PENNINE ecological

320240766P

Bat Survey Results and Barn Owl Breeding Status Report

Barn at Vicarage Farm
Bashall Eaves
Clitheroe
Lancashire
BB7 3DB

July 2024

CIEEM Chartered Institute of Ecology and Environmental Management

25 YEARS

Arboricultural ASSOCIATION Professional Member

Bat Survey Results and Barn Owl Breeding Status Report

Barn at Vicarage Farm
Bashall Eaves
Clitheroe
Lancashire
BB7 3DB

July 2024

A report for:

Philip Cottier
Director at Sunderland Peacock and Associates Ltd
Hazelmere, Pimlico Road
Clitheroe, Lancashire
BB7 2AG

Report authors

PENNINE Ecological
Stuart Macpherson BSc (Hons) MSc ACIEEM
1a Turnlee Road
Glossop
Derbyshire
SK13 6JS

email: stuart@pennineecological.co.uk
web: www.pennineecological.co.uk

CONTENTS

Terms of Use

This report has been compiled by PENNINE Ecological with all reasonable skill, care, and diligence within the terms of the instruction and permissions granted by the client. The results, conclusions and recommendations of this report are proportionate and in line with the British Standard 42020:2013.

This is a technical report and does not represent legal advice/opinion.

The report is for the sole use of the commissioning client in connection with the development project described in the report, and must not be used for any other purpose, copied, re-produced, or sent to any other party other than the Local Planning Authority without the permission of PENNINE Ecological.

This report remains the property of PENNINE Ecological and cannot be relied upon until full payment has been made. PENNINE Ecological reserve the right to retract any survey reports submitted to planning where payments are outstanding.

PENNINE Ecological will retain the right to re-publish data obtained, and to forward data collected during all its ecology surveys to the local wildlife records centre.

1. INTRODUCTION

1.1 BACKGROUND AND REASON FOR SURVEYS

PENNINE ecological were commissioned by Sunderland Peacock and Associates in November 2023 to undertake hibernation and dusk emergence surveys for bats and nest verification surveys for barn owl of a barn at Vicarage Farm, Bashall Eaves, near Clitheroe, Lancashire, BB7 3DB (Figure 1). This followed the completion of a Preliminary Roost Assessment (PRA) by Pennine Ecological in August 2023.

The PRA categorised the building as being of high suitability to support roosting bats. Evidence of barn owl was also recorded with pers. comm with the tenant farmer confirming that barn owl reared three young in the 2023 breeding season.

A high suitability building for bats as described in *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 4th edition. The Bat Conservation Trust, London (Collins, 2023) is as follows;

"A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservations status roosts e.g. maternity or classic cool/stable hibernation sites."

Additionally, high suitability flight paths and foraging habitats for bats are described as follows;

"Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees, and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts."

The building was suspected to have winter hibernation and summer roosting potential for bats.

As described above, it was confirmed that barn owl used the building as a nesting site in 2023.

Therefore, surveys were undertaken to determine whether the proposals would result in adverse impacts to both bats and/or barn which may potentially be roosting within the building.

Figure 1 - Aerial view of the barn subject to survey at Vicarage Farm, Bashall Eaves.

For clarity, the PRA identified the following Potential Roost Features (PRFs) for bats and ingress/egress locations for barn owl (as well as direct evidence of both bat and barn owl);

Southern elevation:

- Extensive holes and gaps in stonework particularly on the upper wall lengths at wall plate level.
- Large barn entrance offering clear flight access for bats and barn owl.
- Barn owl pellets outside main barn entrance opening (east of opening)
- Barn owl splashes on wall.

Western elevation:

- Extensive holes and gaps in stonework throughout.
- Approximately 7 large openings in the walls, plus a large window opening all of which are suitable for bat ingress into the barn, some of which are also suitable for barn owl access.

Northern elevation:

- Intermittent gaps between wooden fascia and breeze block.

Eastern elevation:

- Holes and gaps in stonework / breeze block.
- Large barn/stable entrance offering clear flight access for bats and barn owl.
- Window openings

Internal areas:

- Numerous potential bat roost features within the barn and associated rooms / corridors, including crevices / gaps / cracks in walls, gaps between / under wooden roof trusses and walls. Cavities beneath the hay loft timer floor. Bat droppings recorded in many areas.
- Lots of evidence of barn owl use including pellets, extensive splashing and feathers / down.
- Large box structure in hay loft (access not possible) that, if supporting entry points could be utilised as a barn owl roost.

