Small Barn at Written Stone Farm, Longridge

BAT SURVEY REPORT

September 2024

KNIGHT SKY ECOLOGY
PRACTICAL ECOLOGY SOLUTIONS

E: info@knightskyecology.co.uk

M: 07535 457027

W: www.knightskyecology.co.uk

Report Ref: 093_05

1 INTRODUCTION

1.1 Instruction & Background

Knight Sky Ecology was commissioned to undertake bat surveys of the 'small barn' at Written Stone Farm, Written Stone Lane, Longridge, Preston, PR3 2ZN. The surveys were undertaken in relation to the potential development plans for the barn. Specific details for the proposals were not available at the time of the assessment.

The bat surveys comprised a preliminary bat roost assessment and dusk emergence surveys. The primary aim of the bat surveys was to gather information on the presence or absence of a bat roost(s) at the barn. This report presents the results of the bat surveys and provides all the necessary data, assessment and guidance to satisfy the relevant planning and conservation policy obligations and legislative framework. Details of the legislation afforded to bats is presented in Appendix A.

1.2 Site Description

The small barn is located at the entrance to the farm and forms one of several farm buildings which were disused at the time of the assessment. The farmhouse is located to the immediate west of the barn and there are several former poultry sheds to north. The farm is bordered by pasture land bound by occasional hedgerows and treelines and is approximately 125m Above Ordnance Datum (AOD). Spade Mill Reservoir No.1 is located 420m west and the centre of Longridge is located 2.1km west. Figure 1.1 provides an aerial image of the property location.

Figure 1.1. Location of the small barn.

2 METHODS

2.1 Survey Personnel

The preliminary bat roost assessment and all dusk emergence surveys were led by Ryan Knight MCIEEM who holds a Level 2 Natural England Class Licence (ref. 2015-12611-CLS-CLS) for bats and has held this licence for over 11 years. Ryan has also acted as the named ecologist on numerous European Protected Species (EPS) mitigation licences issued by Natural England which covered several bat species and roost types.

2.2 Overarching Guidance

The bat surveys were primarily based on the methods described in '*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). Bat Conservation Trust, London.' (Collins, J., (ed.) (2023).* Any deviation from standard practice is justified where required.

2.3 Field Surveys

Preliminary Bat Roost Assessment

A preliminary bat roost assessment of the property was undertaken on 12th April 2024. The assessment involved a visual inspection of the property to search for bats and evidence of bats (e.g., droppings) and an appraisal of the extent and suitability of any potential bat roost features present. The assessment included the use of binoculars, a torch and ladders.

Other considerations which would influence the suitability of the property for use by bats were also taken into account. This included the site location, expected night time lighting levels and the suitability of the surrounding habitats. This information was gathered from the site survey and web-based mapping sources (i.e., Google Earth). Following the assessment, the building was assigned a bat roost suitability category of none, negligible, low, moderate, high or confirmed roost based on the collated information.

Dusk Emergence Surveys

Two dusk emergence surveys were undertaken on the barn on 6th June and 3rd July 2024 to gather further information on the presence / absence of a bat roost(s).

With respect to the potential roost features identified during the preliminary bat roost assessment, two survey positions were used to gain clear sightlines of all the elevations of the property. The two survey positions during the first survey comprised: one surveyor with a (full spectrum) bat detector supplemented by infra-red cameras (commonly referred to as Night Vision Aids (NVAs)); and an unmanned NVA with a full spectrum bat detector. The second survey comprised two surveyors with NVAs and bat detectors. All footage from the NVAs along with the recorded bat calls were fully reviewed via a desktop media player and the appropriate bat call analysis software (e.g. Elekon BatExplorer) following the completion of the surveys.

Each dusk emergence survey started at least 15mins before sunset and continued for at least 1.5hrs after sunset. Observations made during the survey and following a review of the NVA footage and bat calls included bat species, numbers, roost access points, roost locations and flight-paths. Table 2.1 details the survey times, weather conditions, equipment used and survey positions.

