# Bat Survey Report

## Siddicks Farm Barns, Goole

October 2023

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| **Client name:** | Mr and Mrs McDougall |
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# EXECUTIVE SUMMARY

This report has been produced to support the conversion of unused barns at Siddicks Farm Barns, Skelton, Goole, DN14 7RH. Based on initial discussions with the client, Building A will remain unaffected by any works, and it is currently unknown if Building B will be developed.

The Site was subject to a Preliminary Bat Roost Assessment (PBRA) by independent consultants Craig Emms MSc MCIEEM and Dr Linda Barnett BSc (Hons), PhD, MCIEEM in December 2022. The full PBRA can be seen within Appendix 2 of this report. The PBRA recorded no evidence of bats and categorised all buildings as being of 'low' suitability to support roosting bats.

Subsequently, BM Ecology undertook emergence surveys during summer 2023.

The buildings within the Site were found to support two common pipistrelle day roosts (max count 1 no. bat), two whiskered bat day roost (max count 1 no. bat), two brown long-eared bat day roosts (max count 1 and 2 no. bat), and two brown long-eared bat feeding perches.

Building A was found to support a common pipistrelle day roost (#R1), Building B supports a whiskered bat day roost (#R3) and a brown long-eared bat day roost (#R5), and Building C supports a common pipistrelle day roost (#R2), a whiskered bat day roost (#R4), a brown long-eared bat day roost (#R6) and two brown long-eared bat feeding perches (#FP1 and #FP2). No roosts or evidence of a roost were recorded within Building D.

No evidence was recorded, both during the daytime assessments and bat activity surveys, to suggest that the buildings within the Site are used by larger numbers of bats i.e., a maternity roost.

The '*Bat Mitigation Guidelines. A guide to impact assessment, mitigation and compensation for developments affecting bats*' (CIEEM, 2023), classes the above roosts as being of Site Level importance and are subsequently considered to be of a relatively low conservation significance.

As the works will involve the destruction of bat roosts, a European Protected Species Mitigation Licence is required to allow works to be undertaken lawfully. Planning Permission must be granted prior to the licence submission, as well as any dischargeable planning conditions relating to wildlife being discharged. On receipt of the licence from Natural England, works can proceed on the buildings following a toolbox talk and under the direct supervision of the licenced ecologist or suitably qualified accredited agent.

Recommendations to timings are also provided, with no works commencing in December to mid-March inclusive, to remove the risk of encountering bats at this sensitive time of year.

Mitigation for the loss of bat roosts includes an integrated bat box in the western gable of Building C, and the installation of four bat boxes either in Building A or within Building A and B (if Building B is not being developed). All windows will remain open within the retained buildings.

It is considered that given the working practices and proposed mitigation discussed within this report, the development is not likely to result in a significant adverse effect on bats at the Site level.

Two active barn swallow nests were recorded in the west of Building A. This building will be retained, and no compensation is considered necessary. Recommendations are also provided for timing of the works in relation to nesting birds.

# TABLE OF CONTENTS

# 1 INTRODUCTION

## 1.1 Instruction

The surveys and report were instructed by Mr and Mrs McDougall, to support the conversion of unused barns at the Site. Based on initial discussions with the client, Building A will remain unaffected by any works, and it is currently unknown if Building B will be developed or not.

## 1.2 Background

The Site was subject to a Preliminary Bat Roost Assessment (PBRA) by independent consultants Craig Emms MSc MCIEEM and Dr Linda Barnett BSc (Hons), PhD, MCIEEM in December 2022. The full PBRA can be seen within Appendix 3 of this report.

The PBRA separated the series of buildings into four separate buildings. For ease of reference and continuity, this report will refer to the buildings with the same reference (Buildings A-D).

Craig Emms MSc (MCIEEM) and Dr Linda Barnett BSc (Hons), PhD, MCIEEM recorded no evidence of bats during the PBRA and categorised all buildings as being of 'low' suitability to support roosting bats. The following rationale was provided:

- *They have 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).*

In addition to bats, the surveyors also recorded barn owl pellets within Buildings B and C.

Subsequently, the report recommended that a single dawn or dusk bat activity survey was required between May to August to establish whether bats root in the buildings, with further surveys required should a roost be recorded.

## 1.3 Scope

As roosts were recorded during the initial emergence survey, this report details the results of daytime inspection surveys and two bat emergence surveys undertaken by BM Ecology Ltd in summer 2023.

The Site is located at Siddicks Farm Barns, Skelton, Goole, DN14 7RH centred on grid reference SE 76614 25704.

The location of the Site is shown within Figure 1 below.


**Figure 1.** Buildings surveyed (outlined red) – Google Earth Imagery 2023

## 1.4 Aims

The initial aim of the bat emergence survey was to determine the presence or likely absence of a bat roost within the buildings. Should any roosting bats be recorded, the aim of the survey would be extended to include the number and species of bats roosting within the building, access and egress points, the type of roosts observed, and any further survey work or mitigation/enhancement requirements.

Any nesting birds observed during the surveys would also be recorded.

## 1.5 Legislation Context

All British bat species are fully protected through The Conservation of Habitats and Species Regulations 2019 as European Protected Species (EPS). They also receive some protection through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

It is an offence to deliberately capture, injure or kill a bat. It is an offence to damage or destroy a breeding site or resting place of a bat. It is an offence to deliberately disturb a bat; in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or (b) to affect significantly the local distribution or abundance of the species to which they belong.

Under the Wildlife and Countryside Act 1981 (as amended), it is also an offence to intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection; or obstruct access to any structure or place which any such animal uses for shelter or protection.

The 'appropriate authority' (Natural England in England) has powers to issue licences for various purposes including - (a) scientific or educational purposes… and (e) preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment. The appropriate authority shall not grant a licence under this regulation unless they are satisfied - (a) that there is no satisfactory alternative, and (b) that 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. It is an offence for any person authorised by virtue of a licence to which this paragraph applies to contravene or fail to comply with any condition which the licence requires him to comply with.

Several species of bat including brown long-eared bat and soprano pipistrelle are identified as UK Biodiversity Action Plan (BAP) priority species.

# 2 METHODOLOGY

## 2.1 Personnel

The bat surveys were led by Ben McLean BSc (Hons) MCIEEM (holding Bat Licence Level 2- 2016-24500-CLS-CLS and also a Registered Consultant under the Bat Mitigation Class Licence). Ben is the Principal Ecologist at BM Ecology Ltd and has over 11 years' experience of conducting bat surveys in both a professional and voluntary capacity.

The bat activity surveys were undertaken with assistance from the following surveyors:

- Andrea Lee has three seasons experience of undertaking professional bat surveys.
- Harriet Day has been involved with bats in a voluntary capacity for three years and this is her third season of undertaking commercial bat surveys. Harriet is also a licenced bird ringer.
- Jane Harris's BSc (Hons) second season of undertaking professional bat surveys. Jane is a trainee bird ringer.
- Eve Leadley is in her third season of undertaking professional bat surveys.
- Jonathon Simpson's second season of undertaking professional bat surveys. Jonathon is a trainee bird ringer.
- Katie Doull's BSc (Hons) MSc second year undertaking professional bat surveys.

## 2.2 Desk Study

North and East Yorkshire Ecological Data Centre (NEYEDC) were contacted to provide records of bats within 2 km of the Site. The records were received on 15th August 2023.