During the PRA, the barn was also recoded as comprising an Occupied Breeding Site (OBS) for barn owl. An OBS for barn owl as described in Shawyer (2011) is as follows;

"An OBS is where breding was taing place or where it had done so in the recent past."

As has already been mentioned personal communication between Pennine Ecological and the tenant farmer during the day of the PRA survey, confirmed that barn owl reared three young during the 2023 breeding season. The nest site was on top of the wall on the building's south west elevation. The nest site was covered by the modern corrugated metal roof. It was presumed to access the nest site through the large doorway on the south western elevation as well as an open window and a ventilation hole on the north western and south eastern elevations respectively.

The results, conclusions and recommendations following the bat and barn owl surveys, including any indicative mitigation to inform an application to Natural England for a European Protected Species Mitigation Licence (EPSML) for bats only, where necessary, will be supplied within this report.

In accordance with Biodiversity Net Gain: Good practice principles for development (CIEEM *et al*, 2019), measures have been recommended proportionate to anticipated impacts to ensure that the proposed development results in a biodiversity net gain.

Information pertaining to bat and barn owl legislation and planning policy is included in Appendix A.

1.2 SITE LOCATION AND CONTEXT

The barn is located in the village of Bashall Eaves, immediately south of Old Vicarage Lane. The surrounding habitat of Vicarage Farm is dominated by pastoral grassland fields that are bounded by hedgerows and tree lines. Within the village itself there a small number of stone residential dwellings and converted barns.

In the wider landscape there are isolated pockets of broadleaved woodland. Extensive, linear tracts of the woodland were identfied using aerial imagry, most notably to the north east of the site, adjacent to Bashall Brook which is approximately 550m from Vicarage Farm. Further afield, approximately 1.2km to the north is a large woodland (named on Ordnance Survey maps as Moor Piece, Bashall Moor Wood and Blackhill Wood) which appears to comprise both coniferous and deciduous woodland as well as section of Bashall Brook.

Numerous watercourses are present throughout the landscape, the most notable are the aforementioned Bashall Brook, and the river Hodder which is 1.7km to the west of the site.

The central Ordnance Survey National Grid Reference for the barn is SD 69708 43402.

2. METHODOLOGY

2.1 SURVEY METHODS

2.1.1 Bats

a) Bat Hibernation Surveys

The building was suspeted of having suitability to support hibernating bats. Hibernation surveys were undertaken in accordance with Collins (2023). Hibernation surveys include a detailed inspection of a structure during winter to look for and identify hibernating bats or other evidence of bat occupation. The aim of the survey was to determine the actual or potential presence of bats and the need for further survey and/or mitigation. It should be noted that in many situations, it is not possible to inspect all locations where bats may be present and therefore an absence of bat evidence does not equate to evidence of bat absence.

Using torches, mirrors and endoscopes an inspection of those features listed in the Introduction section of this report were undertaken on three occasions in December 2023, January and February 2024 respectively i.e., the peak hibernation season for bats (Collins, 2023).

The barn is a 'non-classic' hibernation site; a classic hibernation site would be tunnels, caves, mines, cellars etc. As is stated in Collins (2023) with regards 'non-classic' hibernation sites; '*often only a destructive search would be definitive, and therefore counter-productive. A static detector placed outside a structure might pick up bats flying past on warmer nights rather than confirm winter use.*'

Four Anabat Chorus' were deployed throughout the barn each month between and including December 2023 and February 2024 (three months in total). The locations of the detectors are marked by blue stars in Figure 2.

Static bat detectors were chosen as a data collection method as they can be useful in gaining information about hibernating bats as they can be left for long periods of time and are therefore more likely to pick up bats when they become active. This can be particularly useful at sites with deep crevices that cannot be inspected or at 'non-classic' such as this barn where void dwelling species may linger.