Table 2.1. Survey data and conditions

Date	6th June 2024	3rd July 2024
Sunset	21:37	21:43
Survey Times	21:22 to 23:10	21:28 to 23:15
Weather conditions	• Dry throughout • 12°C at survey start • 10°C at survey end • 70% cloud cover • Wind 2-3 (Beaufort scale) • No significant weather changes were encountered throughout the survey	• Dry throughout • 13°C at survey start • 11°C at survey end • 30% cloud cover • Wind 2 gusting 4 • No significant weather changes were encountered throughout the survey
Equipment	• Ryan Knight: Elekon Batlogger M2 Bat Detector (full spectrum) and 1no. Canon XA15 IR camera with 2no. Nightfox XB5 Pro torches (both surveys). • Catherine Wood: Peersonic RPA3 (full spectrum) and 2no. Nightfox whisker with x2 Nightfox XC5 torch (3rd July 2024) • Unmanned survey position: Echometer Touch 2 Pro with Tablet and 1no. Canon XA15 IR camera with 2no. Nightfox XB5 Pro torches (6th June 2024)	
Survey positions (O)		

2.4 Assessment Comments

Dusk Emergence Survey

The surveys were undertaken within the main bat activity period during weather conditions deemed suitable to conduct bat surveys in accordance with the guidance (Collins, 2023). Overall, no significant constraints to the surveys were encountered.

General

This report will remain valid for a period of 18 months from the date of issue. An ecologist should be contacted for advice on the revalidation requirements of the report if planning permission is not obtained (if required) or works do not commence within this time period.

3 RESULTS

3.1 Preliminary Bat Roost Assessment

3.1.1 Building Description and Potential Bat Roost Features

Photos of the property are provided in Appendix B for a general overview and an illustration of any identified potential bat roost features**.**

Small barn

The barn is a two storey, stone-built construction which appears to have been a former livestock pen. There is also a single storey attachment on the north side which is of a similar construction although it had been repaired with a mix of brick and concrete blocks on the west side.

The barn was in good repair overall as it appears that some maintenance work had been carried out within the last few years. This looks to have comprised full re-roofing including the installation of a modern, breathable roof underlining and the re-pointing of the gable verges. As a result of this relatively recent work, the slate roof appeared to be in very good repair.

The stonework of the property also appeared largely solid. However, there were two gaps on the east gable including one above the top stone quoin on the north corner and a larger gap on the upper central part of the gable. The depth of such gaps was unknown. In addition, there did appear to be a low number of gaps in the stonework on the west gable; however, these gaps did not appear to be recessed. There was also a gap above the lower window on the south elevation.

The property had timber bargeboards along the north and south elevations. There was a gap underneath both bargeboards which provides a potential roost feature for bats.

The front (south) elevations featured two upper floor apertures which both had timber doors on. There were gaps around both doors which would provide direct access for bats into the upper loft area.

The attached building had a large open doorway on the west side and featured a corrugated sheet roof. No potential roost features were observed on this section.

Internally, the ground floor of the barn featured several small pens. The upper floor loft area was empty and the floor contained layers of detritus with some straw. The inner stonework appeared to be in good repair with no potential roost features observed.

3.1.2 Habitat Suitability

The small barn forms one of several agricultural buildings at the farm and the farmhouse and garden are to the direct west. The farm is bordered by agriculturally improved pasture land. The buildings and the mature trees in the garden of the farmhouse will provide sheltered foraging opportunities for bats. The treelines and hedgerows which bound the pasture fields do provide a network of connective foraging features for bats and there are several woodlands in the wider area. Night-time lighting levels around the farm were relatively low. No significant constraints to the presence of bats at the site were encountered.

3.1.3 Evidence of Bats and Bat Roost Suitability

No bats or evidence of bats was recorded. In respect of the above-described roost features along with the property location and surrounding habitats, **a moderate roost suitability** category was assigned to the barn. In summary, potential bat roost features comprised;