## 2.3 Bat Inspection Survey

The internals of the buildings were inspected prior to both emergence surveys for evidence of bats including bats in-situ, droppings, scratches, staining, urine marking, corpses and feeding remains i.e., insect wings.

All buildings were subject to an external inspection for evidence of bats prior to the emergence surveys.

Close-focusing binoculars and a high-powered torch were available for use throughout the assessment.

## 2.4 Emergence Surveys

The surveys were undertaken in full accordance with the 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (Collins ed. 2016) with updates taken from the 'Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys' (Bat Conservation Trust, May 2022).

All buildings were categorised as being of low bat roost potential by Craig Emms MSc (MCIEEM) and Dr Linda Barnett BSc (Hons), PhD, MCIEEM in December 2022 during the PBRA. In line with the Bat Surveys for Professional Ecologists: Good Practice Guidelines, buildings of low bat roost potential require a single survey to provide confidence in a negative result for structures (Collins, Pg 51).

Where a roost is recorded, sufficient surveys should be undertaken to suitably categorise the roost.

As evidence of bats was recorded during the initial daytime inspection by BM Ecology and as a roost was recorded during the first survey, an additional survey was required to provide further information on the roost. As such, two emergence surveys were undertaken on the buildings.

The dusk emergence surveys were undertaken within the main bat survey season of May to August (inclusive) and commenced 15 minutes prior to sunset and continued for 1.5 hours after sunset.

Four surveyors were required to provide full sightlines of the elevations of the buildings. It was not possible to gain full sightlines of the north elevation of Buildings C and D as these back immediately onto a private garden, with no access possible. However, from the views possible of this elevation during the daytime assessment, the walls were either in good condition or with dense climbers, and the roof could be seen by Surveyor Position 2 and 4. As such, this did not represent a significant constraint to the surveys.

Surveyors used full spectrum recordable bat detectors - Echo Meter Touch or Anabat Scout. Night vision aids in the form of IR cameras with associated lighting (Canon XA models) and thermal cameras (Guide TrackIR Pro 19) were positioned with all surveyors to aid the survey findings, with additional cameras also deployed within the barns on survey two. Screenshots from the Camera's at the end of the survey can be seen within Appendix 2.

Survey conditions are summarised in Table 1 with an illustration of the surveyor and camera positions within Figure 2.

**Table 1.** Bat survey conditions

| Survey number | Survey 1 | Survey 2 |
|---|---|---|
| Survey type | Dusk emergence | Dusk emergence |
| Date | 15/08/2023 | 29/08/2023 |
| Sunrise / Sunset time | 20:34 | 20:02 |
| Start / Finish time | 20:19 – 22:04 | 19:45 – 21:32 |
| Temp. (start / finish) | 13.5 °C – 12.7 °C | 11.5 °C – 10.1 °C |
| Relative humidity (%) (start / finish) | 68 % - 79 % | 61 % - 75 % |
| Weather conditions | Dry / Beaufort 1 / Okta scale 0/8. | Dry / Beaufort 1-2 / Okta scale 1/8. |
| Surveyor positions | 1 – Jane Harris<br>2 – Jonathon Simpson<br>3 – Harriet Day<br>4 – Ben McLean | 1 – Katie Doull<br>2 – Eve Leadley<br>3 – Andrea Lee<br>4 – Ben McLean |


**Figure 2.** Surveyor and IR/Thermal Camera Locations. Yellow circles = surveyor positions with field of view denotated by yellow dashed arrow / blue triangles = cameras locations for both surveys / green triangles = camera locations for survey two only.

## 2.5 Survey Comments

As discussed, it was not possible to gain full sightlines of the north elevation of Buildings C and D as these back immediately onto a private garden, with no access possible. However, from the views possible of this elevation during the daytime assessment, the walls were either in good condition or with dense climbers, and the roof could be seen by Surveyor Position 2 and 4. Given the above, this was not considered to be a significant constraint to the survey.

Due to the time of year that the surveys were commissioned (9th August), the surveys were undertaken to the back end of the main bat survey season, both undertaken in August with 2 weeks apart. However, given that this complies with the bat survey guidance (Collins ed. 2016), the detailed internal inspections undertaken (i.e. to record larger accumulations of droppings) and given the type of features present within the building, it is considered that sufficient information has been collected to characterise the roosts within the buildings.

In line with standard guidance (CIEEM, 2019), the results and recommendations within this report are valid for up to 18 months from the date of the final bat survey; however, given the timings of the bat survey season, this can be extended to 19 months for this particular Site (i.e., until April 2025). Updated survey work is likely to be required to support any future works outside of this time period.

# 3 RESULTS

## 3.1 Data search

NEYEDC provided 16 records of bats within 2 km of the Site, dated between 1984 and 2013. No records related to the buildings within the Site or within 400 m of the Site. The following species were recorded within 2 km of the Site: common pipistrelle, pipistrelle species, brown long-eared bat, and unidentified bats.

## 3.2 Site Description

### *3.2.1 Habitats*

The Site is situated within a semi-rural habitat, with pastoral and arable fields with associated hedgerows, villages and the town of Goole, dominant throughout the immediate and wider area. The Rive Ouse is located approximately 40 m west of the Site with only a minor road in between (Howden Road), the river may act as a significant commuting and foraging resource for bats.

In summary, the Site is bordered by suitable foraging and commuting habitat with low levels of light spill and is considered to provide optimal foraging habitat for all species of bats within their local range.

### *3.2.2 Building Description*

Also see Photographs in Appendix 1.

Building descriptions and bat roost potential features can be seen within the PBRA in Appendix 3.

## 3.3 Bat Roost Inspection and Emergence Survey Results

The results of the bat emergence survey are summarised below.

### *3.3.1 Bat Roost Inspection Surveys*

No bats were recorded during the daytime inspection surveys.

There is detritus throughout the floor of all buildings which decreases the likelihood of locating bat droppings.

During both surveys, approximately 40 scattered droppings, indicative of brown long-eared bat, were located within Building C, with no accumulation recorded. In addition, remains of approximately 30 large yellow underwing moths *Noctua pronuba* were recorded below the western internal gable (below the ridge beam) of Building C, indicating a brown long-eared bat feeding perch (FP1), with a pile of a further approximately 10 large yellow underwing moths recorded to the east on the mezzanine of the same building (FP2).

### *3.3.2 Emergence Survey – 15th August 2023*

During the survey, six day roosts were recorded within the Site, as discussed below.

A single common pipistrelle emerged from below a tile at the south of Building A at 20:45 (#R1).

A single common pipistrelle emerged from the southern barn door at Building C at 20:51 (#R2).

A single *Myotis* species emerged from below a roof tile on the east of Building B during the survey at 21:18 (#R3).

A single *Myotis* species emerged from the main barn door on Building C at 21:21 (#R4), the bat continued to re-enter the barn, with light sampling and regular emergence and return through either the door on the south or east of the building, and passing around the barn and then back through the other door (this was confirmed via both the night vision aid footage and the recordings from the surveyors).

A single brown long-eared bat emerged from a door on the west of Building B at 21:16 (#R5), the bat continued to re-enter the barn, with light sampling and regular emergence and return through either the door on the south or east of the building, and passing around the barn and then back through the other door (this was confirmed via both the night vision aid footage and the recordings from the surveyors).