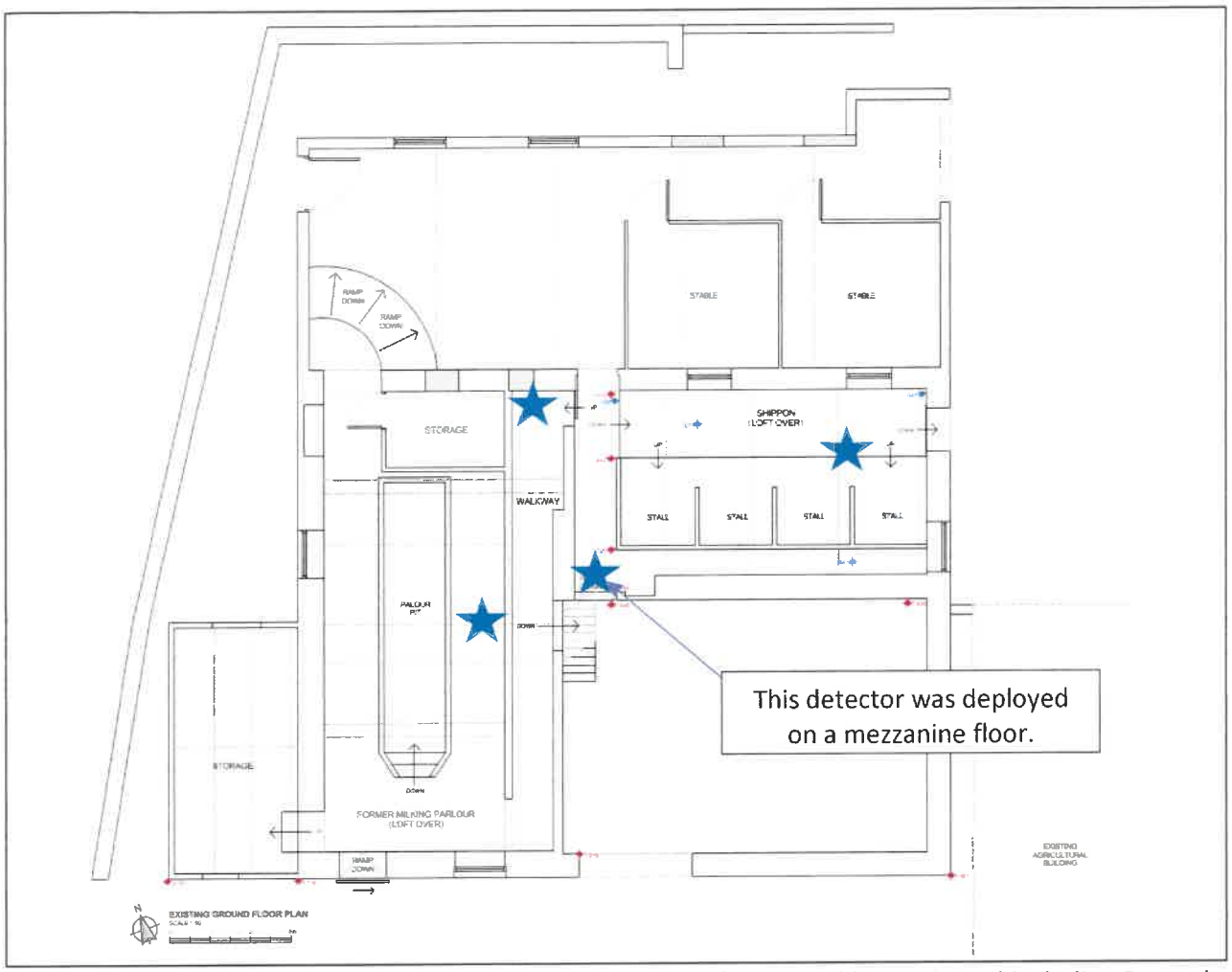

Figure 2 - Locations of the four static bat detectors (blue stars) deployed between and including December 2023 and February 2024.

b) Bat Dusk Emergence Surveys

The PRA concluded the barn was of high suitability to support roosting bats. As such, and in accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists Good Practice Guidelines 4th Edition* (Collins, 2023), three dusk emergence surveys were undertaken on the 2nd May and 24th May 2024 (refer to Figure 3 below).

Table 7.1. Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures) No further surveys required (trees)	May to September[a], with at least one of surveys between May and August[b]	May to September[a], with at least two of surveys between May and August[b]

Figure 3: Extract from Bat Conservation Trust Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

The Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023) edition states:-

"The guidelines do not aim to either override or replace knowledge and experience. It is accepted that departures from the guidelines (e.g., either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate. The guidance should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive."

The survey methods have been determined using the experience of the surveyors and knowledge of the specific nature of the site.

The dusk emergence surveys were undertaken on the 17th May, 11th June and 3rd July 2024. This is considered to be within the main active season for bats (April to September inclusive) and within the optimal survey period in which Natural England accept bat surveys and grant European Protected Species Mitigation Licences (May to August inclusive).

Dusk surveys were considered appropriate for this site as the features could be observed with no visual constraints. This is also recommended within the survey guidance.