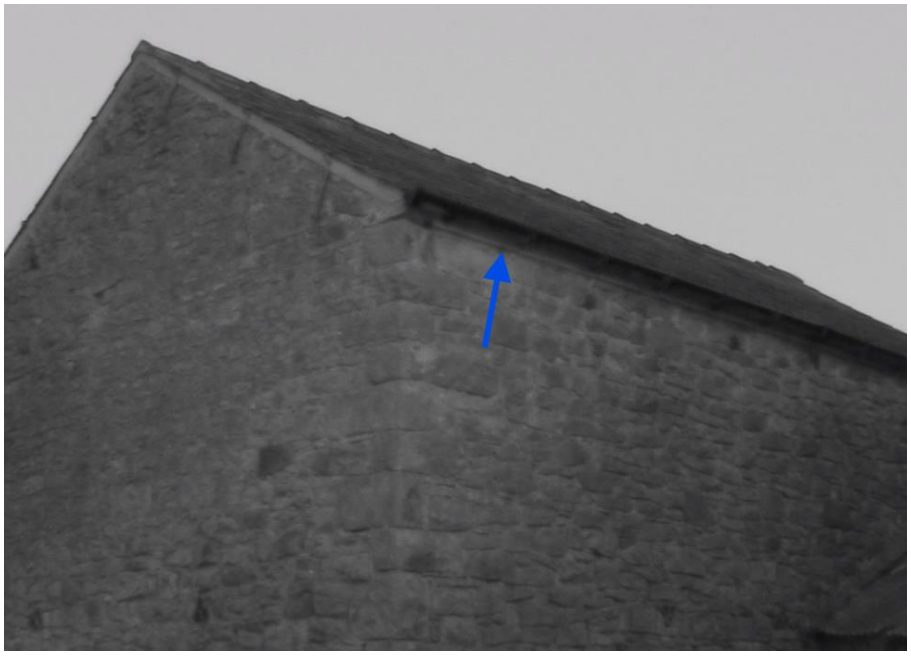
- Gaps in the stonework (west, south and east elevations);
- Gaps under the bargeboard (north and south elevations); and
- Gaps around the upper floor doors (providing access to the loft).

3.2 Dusk Emergence Survey

The results of the dusk emergence surveys are briefly outlined below and further summarised in Table 3.1. A photo which illustrates the main findings of the surveys is provided below.

The barn was confirmed to support a bat roost. A single soprano pipistrelle emerged from a roost on the barn in the same location on both surveys. The bat emerged from under the bargeboard on the north elevation which is likely to be the actual roost location. Activity was generally low to moderate and activity was dominated by common pipistrelle with occasional soprano pipistrelle. Myotis species were recorded on the second survey. The calls were attributed to whiskered / Brandt's bats.

Table 3.1. Bat activity summary

Date	Activity Summary
6th June 2024 (sunset – 21:37)	5-6 commuting passes of common pipistrelle recorded at 21:57-22:00 (from east to west). A soprano pipistrelle was recorded emerging from underneath the bargeboard on the north elevation at 22:00. The bat exited westwards. Frequent activity of 1-2 foraging common pipistrelle throughout survey.
22nd June 2024	A soprano pipistrelle was recorded emerging from underneath the bargeboard on the north elevation at 22:11. The bat exited westwards. Most activity dominated by common pipistrelle. A Myotis species (whiskered / Brandt's bat) was recorded at 22:57 and 23:05.
Roost emergence location (both surveys)	

3.3 Nesting birds

Barn owl pellets were observed on the ground floor of the barn during the preliminary bat roost assessment in April 2024. The small barn appears to have been used as a very occasional roosting site. However, there did not appear to be any access points for barn owl to enter the barn at the time of the assessment. It may be that a doorway had been previously left open for a prolonged period resulting in the temporary use of the barn.

There are further barn owl roosting sites in a delipidated outbuilding to the south-west. The main roost site is the large barn to the west. A single barn owl was observed flying out of this barn on at least two occasions. Barn owl are not nesting within the site. In terms of other birds, no evidence of nesting was observed in the small barn.

4 EVALUATION & CONCLUSIONS

4.1 Bats

A soprano pipistrelle bat roost (solitary bat) was recorded during the dusk emergence surveys. The roost was located in a gap under the bargeboard on the north side. The roost is categorised as a day roost. Soprano pipistrelle bats are a relatively common and widespread species both locally and nationally with stabilised populations. Such roost types have a low conservation status.

It is currently not known whether the roost can be retained. However, in the absence of mitigation, the work may result in the loss of the roost via the removal of the bargeboard. Any work proposed may also risks direct harm to the bat.

All bat species and their roosts are legally protected through The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) as a European Protected Species (EPS). They also receive some protection through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Appendix A provides details of this legislation.

Derogation from the legislative prohibitions is transposed into the Habitats Regulations by way of a licensing regime that allows what would otherwise be an unlawful act to be carried out lawfully. Natural England are the relevant licensing authority in England and issue such licences on receipt of certain information including evidence which demonstrates that the proposed work will comply with the three licensing tests (Appendix A). It should be noted that for this particular development and roost type, the Natural England licence application will not require the completion of a Reasoned Statement and therefore, information relating to two of the three licensing tests (overriding public interest and satisfactory alternatives) is not required.