A single brown long-eared bat emerged from the main barn door on Building C at 21:25 (#R6), the bat continued to re-enter the barn, with light sampling and regular emergence and return through either the door on the south or east of the building, and passing around the barn and then back through the other door (this was confirmed via both the night vision aid footage and the recordings from the surveyors).

No droppings indicative of *Myotis* (i.e. they were all indicative of brown long-eared bat) were recorded during the daytime surveys, and no droppings were observed below the tile where the *Myotis* species emerged.

Four species belonging to the *Myotis* genus are known to be present within the wider area, namely whiskered bat, Brandt's bat, Daubenton's bat and Natterer's bat. There is a significant overlap between the echolocation call characteristics of these species and subsequently a conclusive identification of *Myotis* bats to species level is rarely possible. After a review of the sonagram and slope analysis of the calls, the calls are most indicative of whiskered bat based on published guidance on slope analysis and call parameters. Subsequently, the call is considered most likely to be that of whiskered bat.

No further bats were recorded to emerge from the building during this survey.

During the survey, moderate to hight levels of foraging activity of common pipistrelle, whiskered bat and brown long-eared bat were recorded around all surveyor positions, with low activity of soprano pipistrelle and noctule at all positions.

### 3.3.3 *Emergence Survey – 29th August 2023*

During the survey, two brown long-eared bats emerged from the eastern door of Barn C at 20:55 and 20:57 – associated with #R6. Through camera analysis, the roost was confirmed to be between the gable wall, roof tiles and support beams on the western gable of Building C.

No other bats emerged from the buildings during the survey.

Low levels of common pipistrelle were recorded during the surveys, with a single brown long-eared pass at all positions, and a single soprano pipistrelle and noctule pass.

## 3.4 Summary of Bat Surveys

In summary, the buildings support two common pipistrelle day roosts (max count 1 no. bat), two whiskered bat day roost (max count 1 no. bat), two brown long-eared bat day roosts (max count 1 and 2 no. bat), and two brown long-eared bat feeding perches.

Figure 3 below provides an illustration of all bat roosts recorded within the Site, and Table 2 on the following page provides a summary of each roost, including location, species, number of bats, type of roost and roost location details.

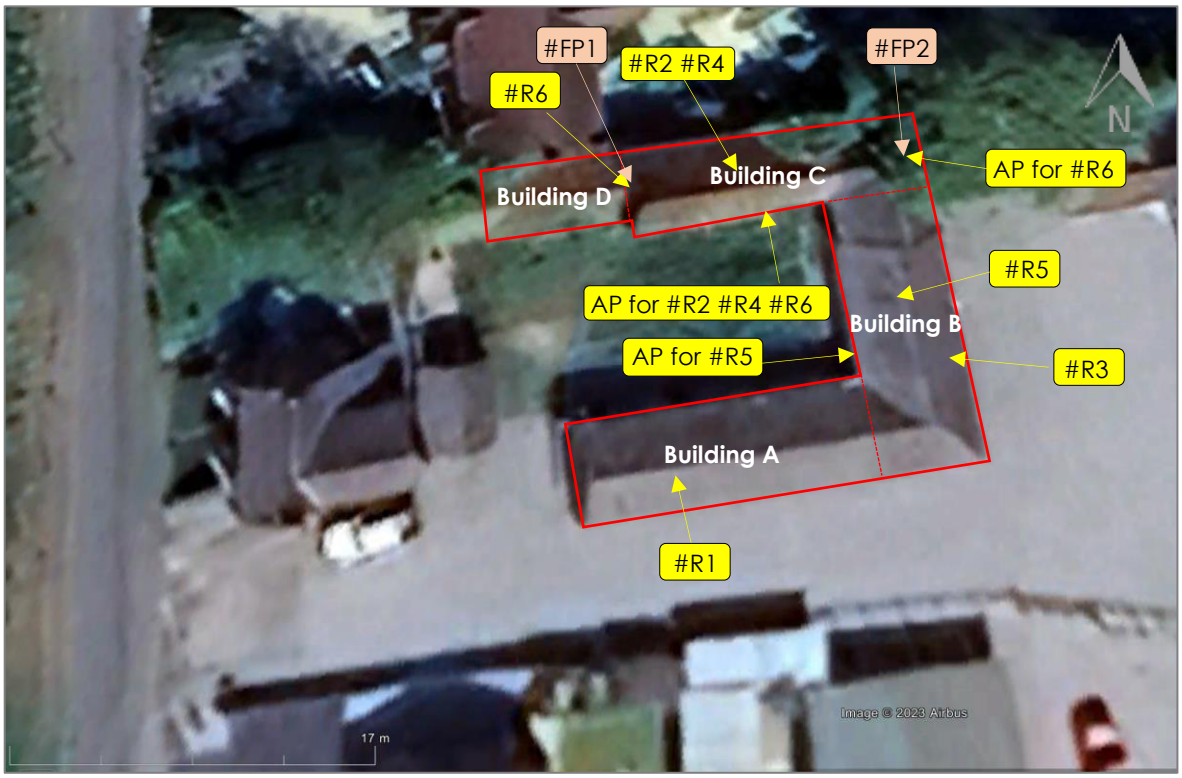


**Figure 3.** Roost locations (#R), access points (AP) and feeding perch (#FP) locations

**Table 2.** Summary of bat roosts recorded throughout the surveys

| Roost ref. no. | Building ref. | Species | No. of bats | Roost type | Comments |
|---|---|---|---|---|---|
| **#R1** | Building A | Common pipistrelle | 1 | Day roost | A single common pipistrelle emerged from below a tile at the south of the building on Survey 1 only. |
| **#R2** | Building C | Common pipistrelle | 1 | Day roost | A single common pipistrelle emerged from the southern barn door of the building on Survey 1 only. An exact roost location was not confirmed, but the bat is likely to roost in gaps in the brickwork or between the partitioning walls, tiles and support beams. |
| **#R3** | Building B | Whiskered bat | 1 | Day roost | A single whiskered bat emerged from below a roof tile on the east of the building on Survey 1 only. |
| **#R4** | Building C | Whiskered bat | 1 | Day roost | A single whiskered bat emerged from the main barn door on south of the building, with regular foraging and 'light sampling' within the building. Recorded on Survey 1 only. |
| **#R5** | Building B | Brown long-eared bat | 1 | Day roost | A single brown long-eared bat emerged from a door on the west of the building, with regular foraging and 'light sampling' within the building. Recorded on Survey 1 only. |
| **#R6** | Building C | Brown long-eared bat | 2 | Day roost | A single brown long-eared bat emerged from the main barn door of the building on Survey 1 with regular foraging and 'light sampling' within the building, with two brown long-eared bats emerging from the eastern door on Survey 2. Confirmed to be roosting between the gable wall, roof tiles and support beams on the internal western gable. |
| **#FP1** | Building C | Brown long-eared bat | n/a | Feeding perch | Approximately 30 large yellow underwing moths were observed in the west side of the building, consistent with a brown long-eared bat feeding perch. |
| **#FP2** | Building C | Brown long-eared bat | n/a | Feeding perch | A small pile of moth remains (approx. 10) were observed to the east of the building on the mezzanine below a support beam, consistent with a brown long-eared feeding perch |

**Photo 1**: #R1 – common pipistrelle day roost (1 no. bat) – Building A (circled red)

**Photo 2**: Access point for #R2 - common pipistrelle day roost (1 no.), #R4 - whiskered bat day roost (1 no.) and #R6 - brown long-eared bat day roost (2 no.)