The number of surveys (three) and surveyors (four) (locations shown in Figure 4) was adequate relative to the roost potential that was identified for the site. The surveyors observed the roost features from 15 minutes prior to and at least 1 hour 30 minutes after sunset.

Figure 4 - Surveyor locations for the dusk emergence surveys.

Surveyors used the following bat detection equipment e.g., Anabat Chorus, Echo Meter Touch Pro, Batbox Duet and Nightfox Whisker infrared cameras (with additional infrared cameras where required) that would enable them to hear, potentially locate (dependent on light levels) and record high frequency echolocation calls emitted by bats whilst commuting or foraging. The echolocation and infrared camera recordings were analysed following survey completion where required.

The survey was led by Stuart Macpherson BSc (Hons) MSc, ACIEEM who holds a Class 2 Natural England bat survey licence (licence ref no. 2021-10079-CL18-BAT) and who is also an experienced bat consultant, carer and tree climber.

2.1.2 Barn owl

a) Barn Owl Nest Verification Survey

The barn owl survey was undertaken by Stuart Macpherson who is licensed to survey for barn owl; licence reference number; CL29/0477.

The survey was completed in accordance with Shawyer (2011), particularly Stage 3 - Nest Verification Survey which the extract below is taken from;

"To confirm the presence of an Occupied Breeding Site (OBS), e.g. one where breeding was taking place or where it had done so in the recent past, the Stage 3 Survey requires a detailed inspection of the Potential Nest Site (PNS) and Active Roost Site (ARS) previously identified during the Stage 2 Survey. This is accomplished by checking for the presence of adult barn owls, their moulted feathers, pellets, eggs, egg shells, chicks or down."

Three surveys were undertaken on all of the three dates the bat dusk emergence surveys were completed; 17th May, 11th June and 3rd July 2024 which accounts for the peak barn owl breeding season. The inspections were undertaken at approximately 20:00 when the weather was suitable i.e., dry and light winds.

2.2 SURVEY LIMITATIONS

Due to the construction of the barn not all potential roost features were inspected for hibernating bats. The barn comprised a mezzanine floor which Pennine Ecological were advised not to access due to the unceratinity around its structural integrity.

3. RESULTS

The results of the hibernbation and dusk emergence bat activity surveys are outlined below.

3.1 SUMMARY STATIC BAT DECTECTOR DEPLOYMENT DECEMBER 2023 – FEBRUARY 2024 INCLUSIVE AND INSPECTION SURVEYS

A summary of the species, dates and approximate number of bat calls recorded during the deployment of the static bat detectors is included below.

The numbers of calls detailed below is relatively low for the number of days each month the static detectors were deployed. As has been discussed in the methodology section, the fact bats were detected does not entirely prove bats are hibernating in the building, it may well be bats are foraging outside of the building or even temporarily inside the barn and the detectors have recorded their respective calls

December 2023.

The static detectors in December was deployed on December 1st and continued recording up until the 11th December when it is likley the batteries within the unit ran out. During that time the following number of calls for the following species was recorded;

- Soprano pipistrelle;
  - Two calls on the 8/12/2023
  - Six calls on the 9/12/2023
  -
- Myotis sp.;
  - One call on the 1/12/23
  - Two calls on the 8/12/23
  - Three calls on 9/12/23
  - One call on the 10/12/2023
  - Three calls on 11/12/2023

January 2024

The static detectors in January were deployed on January 5th and continued recording up until the 20th January when it is likley the batteries within the unit ran out. During that time the following number of calls for the following species was recorded;

- Myotis sp.;
  - Three calls on the 18/01/24
  - One call on the 19/01/24.

February 2024

The static detectors in February were deployed on February 9th and continued recording up until the 29th February when it is likley the batteries within the unit ran out. During that time the following number of calls for the following species was recorded;

- Soprano pipistrelle;
  - Five calls on the 14/02/24
  - One call on the 16/02/24

  - Five calls on the 19/02/24
- Common pipistrelle
  - One call on the 15/02/24
- Myotis sp.;
  - Two calls on the 14/02/24
  - One call on the 18/02/24
  - Ten calls on the 21/02/24

No bats were recorded when inspecting the features identfied during the PRA.

3.2 DUSK EMERGENCE BAT ACTIVITY SURVEY RESULTS

Survey details including dates, times and weather conditions are provided in Table 3.1 and the results of the dusk surveys provided in Table 3.2.

