 Suitability Assessment

All affected survey features on site were categorised according to the likelihood of bats being present, in line with best practice guidelines (Collins, J. (ed) 2023). The features that dictate the likelihood of roosting bats are summarised in Table 1 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

*Table 1: Features of a building that are correlated with use by bats*

| Likelihood of bats being present | Feature of building and its context |
|---|---|
| Higher | Buildings/structures with features of particular significance for roosting bats e.g., mines, caves, tunnels, icehouses and cellars.<br>Habitat on site and surrounding landscape of high quality for foraging bats e.g., broadleaved woodland, tree-lined watercourses and grazed parkland.<br>Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g., river and or stream valleys and hedgerows.<br>Site is proximate to known or likely roosts (based on historical data). |
| Lower | A small number of possible roost sites/features, used sporadically by more widespread species.<br>Habitat suitable for foraging in close proximity but isolated in the landscape. Or an isolated site not connected by prominent linear features.<br>Few features suitable for roosting, minor foraging or commuting. |

### 2.5 Limitations – evaluation of the methodology

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete description of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on the site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study.

- Survey outside the peak activity season for bats, meaning external evidence unlikely.

## 3.0 Results and Evaluation

### 3.1 Desk Study Results

- The desk study included a 2km buffer zone surrounding the Site.
- The Site is located at National Grid Reference SD 79674 50119

### 3.1.1 Designated sites & Priority habitats

- The site lies within the Forest of Bowland National Landscape.
- The site lies within the Impact Risk Zone for New Ings Meadow SSSI

  Priority habitats:
  - Small areas of good quality semi-improved grassland, deciduous woodland plantation and cloughs within the study area, the closest being Small Field Plantation just to the north of the site.

### 3.1.2 Landscape

Reviewing the designated sites, aerial photographs (Figure 1), the Magic database (App. 3) the Site and its surrounding landscapes' relevance to bat habitat is described as being located in a relatively remote and open agricultural landscape with associated hedges and ditches providing connection and forming suitable commuting and foraging habitat for bats, linking to the areas of deciduous woodland which will also provide some roosting and foraging habitat.

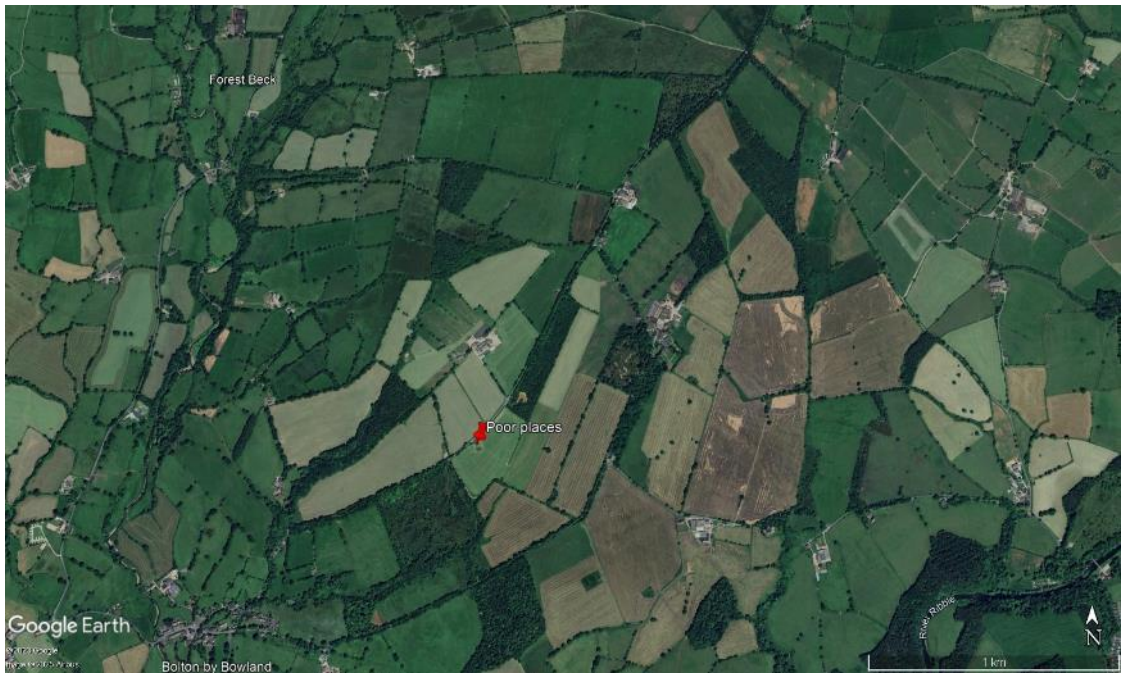


Figure 1: Aerial photo of site, showing surrounding landscape structure.

### 3.1.3 Historical records

A search of the magic database returned one granted European Protected Species Mitigation Licence (EPSMLs) records for bats within a 2km radius of the survey site, for the destruction of a resting and breeding place for common and soprano pipistrelles, and brown long eared bats.

The absence of licenced records does not confirm the absence of bats in the area.

### 3.2 Field Survey Results

The survey was undertaken on 25th February 2025 by Carol Edmondson (Natural England bat licence number: **2015-12195** CLS-CLS), an MSc qualified ecologist with 12 years' experience in bat and ecology surveys.

The survey was carried out using a high-powered torch, binoculars and endoscope where necessary. The proposals include for the building of an extension to the north elevation of the building. The entire exterior & interior of the dwelling was surveyed for potential bat roosting features, to ensure no disturbance will be caused to bats by the proposed works.