**Photo 3**: #R3 – whiskered bat day roost (1 no. bat) – Building B (circled red)

**Photo 4**: #R5 – brown long-eared bat day roost (1 no. bat) – access point

**Photo 5**: #R6 – brown long-eared bat day roost location (2 no. bat)

**Photo 6**: #R6 – brown long-eared bat day roost – second access point

**Photo 7**: #FP1 – brown long-eared bat feeding perch

**Photo 8**: #FP2 – brown long-eared bat feeding perch

## 3.5 Nesting Birds

During the survey, two active barn swallow nests were recorded within a room to the west of Building A, and an additional four older inactive nests were recorded within the buildings.

No barn owl pellets were recorded within the building during the 2023 surveys, although it is noted that Craig Emms MSc MCIEEM and Dr Linda Barnett BSc (Hons), PhD, MCIEEM recorded barn owl pellets in three areas in the buildings in December 2022.

# 4 CONCLUSION AND RECOMMENDATIONS

## 4.1 Key Findings

The key findings of the survey are as follows:

- The buildings within the Site support two common pipistrelle day roosts (max count 1 no. bat), two whiskered bat day roost (max count 1 no. bat), two brown long-eared bat day roosts (max count 1 and 2 no. bat), and two brown long-eared bat feeding perches.

- Building A supports a common pipistrelle day roost (#R1).

- Building B supports a whiskered bat day roost (#R3) and a brown long-eared bat day roost (#R5).

- Building C supports a common pipistrelle day roost (#R2), a whiskered bat day roost (#R4), a brown long-eared bat day roost (#R6) and two brown long-eared bat feeding perches (#FP1 and #FP2).

- No evidence was recorded, both during the daytime assessments and bat activity surveys, to suggest that the buildings within the Site are used by larger numbers of bats i.e., a maternity roost.

- The buildings within the Site are not heated and considered to be suitable for small numbers of hibernating bats.

- No evidence of bats were recorded during the surveys on Buildings D.

- During the first survey, moderate to hight levels of foraging activity of common pipistrelle, whiskered bat and brown long-eared bat were recorded around all surveyor positions, with low activity of soprano pipistrelle and noctule at all positions. During the second survey, low levels of common pipistrelle were recorded during the surveys, with a single brown long-eared pass at all positions, and a single soprano pipistrelle and noctule pass.

- The surrounding habitat offers excellent conditions for foraging and commuting bats.

- Two active barn swallow nests were recorded within a room to the west of Building A, and an additional four older inactive nests were recorded within the buildings. Barn owl pellets were recorded in three areas in the buildings in December 2022, with no barn owls or pellets recorded during the summer surveys 2023.

## 4.2 Impact Assessment

Based on the data collected, it is considered that the information gathered and presented, provides a robust understanding of bat usage on buildings within the Site.

### *4.2.1 Impact Assessment – Buildings A, B and C – Roosts Recorded*

Considering the survey findings, without mitigation, the proposed redevelopment of Buildings C and potentially B, would result in the combined loss of two common pipistrelle day roosts, two whiskered bat day roosts, two brown long-eared bat day roosts, and two brown long-eared bat feeding perches. It is understood that Building A will not be impacted by the works, and the redevelopment of Building B is currently unknown.

The '*Bat Mitigation Guidelines. A guide to impact assessment, mitigation and compensation for developments affecting bats'* (CIEEM, 2023), classes feeding perches, non-breeding day roosts of common pipistrelle and brown long-eared bat (widespread species), and non-breeding day roosts of whiskered bat (widespread in all geographies, but not as abundant in all) as of Site importance. Subsequently, these roosts are considered to be of a relatively low conservation significance. This is further supported by the Bat Mitigation Class Licence, which categorises an individual day roost of the above species as a low conservation significance roost; however, the number of roosts recorded does increase the conservation value of the Site when assessed holistically.

### *4.2.2 Impact Assessment – Building D – No Roosts Recorded*

Given the survey results of Building D it is considered that works can proceed on this building without likely effects on bats and without the requirement for further surveys, mitigation or licensing from Natural England.

Works should proceed with caution for unexpected bat presence; bats are highly mobile species that roost switch throughout the season and transient bat roosts can switch from night to night and can be found almost anywhere. In the unlikely event that a bat is unexpectedly found within the building during works, the roost is to be carefully re-covered and all work potentially affecting the roost is to be halted and BM Ecology should be contacted immediately to discuss options, and potential further survey and licencing requirements.

## 4.3 Recommendations

Any work which involves either the damage, destruction or disturbance of a bat roost (including the various roosting types), requires either a European Protected Species Mitigation Licence (EPSML) or if suitable, a Bat Mitigation Class Licence (BMCL). In England, these licences would be provided by Natural England and would permit activities that would otherwise be unlawful.

Given the number of bat roosts recorded on the Site (including within Building C alone), the Site does not meet the criteria to be registered under the Bat Mitigation Class Licence and would require a full European Protected Species Mitigation Licence.

Natural England typically require update nocturnal bat surveys to be undertaken from the most recent survey season. As such, further update bat surveys may be required should there be a delay between the surveys undertaken in 2023 and the licence application.

The mitigation and compensation recommendations presented within section 4.4 and the method statement presented within section 4.5, provides details outlining measures that will be employed to retain the favourable conservation status of bats at the Site.

## 4.4 Mitigation and Compensation

As the proposed works will result in the loss of the existing bat roosts within Building C and potentially Building B (if developed), compensation will be required to mitigate the roost loss. The details below are designed to facilitate the continuing ecological functionality of the bat populations at the Site.

To mitigate for the loss of roosting opportunities on the Site, the following roost features should be created:

- Four bat boxes, such as the Greenwood Ecohabitats boxes, will be installed within the retained buildings, whether this be Building A (if Building B is converted) or Building A and B (if neither building is proposed for conversion). The bat boxes will include two medium cavity boxes and two boxes with two crevices. These boxes will be installed to provide additional roosting features within the retained barns.

- An integrated bat box, such as the 'Ibstock Enclosed Bat Box C', will be installed within the integrity of the west gable of Building C. The box will be installed near to the peak of the gable, > 5 m high. The box will be installed away from windows/light and disturbance, with good commuting access.

- All open windows will be retained open in Building A, and Building B if undeveloped, to allow continued flight access to the buildings by bats, to provide both roosting access and opportunities to be used as feeding perches.

- Artificial lighting causes disturbance to bats, as such lighting must not be directed towards the rooflines i.e., the bat tiles and commuting roots, or the bat boxes. All treelines / hedgerows must remain unlit post development.

Due to the type of roosts recorded and their relatively low conservation status, post development monitoring surveys are not considered to be necessary for the mitigation proposed for the traditional barns.

It is considered that the above would allow the continued ecological functionality of the Site for common pipistrelle, whiskered bat and brown long-eared bats, and provides opportunities for other species of bats within the local range, and roosts of higher conservation significance (i.e., a maternity roost).

## 4.5 Method Statement

Works will be undertaken in full accordance with the Method Statement presented below:

- No works will be undertaken which would impact the bat roosts until a European Protected Species Mitigation Licence has been obtained. Planning permission and any dischargeable conditions relating to wildlife must be granted before the licence can be applied for, and the licence can only be applied for within 3 months of the works start date. Given that there may be a delay between the surveys presented within this report and the actual licence application, update nocturnal bat surveys may need to be undertaken from the most recent survey season to inform the licence applications.