Table 3.1: Bat Activity Survey Details

Date	Time of Survey (start to end)	Sunset Time	Weather Conditions
17th May	20:55 – 22:40	21:10	Dry, calm, Light breeze, 2/8 cloud cover cloud cover. Start temp: 14°C. End temp: 13°C.
11th June	21:22 – 23:07	21:37	Dry, light breeze, 4/8 cloud cover cloud cover. Start temp: 13°C. End temp: 12°C.
3rd July	21:26 – 23:11	21:41	Dry, light breeze, 8/8 cloud cover cloud cover. Start temp: 14°C. End temp: 11°C.

Table 3.2: Dusk Emergence Survey Results

Survey Results	Time	Species	No. of Bats	Activity
17th May	**Summary:** Seven bats emerged from the stone barn; three soprano pipistrelle and four common pipistrelle. Roost locations could not be identified, only the locations of where the bats emerged from the building i.e., window on north west elevation and presumed from the ventilation hole on the south east elevation. Myotis species also recorded.			
	21:13	Soprano pipistrelle.	**3**	Presumed to have **emerged** from the stone barn (through ventilation hole on the SE elevation) or potentially within the adjoined steel barn. Bats wee recorded foraging under the steel barn for approx. 10 minutes.
	21:39	Common pipistrelle	**1**	**Emerged** from the open window on the north west elevation.
	21:40	Common pipistrelle	**1**	**Emerged** from the open window on the north west elevation.
	21:40	Common pipistrelle	1	Presumed to have **emerged** from stone barn as above and foraged under steel barn for approx. 5 minutes before flying south east.
	21:44	Common pipistrelle	2	Foraging only to the south west of the barn in the garden of the adjacent residential property.
	21:52	Common pipistrelle	1	General foraging to the south west of the barns, and within the adjacent properties front and back gardens.
	21:54	Soprano pipistrelle.	1	Foraging along Old Vicarage Lane.
	22:00	Soprano pipistrelle.	**1**	**Emerged** from open window on north east elevation.
	22:01	Common pipistrelle	1	General foraging to the south west of the barns, and within the adjacent properties front and back gardens.
	22:09	Common pipistrelle	1	General foraging to the south west of the barns, and within the adjacent properties front and back gardens.

Survey Results	Time	Species	No. of Bats	Activity
	22:00	Myotis sp.	1	Foraging along Old Vicarage Lane from the north east.
	22:19	Common pipistrelle	1	General foraging to the south west of the barns, and within the adjacent properties front and back gardens.
	22:28	Common pipistrelle	1	Heard not seen foraging to the south and east of the barns.
	22:34	Soprano pipistrelle	1	Heard not seen foraging to the south west of the barns.
	22:40	Soprano pipistrelle.	1	Foraging along Old Vicarage Lane.
	22:42	Soprano pipistrelle.	1	Foraging to the east of the barn.
	END OF FIRST SURVEY			
11th June 2024	**Summary:** Five bats emerged; four common pipistrelle and one soprano pipistrelle. Constant foraging activity throughout the survey. Myotis species also recorded.			
	21:30	Common pipistrelle	**1**	Soprano pipistrelle presumed to have **emerged** from the stone barn and foraged under the steel barn.
	21:48	Common pipistrelle	1	Foraging from south of the barns, northwards to Old Vicarage Lane.
	21:54	Common pipistrelle	1	As above.
	21:55	Common pipistrelle	**1**	Bat emerged from open window on north west elevation.
	22:09	Common pipistrelle	**2**	**Emerged** from large barn door on stone barn's south west elevation.
	22:22	Soprano pipistrelle	**1**	**Emerged** from open window on stone barn's north west elevation.
	22:29	Myotis sp.	1	Foraging along Old Vicarage Lane.
	22:33	Common and soprano	2	Foraging under large steel barn.
	22:51	Common pipistrelle	1	Heard not seen initially but foraging in adjacent properties garden. Bat was then seen re-entering stone barn before emerging a few minutes.
	22:54	Common pipistrelle	2	Foraging to the south and south west of the stone barn.
	22:58	Common pipistrelle	1	Foraging along Old Vicarage Lane.
	23:01	Common pipistrelle	1	Foraging along Old Vicarage Lane.
END OF SECOND SURVEY				
3rd July 2024	**Summary:** Three common pipistrelles emerged. Generally lower levels of activity compared to two previous surveys. Myotis species the only other species recorded.			
	22:05	Common pipistrelle	**1**	**Emerged** from large barn door on stone barn's south west elevation.
	22:08	Common pipistrelle	1	Commuting/foraging from south to north and along Old Vicarage Lane.
	22:18	Common pipistrelle	1	Occasional foraging in adjacent garden, heard not seen.
	22:23	Common pipistrelle	**1**	**Emergence** from fascia on stone barn's north western elevation.
	22:27	Myotis sp.	1	Myotis foraging along Old Vicarage Lane.
	22:30	Common pipistrelle	**1**	**Emergence** from fascia on stone barn's north western elevation.
	22:28	Myotis sp.	1	Foraging along Old Vicarage Lane.
	22:54	Common pipistrelle	1	Occasional foraging in adjacent garden, heard not seen.
	22:59	Common pipistrelle	2	Foraging along Old Vicarage Lane.
	23:06	Common pipistrelle	2	Foraging along Old Vicarage Lane.
	23:08	Common pipistrelle	1	Foraging to the east and south of the barns.
	END OF THIRD SURVEY			