The local planning authority also requires sufficient information to enable them to determine if the proposed development works will be granted such a licence. Therefore, further recommendations to address this requirement is provided in Section 5.

4.2 Nesting birds

Whilst no direct evidence of nesting birds was observed, the barn is considered suitable to support nest sites. The proposed development should therefore be aware of the legislation afforded to nesting birds:

- All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs.

The nesting bird season is generally accepted as March to September. Mitigation to avoid impacts to nesting birds is detailed in Section 5.

4.3 Barn owl

The following report has been issued in relation to the presence of barn owl at the site:

- Large Barn at Written Stone Farm, Longridge. PRELIMINARY BAT ROOST ASSESSMENT & GENERAL ECOLOGY WALKOVER. May 2024. (Knight Sky Ecology, 2024).

This report provides recommendations to compensate for the loss of the barn owl roosting sites.

5 RECOMMENDATIONS

5.1 Bats

A Method Statement is recommended to be completed once the development proposals for the small barn are finalised.

The Method Statement should include sensitive working measures which will be adopted to avoid, mitigate and compensate for (if required) any impacts to the bat roost. The Method Statement will address the 'Favourable Conservation Status' test (Appendix A).

The Method Statement should also clarify whether or not the development works will require a Natural England licence or if the roost ca be retained in-situ using a non-licensed Method Statement.

It should also be noted that in this instance, the roost type and low scale of impacts qualifies for the low impact licence scheme which offers a more streamlined licensing approach.

Natural England can only process EPS mitigation licence applications on receipt of the planning consent document. Furthermore, Natural England requires the most up to date survey information. Further update surveys may be required if the works are not undertaken within the next 12 months.

Standard mitigation measures as stated within the Method Statement of the licence (if required) MUST be followed and overseen by the named applicant and named ecologist who are legally bound by the terms and conditions of such a licence.

5.2 Nesting Birds

Any works which will potentially impact bird's nests should be undertaken outside of the main nesting bird season of March to August (inclusive). If this is not possible, any works potentially affecting bird's nests must be preceded by a nesting bird check, undertaken by a suitability qualified ecologist. If an active nest is found, it must be left in-situ until no longer in use. This may potentially delay the works programme.

APPENDIX A. LEGISLATION FOR BATS

The Wildlife and Countryside Act 1981

All bat species in England are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Section 9 of the Act make it an offence to intentionally or recklessly kill, injure or take any wild animal included in Schedule 5. In addition, it is an offence to (intentionally or recklessly):

- Damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Disturb any such animal 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.

In addition, under this legislation there are offences relating to sale, possession and control of bats.

The Conservation of Habitats and Species Regulations 2017

Bats are listed within Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) as European Protected Species of animals. Part 3 (Protection of animals); Regulation 43 (1) of the Habitats Regulations make it an offence to:

- Deliberately capture, injure or kill any wild animal of a European protected species;
- Deliberately disturb wild animals of any such species;
- Deliberately take or destroys the eggs of such an animal; or
- Damages or destroy a breeding site or resting place of such an animal.

For the purposes of the legislation, the disturbance of wild animals includes any disturbance which is likely to impair their ability to survive, to breed or to reproduce, or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

In addition, under this legislation there are offences relating to possession, control sale and exchange of European Protected Species.

Where it is likely that a proposed scheme would result in contravention of this legislation, a European Protected Species mitigation licence would be required to allow the works to proceed. As part of this process, the application must meet 'three tests' for licensing under the Conservation of Habitats and Species Regulations 2017 (as amended). Planning guidance and case law also confirm that local authorities have a statutory duty under the Regulations to have regard to these three tests when deciding whether to grant planning permission. The three tests are as follows:

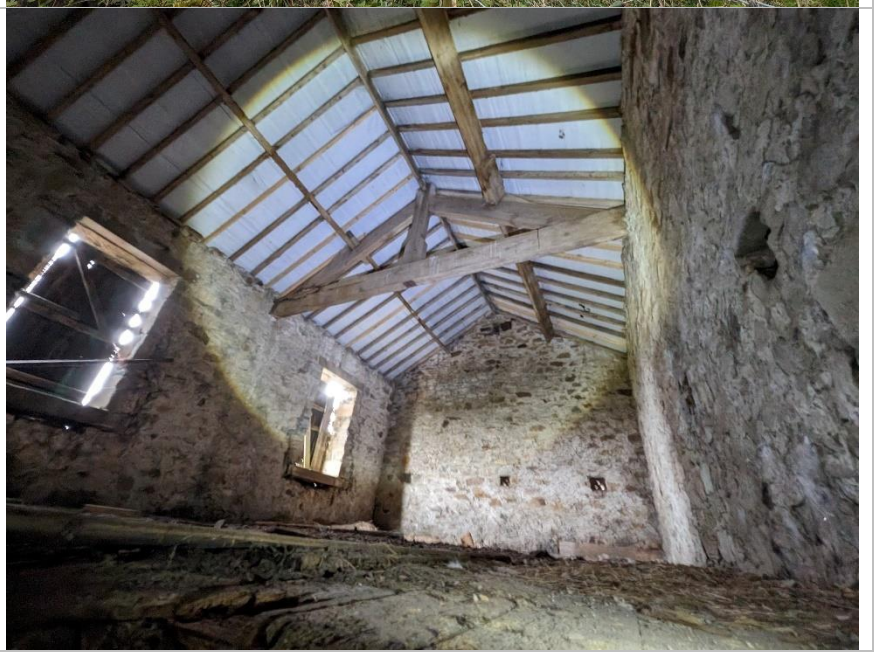
- Regulation 55 (2) (e) states that a derogation licence can only be issued for preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- Regulation 55 (9) (a): that there is no satisfactory alternative; and
- Regulation 55 (9) (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.

Natural Environment and Rural Communities (NERC) Act 2006

Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of the living organisms and types of habitats which in the Secretary of State's opinion are of principal importance for the purpose of conserving or enhancing biodiversity. The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their general biodiversity objective under Section 40 of the NERC Act 2006. Bat species listed under Section 41 and known to be present within Lancashire comprise soprano pipistrelle, brown long-eared bat and noctule bat.

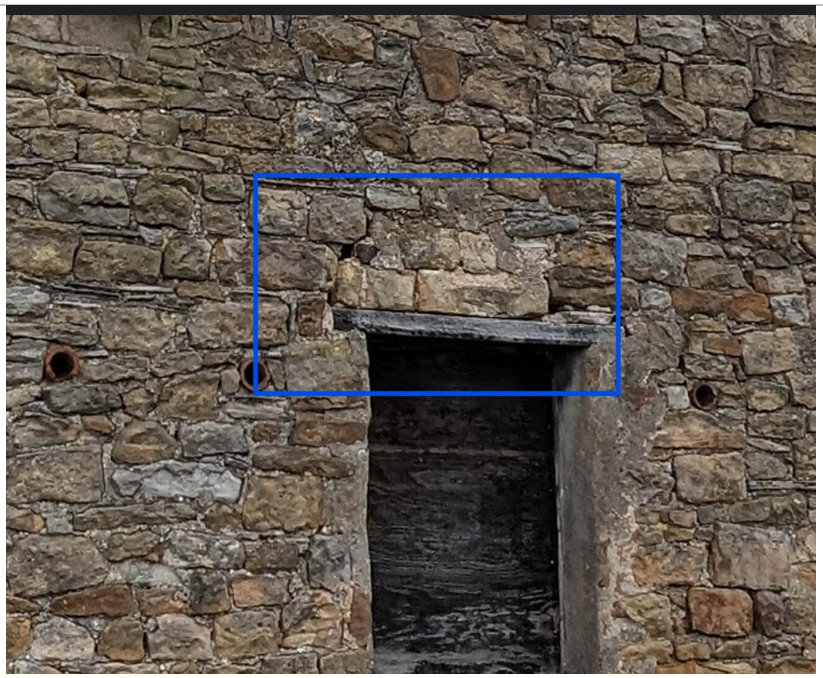
APPENDIX B. PHOTOS

Photo 1. South elevation	
Photo 2. West elevation	

Photo 3 East elevation	
Photo 4. Loft area.	

Photos 5.1-5.3

Selection of photos showing potential gaps in the stonework.



APPENDIX C. NVA SCREENSHOTS

Screenshot 1. North-east elevations	
Screenshot 2. South-west elevations