- From a bat perspective, the most suitable time to undertake the licensable works (i.e., the supervised roost strip and bat exclusion works) would either be in spring (mid-March to April inclusive), or autumn (September to November inclusive). In particular, the licensable works (roost destruction/roof strip) must avoid the peak hibernation period of December to mid-March inclusive, to remove the risk of encountering bats at this sensitive time of year. Should it be necessary to commence licensable works during the main bat activity period (May to August), they should be preceded by a daytime inspection and nocturnal survey to ensure a higher conservation roost is not present within the buildings. As discussed within Section 4.6 consideration to timings must also be given to nesting birds.

- Prior to any works on the buildings, the licenced ecologist or suitably qualified accredited agent will provide a toolbox talk to the contractors undertaking the works, to explain bats legal protection, the roost location, the roles, responsibilities and required working practices, and procedures should a bat be found during works.

- All roosts will be destroyed under the direction of the licenced ecologist or suitably qualified accredited agent. All tiles (including the roost tiles) will be carefully lifted and checked below the tiles and on the roof itself, before being removed.

- Any bats that are captured either during an initial walkover by the supervising ecologist prior to any works, or during the roof strip / other works, will be captured and released into the boxes installed within the barn. Should any injured bats be found, these will be taken into care and released on the Site when healthy.

- In the unlikely event that a bat is discovered outside of times where works will be supervised, contractors will be advised to contact the licenced bat handler whom will travel to Site to collect the bat and transfer it to a bat box. Contractors will be specifically forbidden to handle bats.

## 4.6 Birds

### *4.6.1 Conclusions*

During the survey, two active barn swallow nests were recorded within a room to the west of Building A, and additional four older inactive nests were recorded within the buildings.

No barn owls or pellets were recorded within the building during the survey, although it is noted that Craig Emms MSc MCIEEM and Dr Linda Barnett BSc (Hons), PhD, MCIEEM recorded barn owl pellets in three areas in the buildings in December 2022.

### *4.6.2 Recommendations*

As there are no plans of works on Building A, based on the active barn swallow nests recorded this year, barn swallows will not be impacted by the works.

As discussed within the bat mitigation, all open windows will be retained open in Building A, and Building B if undeveloped, which will allow continued flight access to the buildings by barn swallows.

No further compensation for barn swallows is considered necessary.

Given the irregularity of the use of Barn C by barn owls, no compensation is considered necessary.

It is recommended that works on buildings commence outside of the bird nesting period of March to September (inclusive). If this is not possible, works within the Site during the bird nesting period (March to September inclusive) would require supervision by a suitably qualified ecologist. The supervising ecologist would advise all site personnel of the potential presence of nesting birds, their legal protection and the need to minimise disturbance of nesting birds. The supervising ecologist would also check for active bird nests prior to works during March-September.

In line with current legislation (The Wildlife & Countryside Act 1981), if active nests are present, these must be retained in-situ undisturbed by the works until the nests are no longer active.

Should works commence during the nesting bird period, the client should be aware that it is likely that some of the works will need to be postponed on some of the buildings until the nests are no longer active. However, it may be possible to stagger the works depending on the active nests observed.

# 5 REFERENCES

Bat Conservation Trust (2022). *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys*. Online at: https://cdn.bats.org.uk/uploads/pdf/Interim-guidance-note-on-NVAs-May-2022-FINAL.pdf?v=1653399882

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# APPENDICIES

# Appendix 1 Night Vision Aid Screenshots

**Survey Position 1.** Screenshot of video footage (Guide TrackIR Pro 19)


**Survey Position 2.** Screenshot of video footage (Guide TrackIR Pro 19)

**Survey Position 3.** Screenshot of video footage (Canon XA 50)

**Survey Position 3.** Screenshot of video footage (Canon XA 50)

# Appendix 2 PBRA Report

# PRELIMINARY BAT ROOST ASSESSMENT

## SIDDICKS FARM, SKELTON, GOOLE, YORK
## FOR
## MR CHRIS GOULDEN


(December 2022)
(Contract number 404)

Prepared by:
Craig Emms MSc MCIEEM
Dr Linda Barnett BSc (Hons), PhD, MCIEEM
Consultant Ecologists
Huntingdon
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## CONTENTS

## PROJECT DATA

| | |
|---|---|
| Site Address | Siddicks Farm, Skelton, Goole, York DN14 7RH |
| Project Proposed | Conversion of agricultural buildings into residential properties |
| Boundary as Specified by Client | Yes |
| Central Ordnance Survey Grid Reference | SE 76613 25704 |
| Survey Dates | 20 December 2022 |
| Date Report Issued | 21 December 2022 |
| Report Version | Version 1 |

## SUMMARY

This report has been prepared by Craig Emms and Linda Barnett who were contracted by Mr Chris Goulden to undertake a preliminary bat roost assessment of agricultural buildings at Siddicks Farm, Skelton, Goole, York, hereafter referred to as 'the site'. The preliminary bat roost assessment was undertaken on 20th December 2022.

The survey was required to inform a planning application to convert the agricultural buildings into residential properties. Following the assessment, the agricultural buildings were judged to have 'low' potential to support roosting bats as a few potential bat roosting features were observed which could be used by bats. The buildings are, however, unlikely to support a roost of high conservation status.

Blackbird, wren and swallow nests were observed in the buildings, as well as the fresh pellets of a roosting barn owl.

The results of the survey indicate that one further dawn or dusk bat activity survey is required during the appropriate season (May to August, inclusive) to establish whether bats use the buildings for roosting, before any works on the buildings can commence.

## INTRODUCTION

Craig Emms and Linda Barnett were instructed by Mr Chris Goulden to undertake a preliminary bat roost assessment of agricultural buildings situated at Siddicks Farm, Skelton, Goole, York. Mr Goulden intends to apply for permission to convert the buildings into residential properties. The buildings are located at central Ordnance Survey Grid Reference: SE 76613 25704, and hereafter are referred to as 'the site'.

The site is a small complex of farm buildings located in Skelton which is a small village in the unitary authority of the City of York situated on the east bank of the River Ouse. The surrounding landscape is dominated by residential properties to the north and south, the River Ouse to the west and pasture and arable land to the east.

The preliminary bat roost assessment was undertaken in December 2022.

This report describes the survey carried out and outlines the further surveys that are required.

AIMS AND OBJECTIVES
The aims of the study were to:

- Identify, quantify and report on the use of the site by roosting bats.
- Identify potential impacts of conversion works on roosting bats and suggest appropriate outline mitigation and compensation measures.
- Identify the legal and policy implications of any anticipated impacts.
- Make recommendations for any necessary further survey work or licensing, as required.

Ecological information for the assessment and subsequent recommendations is provided by the results of the preliminary bat roost assessment conducted in December 2022.

Relevant background information to roosting bats, nesting birds and barn owls, and their legal protection is provided in the Appendix.

CONSTRAINTS
All surveys are a snapshot of a site at the time of the survey. However best practice has been followed and all reasonable effort made to complete the surveys to a high standard. There were no limitations to the field study with full access to the interior and exterior of the buildings.

Ecological constraints will change over time and therefore the findings of this report are considered to be valid for a period of one year, after which the report should be reviewed to consider whether the survey should be updated.