3.3 BAT HABITAT SUMMARY

Figure 5 below illustrates the locations of optimal bat foraging habitat in close proximity to Vicarage Farm. In summary, the habitats likely to be of high value to bats are listed below;

- River Hodder.
- The wooded corridor of Bashall Brook.
- Hedgerows and tree lines surroudning pastoral grasslands.

Figure 5 - Habitats likely to be of value to commuting and foraging bats.

3.4 BARN OWL SURVEY RESULTS

Barn owl were confirmed to have successfully bred within the building in 2024.

Photographs 1 to 3 below show the location of the barn owl nest site. The red arrow in Photograph 2 shows the location from which the nest site was inspected. Due to the construction of the barn, a close inspection of the nest site could not be undertaken. The inspection was undertaken approximately 1.5 to 2m away from the actual nest site. It proved difficult to capture clear photographs of young barn owl but young barn owl could be seen and both heard.

Furthermore, on subsequent surveys (each survey was at least three weeks after the previous) young barn could be heard calling. Additionally, barn owl were regularly observed both emerging and re-entering the barn during the bat surveys (care was taken to position bat surveyors not to interfere or disturb barn owl when in flight or indeed when sat on the nest). On one one occasion and adult barn owl was seen returning to the barn with prey, strongly suggesting a female barn owl was rearing young.

Photograph 1: South west elevation fo the barnm. Red arrow marks barn owl splashing (faeces).

Photograph 2: Red arrow marks location of where the nest inspection was undertaken and also likely ingress/agress location for adult barn owl accessig the nest site.

Photograph 3: As for Photograph 1.

4. CONCLUSION, EVALUATION, RECOMMENDATIONS & MITIGATION

4.1 CONCLUSION

4.1.1 Bats

From the three bat surveys the barn was confirmed to support a common and soprano pipistrelle day roost. Bat numbers emerging from the building did not increase as the surveys progressed. Should a maternity roost have been present within the building numbers would have expected to increase, conversely numbers decreased as the surveys progressed. With regards to the day roost; Collins (2023) describe a '*day roost' as: "a place where individual bats, or small groups of males, rest or shelter in the day during summer*".

The largest number of bats to emerge during the three surveys was seven; three common pipistrelle bats and four soprano pipistrelle bats respectively. During the second survey, five bats emerged (four common pipistrelle bats and one soprano pipistrelle bat respectively) and during the third survey just three common pipistrelle bats emerged.

Myotis species were also recorded in low numbers foraging around Vicarage Farm and adjacent properties. No Myotis species were recorded emerging from the building during the three surveys.

Due to the size and complexities of the barn, the exact locations of the bat roosts could not be identfied.

Additionally, whilst bat calls were recorded during the winter months, this does not prove bats used the building for hibernating. Features inpsected also didn't prove the presence of bats hibernating within the building.

The proposals will involve the removal of the modern corrugated metal roof and complete renovation of the barn likely leading to the damage or destruction of bat roost(s). Appropriate mitigation will be required to ensure compliance with current legal legislation and conservation policy. **A European Protected Species Mitigation Licence will be required to legally damage, destroy or disturb a place that is actively used for breeding, resting or sheltering by bats.**

However, before a licence can be applied for, all planning issues must be resolved. In order that the Local Planning Authority LPA can implement its obligations under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), appropriate and proportionate mitigation will need to accompany the planning application which will demonstrate that the "favourable conservation" of the species concerned can be maintained (see below).