There is one survey building on the site which is illustrated in the map in Appendix 1. The environmental variables recorded at the time of the survey are shown in Table 2.

*Table 2: Environmental variables during the survey*

| Date: 25/02/2025 | |
|---|---|
| Temperature | 6°C |
| Cloud Cover | 80% |
| Wind | 14 km/h |
| Rain | none |

### 3.2.1 Site Feature descriptions and photos

| | |
|---|---|
| **Building Description**<br>The survey building was a detached traditional out barn.<br><br>A traditional stone-built barn, typical of the area with solid stone walls, and slate roof tiles.<br>The ridge of the dual pitched roof runs northeast – southwest. |  <br>Photo 1: Overview of the site |
| **Potential roosting features:**<br><br>There were some areas of missing pointing in the stonework on all elevations, and at the eaves and verges. Although the gaps in the mortar are mostly too wide for crevice dwelling bats they allow access into the materials of the walls, which could be suitable for bats to roost. |  <br>Photo 2: South and east elevations of the barn. |

| | |
|---|---|
| The roof slates had multiple gaps, with some slates missing altogether. The ridge had some gaps in the pointing also. |  <br>Photo 3: North gable end and west elevation of the barn. |
| Overall, there were many gaps or crevices that could be used by bats for roosting in the building. |  <br>Photo 4: West elevation showing gaps to the pointing, and under the eaves and roof tiles. |

**Internally:**

The roofing materials were exposed internally, with the tiles being lined with sarking. There were areas of missing and cracked sarking.
Areas of the stone walls had missing mortar, exposing gaps into the stonework.

The roof timbers form ideal crevices & feeding perches for bats, but the open and airy nature of the building would greatly reduce the likelihood of the presence of void dwelling bats such as brown long eared bats.

Photo 5: Internal view of roofing materials

***Evidence of bats***

There was no physical evidence of bats currently using this building as roosting habitat i.e. no droppings, urine stains or grease smudge marks either internally or externally. However, as this survey was carried out outside of the peak activity season, such evidence would likely be destroyed over the winter. Also, the transient nature of bats does mean that features described as potential roosting features, could be used in future by bats.

| | |
|---|---|
| ***Breeding birds and other incidental observations***<br>During the internal inspection a barn owl flew out from the small hayloft above the porch. There was evidence of long-term use – large numbers of owl pellets on the barn floor, and splatter on the truss beams. |  <br>Photo 6: The small hay loft above the entrance porch, where the barn owl was roosting. |

# 4.0 Conclusions, Impacts and Recommendations

## 4.1 Informative guidelines

Bats and their roosts are protected under the Wildlife and Countryside Act and Conservation Regulations. Legislation protects all wild birds whilst they are breeding, and prohibits the killing, injuring or taking of any wild bird or their nests and eggs. Certain species of bird, including the barn owl, are subject to special provisions; it is an offence to disturb any bird or their young during the breeding season.

## 4.2 Evaluation

Taking the desk-based assessment and site survey results into account, the following value for roosting bats has been placed on The Site.

*Table 3: Evaluation Summary for presence of bats*

| | |
|---|---|
| **Survey assessment conclusions** | There is suitable bat foraging habitat in the proximity of this site, and low records of EPSML's in the 2km study area. Taking into account the exposed and open nature and condition of this barn and weighed against the number of potential roosting features as described above, the surveyor considers that the building has a **moderate** potential for use by bats for roosting. |
| **Foreseen impacts** | There is a moderate risk that bats could be injured or killed during the building process. |
| **Recommendations** | Two further emergence surveys will be required. These should be carried out between May and September, a minimum of 3 weeks apart, and aimed at capturing the activity of bats through the peak season. If a bat roost is confirmed, then a further survey may be required to inform a Natural England Protected Species Mitigation Licence Application. In addition, if bats are found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted to seek further advice. |
| ***Enhancements***<br>*The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99* | To be advised following further survey effort, but can include:<br>The installation of a bat box on the building or existing tree before work commences will provide additional roosting habitat for bats in the area e.g. Local supplier:<br>• Greenwoods Ecohabitats<br>• https://www.greenwoodsecohabitats.co.uk/bats<br>• Kent Bat Box (timber).<br><br>Bat boxes should be positioned 3-5m above ground level facing in a south/south-westerly direction with a clear flight path to and from the entrance.<br>• Cavity bat boxes are also a good option in new construction for example available from:<br>https://www.nhbs.com/ib-vl-05-vivara-pro-build-in-woodstone-batbox?bkfno=252213 |

*Table 4: Evaluation Summary for presence of breeding birds*

| | |
|---|---|
| **Survey assessment conclusions** | Barn owl nest/day roost confirmed |
| **Foreseen impacts** | High risk of disturbing nesting barn owls. |
| **Recommendations** | Further surveys for barn owl activity to determine the use of the building. |
| ***Enhancements***<br>*The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99* | To be advised following further survey effort. |

## 5.0 References


- Andrews H and Gardener M 2016, *Bat Tree Habitat Key – Database Report 2016.* Bridgewater:AEcol.
- Bat Conservation Trust: http://www.bats.org.uk/
- British Trust for Ornithology (2016) www.bto.org/about-birds/nnbw/putting-up-a-nest-box
- Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 4th edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth Pro (2024)
- Magic database (2024) http://www.magic.gov.uk/MagicMap.aspx
- Mitchell-Jones, A.J. (2023). Bat Mitigation Guidelines. English Nature, Peterborough.

## Appendix 1: Survey Plan


## Appendix 2: Proposed Site Plan

Not provided

**Appendix 3: Desk study results**