## METHODOLOGY – FIELD SURVEY

The preliminary bat roost assessment was undertaken by Craig Emms (Natural England Class Licence Registration Number: 2015-12020-CLS-CLS) and Dr Linda Barnett (Natural England Class Licence Registration Number: 2015-15048-CLS-CLS). The survey was conducted on 20th December 2022 following the methodology contained in Collins (2016). The survey date falls within the optimal survey period to conduct preliminary roost assessments on structures.

The preliminary bat roost assessment involved a detailed external and internal inspection of the buildings specifically for potential or actual bat access points and roosting places and any direct evidence of bats, including:

- Live or dead bats
- Droppings
- Urine splashes
- Fur-oil staining
- Squeaking noises

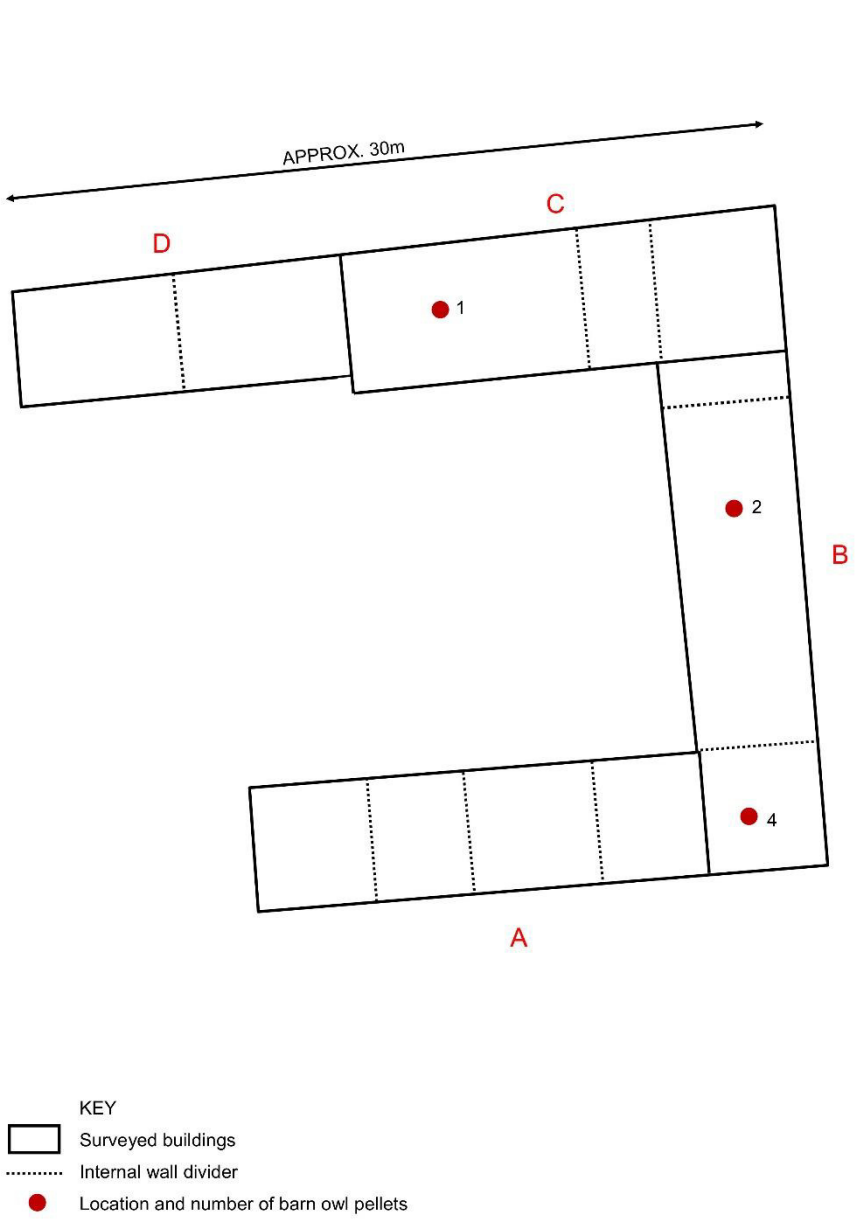
The buildings were then attributed a grade of negligible, low, moderate or high suitability to support roosting bats according to Bat Conservation Trust guidelines criteria following Collins (2016). Table 1 in the Appendix provides a more detailed explanation of the bat roost assessment criteria. If evidence of bats is found, further surveys may be necessary.

## RESULTS – GENERAL SITE DESCRIPTION

The site is situated in the village of Skelton. Buildings adjacent to the site include residential properties to the north, east and south. The Humber Estuary Ramsar Site, Special Area of Protection, Special Area of Conservation and Site of Special Scientific Interest is located approximately 26m to the west of the site.

According to MAGIC (Multi-Agency Geographic Information for the Countryside - www.magic.gov.uk), no bat development licenses have been granted within a 2 km radius of the site.

## FIGURE 1: THE SURVEYED BUILDINGS




Please note: This plan is intended to indicate the approximate location of features and should therefore, not be treated as an accurate scale plan.

## RESULTS – DESCRIPTION OF THE SURVEYED BUILDINGS

The site consists of agricultural buildings joined in a horseshoe shape around an open courtyard. For ease of reading, the descriptions of the buildings have been broken down into four separate parts, A, B C and D (see Figure 1).

Building A

Building A (see Figure 1 and Plates 1 and 2) is a single storey brick-built building with a pitched slate-tiled roof and a floor-space of approximately 100m$^2$. The building is divided internally into four former livestock stalls by brick walls. There are glassless windows present in each stall (see Plate 3). The roof has skylights and is in poor condition with many slipped tiles and small holes, including some glassless skylights (see Plate 4). There are gaps present beneath the ridge tiles (see Plate 5). The interior frame is timber (see Plate 6).

| | |
|---|---|
|   | **Plate 1:** a view of Building A. Photograph taken from the north. |
| | |
|   | **Plate 2:** Building A. Photograph taken from the south-east. |
| | |

| | |
|---|---|
|   | **Plate 3:** Building A, showing one of the glassless windows in a stall. |
| | |
|   | **Plate 4:** Building A, showing holes in the roof. |
| | |
|   | **Plate 5:** Building A, showing gaps beneath the ridge tiles. |
| | |

| | |
|---|---|
|  | **Plate 6:** Building A, showing the roof and the internal timber frame. |

Building B

Building B (see Figure 1 and Plates 7) is a single storey brick-built building with a pitched slate-tiled roof and a floor-space of approximately 88m$^2$. The building is divided internally into two rooms by brick walls. One of the rooms is a former livestock stall (see Plate 8). The room on the southern end of the building is open to the east (see Plate 9). The roof of the stall has skylights and is in poor condition with many slipped tiles and small holes (see Plate 10). The interior frame is timber (see Plate 11).

| | |
|---|---|
|  | **Plate 7:** Building B. Photograph taken from the west. |
| | |
|  | **Plate 8:** Building 2, showing the former livestock stall. |
| | |

| | |
|---|---|
|   | **Plate 9:** Building B, showing the open wall on the eastern side of the building. Photograph taken from the south-east. |
| | |
|   | **Plate 10:** Building B, showing the holes in the roof. |
| | |
|   | **Plate 11:** Building B, showing the internal timber framework. |