From the evidence gained during the surveys, the site is considered to be of 'low' conservation significance for common and soprano pipistrelle species respectively[1]. Therefore the proposed mitigation is proportionate to this assessment. If at any time the assessment of the roost is revised to a higher level, the mitigation will be revised accordingly.

[1] Significance level based on information provided in *English Nature: Bat Mitigation Guidelines, 2004*. Bats and their current status

4.1.2 Barn owl

The barn was confirmed to be an Occupied Breeding Site. Barn owl young were both seen and heard during the nest verification surveys. Additionally, adult barn owl were regularly seen emerging and re-entering (with prey) the barn strongly suggesting young barn owl were being reared.

The works will lead to the destruction of the Occupied Breeding Site. Therefore, appropriate mitigation will need to be implemented either within the proposed building itslef or on land in the ownership / tenancy of the landowner.

4.2 RECOMMENDATIONS/MITIGATION

4.2.1 Bats

The following procedures and mitigation recommendations are designed to allow the LPA, in association with their ecological advisers, to determine a Planning Application where a European Protected Species has been identified and will be affected by the work for which the Planning Application seeks consent.

In addition, Local Planning Authorities in accordance with the obligations placed upon them by way of their duties under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579) have to take into consideration the presence of a European Protected Species before determination of an application where it/they have been identified.

The LPA need to consider the mitigation in relation to the potential success of a Natural England licence application and/or if in their opinion the mitigation is considered as being appropriate, or if it is over and above what is required; if they determine that the mitigation is appropriate then a Planning Condition should be attached requiring the roost provision to be implemented.

If the LPA consider that the mitigation is over what is necessary but require "enhancement" as part of their Local Biodiversity/Net-Gain Planning Policies this should be included in the terms of Consent. The acting bat ecologist deems the proposed new roost creation as appropriate and not over and above what is required.

Notwithstanding that Planning Consent is granted or equally if the work is undertaken outside of the planning system, whereby projects that do not require planning consent may affect bats or their roost, including disturbance, it does not absolve the applicant, site owner, developer or any other party involved with the work from ensuring that an application is made for a Natural England development licence, to legally undertake work that will affect bat(s) or their roost(s).

If work is undertaken without a licence and bat(s) or their roost(s) is/are affected then a breach of current wildlife legislation will occur for which penalties are severe

4.2.2 Summary of Mitigation

The mitigation proposals outlined in this report are seen to be the most productive way forward that will retain long term roosting opportunities for bats.

There is not thought to be any changes to the adjacent habitats, thus no foraging or commuting habitat is anticipated to be significantly impacted on by the proposed works.

Due to the building undergoing significant renovation it is recommended that four integrated Habibat Bat Access Slates (Figure 6) are included as part of the building design.

Taken from the NHBS website, the access slates are described as follows;

"The Habibat Bat Access Slate has been carefully designed to provide much needed access to roof space for our protected bat species, whilst blending in seamlessly to your slate roof. The Bat Access Slate consists of a standard sized slate, with a capped vent which allows access to roof felt (for roosting Pipistrelles) or roof space (for Serotine, Leisler's, Daubenton's and Barbastelle Bats). These Access Slates are endorsed by the Bat Conservation Trust."

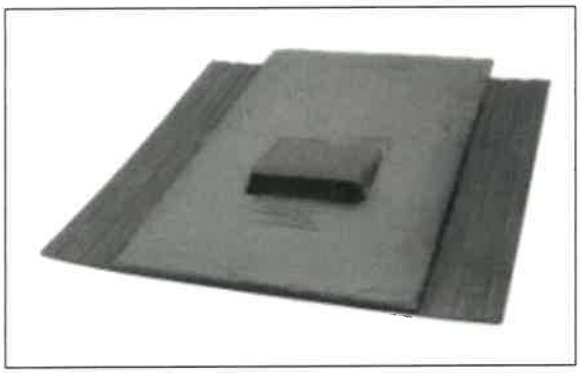

Figure 6 - Habibat Bat Access Slates.

Suggested locations marked red arrows, for the access slates are shown in Figure 7 below.