Building C

Building C (see Figure 1 and Plate 12) is a brick-built building with a pitched roof. It has a floor space of approximately 110m$^2$. The eastern end of the building is two storeys, with an enclosed staircase leading to the 1$^{st}$ floor and a space beneath the stairs (see Plate 13). The ground floor room is open to the east (see Plate 14). The first-floor room is divided into two parts and the roof is constructed of slates with a skylight (see Plate 15). The frame is timber. The western end of the building (see Plate 16) is open from the floor to the roof, which is constructed of clay pantiles with skylights. The interior frame is timber. Both roofs are in poor condition with many slipped tiles and small holes (see Plate 17).

| | |
|---|---|
|  | **Plate 12:** Building C. Photograph taken from the south-west. |
| | |
|  | **Plate 13:** Building C, showing the space beneath the stairs. |
| | |
|  | **Plate 14:** Building C, showing the open wall on the eastern side of the building. Photograph taken from the south-east. |
| | |

| | |
|---|---|
|   | **Plate 15:** Building C, showing the timber frame and the slate-tiled roof of the 1st floor room. |
| | |
|   | **Plate 16:** Building C, showing the room on the western end of the building. |
| | |
|   | **Plate 17:** Building C, showing the clay pan-tiled roof of the eastern end of the building. Photograph taken from the south. |

Building D

Building D (see Figure 1 and Plate 18) is a single-storey stone and brick-built building with a pitched clay pan-tiled roof and a floor space of approximately 54m$^2$. The building is divided internally into two former livestock stalls by a brick wall. The roof has skylights and is in poor condition with many slipped tiles and small holes (see Plate 19). There is thick ivy growing on the roof's western end (See Plate 20) which has grown into the building itself (see Plate 21) The interior frame is timber (see Plate 22).

| | |
|---|---|
|  | **Plate 18:** Building D. Photograph taken from the south-east. |
| | |
|  | **Plate 19:** Building D, showing the clay pan-tiled roof. Photograph taken from the south. |
| | |
|  | **Plate 20:** Building D, showing the ivy growing on the roof of the stall at the western end of the building. Photograph taken from the south. |
| | |
|  | **Plate 21:** Building D, showing the ivy growing inside the stall. |

| | |
|---|---|
|   | **Plate 22:** Building D, showing the interior timber frame at the eastern end of the building. |

## RESULTS – DESCRIPTION OF OBSERVATIONS OF ROOSTING BATS OR POTENTIAL BAT ROOSTING FEATURES AND BIRD NESTS

No direct signs of roosting bats were observed in the buildings. However, there were a few potential bat roosting features observed, including but not limited to: gaps beneath ridge tiles (see Plate 23); gaps beneath flashing (See Plate 24); crevices between roof tiles (see Plate 25); gaps between the internal timber framework and the roof tiles (see Plate 26); and holes and deep cracks in brick walls (see Plate 27).

| | |
|---|---|
|  | **Plate 23:** gaps beneath ridge tiles. |
| | |
|  | **Plate 24:** gaps beneath flashing. |
| | |

| | |
|---|---|
|  | **Plate 25:** crevices between roof tiles. |
| | |
|  | **Plate 26:** gaps between the internal timber framework and the roof tiles. |
| | |
|  | **Plate 27:** holes and deep cracks in brick walls. |

Inactive blackbird, wren and swallow nests were observed throughout the buildings.

A low number of very fresh barn owl pellets were observed in buildings B and C, indicating an occasionally roosting individual owl (see Plate 28). No nesting barn owls were observed.

| | |
|---|---|
|  | **Plate 28:** barn owl pellets in Building B. |

## RESULTS – SUMMARY OF SURVEY FINDINGS

PRELIMINARY BAT ROOST ASSESSMENT

The agricultural buildings were judged to have 'low' suitability to support roosting bats because:

- They have 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).

No direct evidence of roosting bats was found in the buildings.

## DISCUSSION

DEVELOPMENT PROPOSALS

At the time of writing the report, the development proposals entail the conversion of agricultural buildings into residential properties.

EVALUATION

It is possible that bats roost in the buildings on the site. One further dawn or dusk bat activity survey is required to establish whether bats roost in the buildings (see Recommendations for Mitigation and Further Surveys below). If roosting bats are found to be present during this survey, then further studies will be required to inform an application for a bat mitigation (development) licence to Natural England.

Birds of several species nest in the buildings on the site, and barn owls roost in two of the buildings.

POTENTIAL IMPACTS

All British bats are protected from disturbance, killing and injury and their roosts are also protected (see the Appendix for further details).

Without mitigation the works are likely to disturb, kill or injure bats or to disturb or destroy their roosts.

All wild bird nests are protected and it is illegal to intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions). It is also illegal to intentionally disturb barn owls, or their dependent young while they are nesting (See the Appendix for further details).

Without mitigation the works are likely to disturb, kill or injure nesting birds (possibly including roosting barn owls) or to disturb or destroy their nests.

## RECOMMENDATIONS FOR MITIGATION AND FURTHER SURVEY

RECOMMENDATIONS

- Birds nest in the agricultural buildings on the site. As a precaution, appropriate and pragmatic measures should be taken to avoid committing the offence of killing or injuring a wild bird or damaging or destroying an active nest; all birds, their nests and eggs are protected by the Wildlife & Countryside Act of 1981. This makes it an offence, with certain exceptions, to deliberately take, damage or destroy the nest of any wild bird while it is in use or being built. It is also illegal to take or destroy the egg of any wild bird.

- Any operations that may disturb nesting habitat should be conducted outside the main bird nesting season. The main bird nesting season is usually taken as the beginning of March to the end of August inclusive in this part of Britain. If this is unavoidable, a pre-clearance inspection by a suitably experienced ornithologist will be required immediately prior to construction works to identify whether any nests are present, and ensure appropriate action is taken. If the latter approach is taken and nesting is encountered there is a risk of delay since an 'exclusion zone' may need to be set up around active nests until the young have fledged. Please be aware that some species of bird may occasionally be found nesting outside of the main bird nesting season as detailed above (*e.g.* barn owl, tawny owl, long-eared owl, mistle thrush, robin, yellowhammer, corn bunting, stock dove, feral pigeon, woodpigeon and collared dove *etc*.). Always check potential nesting habitat for signs of nesting birds (*e.g.* look for singing males or birds making strident alarm calls) before disturbing potential nesting habitat when outside of the main nesting season. If you believe that nesting birds *may* be present, instruct a suitably experienced ornithologist to conduct an inspection.

- A pre-clearance barn owl inspection of the agricultural buildings on the site using a suitably licenced, qualified and experienced ecologist should be conducted immediately prior to works commencing. If nesting barn owls or their dependant young are encountered there is a risk of delay since works will not be allowed to commence until the young have fledged and moved away from the site;

- To comply with the latest planning guidance and to enhance the site for swifts, four integral swift nesting boxes should be built into the new dwellings. This will provide new roosting and nesting places for this species.

- To also comply with the latest planning guidance hedgehog holes (measuring 13cm by 13cm) should be provided in the base of any new fencing erected on the site to allow the free movement of this declining species between foraging habitats.

Please be aware that any works which have the potential to harm or disturb bats must not take place until appropriate mitigation measures have been agreed with the statutory licencing body (Natural England). This is because bats, as European Protected Species, are protected under the "strict liability" regimen. There is no defence for unintentional/incidental harm.

FURTHER SURVEYS

- One further dawn re-entry or dusk emergence bat activity survey during the appropriate season (May to August, inclusive) is required to establish whether bats use the buildings for roosting, before any works can commence.

## CONCLUSIONS

It is possible that bats roost in the buildings on the site. A further bat activity survey is required during the appropriate season (May to August, inclusive) to establish if bats roost in the buildings. If roosting bats are identified in the buildings further studies may be needed and it will be necessary to apply for a bat mitigation (development) licence from Natural England. Birds nest in the buildings and barn owls roost in two of the buildings.

## REFERENCES

Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)*. The Bat Conservation Trust, London, UK.

# APPENDIX

BACKGROUND TO ROOSTING BATS AND THEIR LEGAL PROTECTION

BAT ROOSTS

Bats use a variety of different structures for the purposes of roosting, including mature trees, caves, mines, buildings (both modern and ancient), bridges and tunnels. In addition, many bat species will occupy purpose-built bat-boxes or even boxes designed to house nesting birds. Bats also use different types of roost at different times of year, including:

- **Day Roost** – a place where individual bats, or small groups of male bats, rest or shelter in the day but are rarely found by night in the summer;

- **Night Roost** - a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony;

- **Feeding Post** - a place where individual bats or a few individuals rest or feed during the night but are rarely present by day;

- **Transitional/Occasional Roost** - used by a few individuals or occasionally by small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation;

- **Swarming Site** - where large numbers of male and female bats gather in late summer to autumn. These appear to be important mating sites;

- **Mating Site** - sites where mating takes place from late summer and can continue through the winter;

- **Maternity Roost** - where female bats give birth and raise their young to independence;

- **Satellite Roost** - an alternative roost found in close proximity to the main nursery colony used by a few individual females to small groups of breeding females throughout the breeding season.

The use of roosts is rather unpredictable, particularly amongst tree-roosting species, but female bats are typically loyal to maternity roosts.

LEGISLATION

All species of bat in Britain are ‘European Protected Species’ and are protected under the Conservation of Habitats and Species Regulations 2017, and the Wildlife and Countryside Act 1981, as amended by the Countryside & Rights of Way Act 2000. These pieces of legislation combine to give substantial protection to bats and their habitats, making it an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat;
- Intentionally or recklessly obstruct access to a bat roost.

**Table 1:** Bat Roost Assessment Criteria.

| Suitability | Description of Roosting habitats | Commuting and foraging habitats |
|---|---|---|
| Negligible | Negligible habitat features on site likely to be used by roosting bats. | Negligible habitat features on site likely to be used by commuting or foraging bats. |
| Low | A structure with one or more potential roost sites that could be used by individual bats opportunistically.<br><br>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).<br><br>A tree of sufficient size and age to contain Potential Roost Features (PRFs) but none seen from the ground or features seen with only very limited roosting potential. | Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream or lone tree (not in a parkland situation) or a patch of scrub, but isolated, *i.e.* not very well connected to the surrounding landscape by another habitat. |
| Moderate | A structure or tree with one or more PRFs 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 - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed). | Continuous habitat connected with the wider landscape that could be used by bats for commuting such as lines of trees, scrub, grassland or water or linked back gardens. |
| High | A structure or tree 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. | Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, tree-lined watercourses, grazed parkland, hedgerows, lines of trees, broad-leaved woodland and woodland edge.<br><br>Site is close to and connected to known roosts. |

Note: Adapted from Collins, 2016.

NESTING BIRDS AND THEIR LEGAL PROTECTION

All wild bird nests are protected under The Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting.

BARN OWLS AND THEIR LEGAL PROTECTION

The barn owl is included in the list of strictly protected fauna and appears in Appendix II of the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats). They are also afforded protection under Schedule One of the Wildlife and Countryside Act (1981). This act has been amended on several occasions, most recently by the Countryside and Rights of Way (CRoW) Act 2000, the Natural Environment and Rural Communities (NERC) Act 2006 and by the Conservation of Habitats and Species Regulations 2010 and 2017, making it an offence to:

- Intentionally and recklessly disturb barn owls whilst they are building a nest or are in, on or near a nest containing eggs or young, or to disturb their dependent young.

## QUALITY ASSURANCE

This report format is designed to comply with statutory authority (*e.g.* Natural England, Natural Resources Wales and Scottish Natural Heritage) and the Chartered Institute of Ecology and Environmental Management relevant standing advice. Further studies may be required where there is evidence of protected species or if other notable ecological factors are found.

**Craig Emms MSc, MCIEEM**
**Linda Barnett BSc (Hons), PhD, MCIEEM**
Craig and Linda are professional ecologists with over 65 years of combined practical experience in nature conservation, wildlife research and management and ecological consultancy, gained from working in the UK and overseas. Craig has a MSc. in Ecosystems Analysis and Governance and Linda has a PhD in Genetics. Together they have carried out original academic research on a broad range of wildlife; insects, amphibians, reptiles, birds and mammals (including bats), and published the results as scientific papers in a number of international peer-reviewed journals. Linda co-authored the Species Action Plans for Britain's eight most endangered butterflies while working for Butterfly Conservation, and has supervised students in research projects on hazel dormouse, great crested newts and moths whilst she was co-ordinating and lecturing on a Masters course in Analytical Biology at the University of Warwick. Craig was also a lecturer in ecological methods on two Masters courses at the University of Warwick. Linda and Craig are skilled and practiced field ecologists, especially with regard to wildlife and countryside management. They are licenced by Natural England as bat and great crested newt surveyors (and are former volunteer bat roost visitors/handlers for Natural England, and former registered bat carers for the Bat Conservation Trust with 15 years of experience) and have an extensive and broad experience of a great variety of field surveys including mammals (otter, badger, water vole, hedgehog, small mammals and bats), birds, reptiles, amphibians, dragonflies, butterflies and moths. Both have undergone training in the use of eDNA methodology and field sample collection. Craig is also licenced by Natural Resources Wales as a bat and great crested newt surveyor, by the British Trust for Ornithology as a bird nest recorder and has been the named ecologist and clerk of works on many bat mitigation and compensation (development) licences.

Please be aware that ecological reports generally have a limited period of currency. Many statutory authorities now regard one year as the maximum time that should elapse before a report will need to be updated. Where a European Protected Species licence is to be applied for once planning permission has been granted, a walk-over of the site should be carried out within three months of an application being submitted to check that the habitats have not changed significantly since the survey was carried out.

Any information relating to legal matters, designs, specifications, advice, suggestions, or comments written or verbal in this report is provided in good faith and for consideration only,

and does not purport in any way to give any advice on or interpretation of the law whatsoever. Professional legal advice should always be sought.

It is a requirement under the CIEEM code of practice to provide recorded data to biological record centres. For certain records (*i.e.* data obtained under a government survey licence) we also have a legal obligation to forward such data.

If you have special cause to restrict the distribution of this data (which will be in the public domain), please contact us to discuss this further within one month of the issue of this report.

Note. *Whilst all due and reasonable care is taken in the preparation of reports, Craig Emms and Linda Barnett accept no responsibility whatsoever for any consequences of the release of this report to third parties. Please be aware that site surveys inevitably miss species not apparent on the date of visit(s) by reason of seasonality, mobility, habits or chance. Results are indicative and given in good faith but they are not a guarantee of presence or absence of any particular taxa.*

## COPYRIGHT AND LIMITATIONS

Craig Emms and Linda Barnett have prepared this report for the sole use of the above-named client or their agents with respect to the proposed development detailed in the Executive Summary and Introduction of the report. This report may not be relied upon by any other party without the prior and express written agreement of the authors.