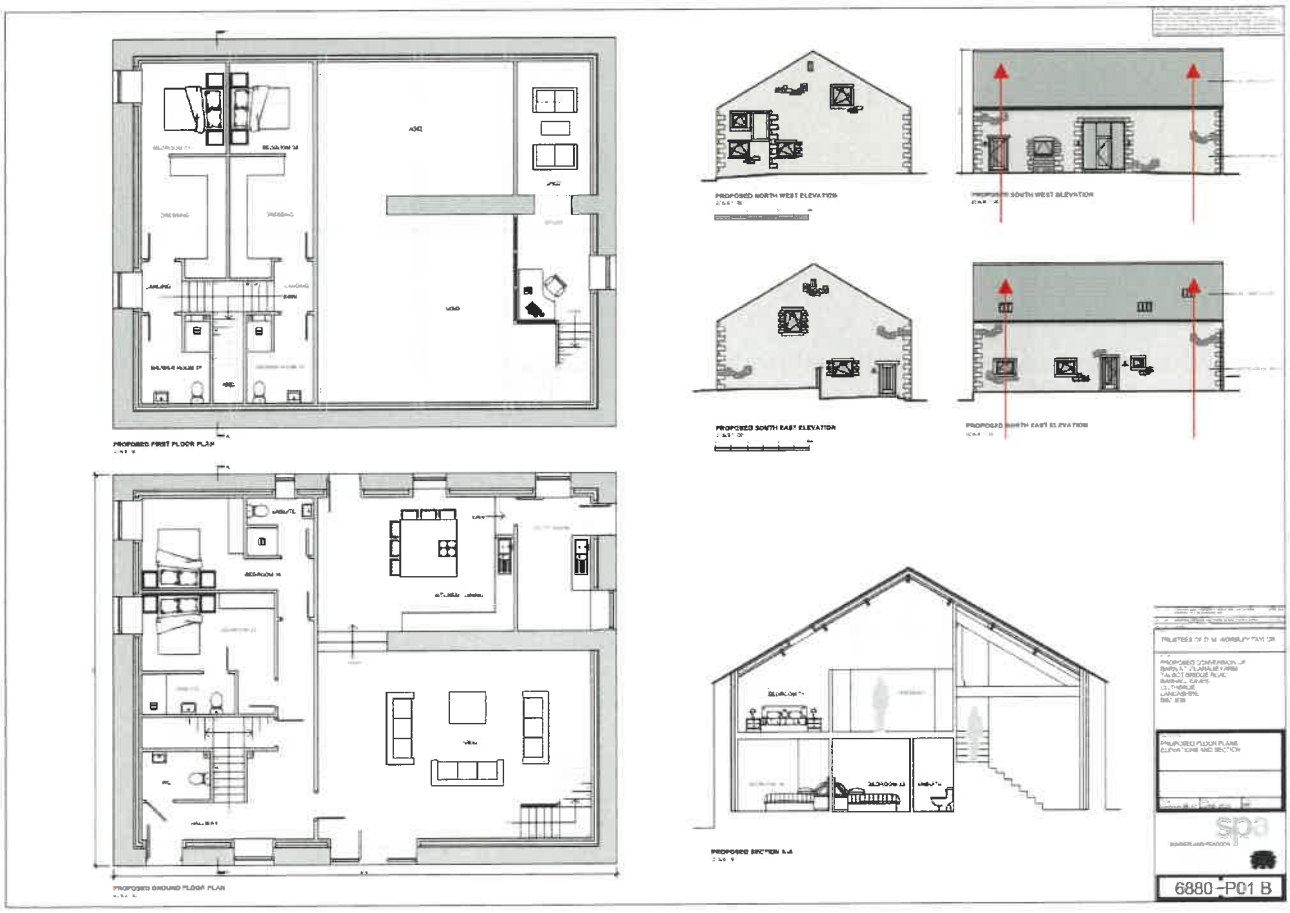

Figure 7 - Suggested locations for bat access slates.

Additionally, integrated bat boxes in to the stone work are also recommended. The type to be used can be agreed upon once the type of stone work / rendering is decided on. Examples of these are included in Figures 8 and 9 below.

The Habibat Bat Box – Plain (for rendering) is a large, solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish, rendering the box unobtrusive and aesthetically pleasing. The Habibat box is suitable for species which are most commonly found roosting in buildings in the UK, such as pipistrelle, natterer's, whiskered, and Brandt's bats. This box is made to order with a plain face suitable for rendering over to match the rest of the building, leaving just a small entrance hole exposed. It is available with a choice of three plinth finishes: smooth blue, smooth red, or buff.

The 1WQ Schwegler Summer and Winter Bat Box is a highly sophisticated Bat Roost is designed for the safe hibernation of bats in winter as well as for roosting, forming of colonies and raising of young during summer. The layered structure of the bat roost materials means that the 1WQ has excellent insulating properties whilst guaranteeing air convection and permeability. As with all Schwegler products, this extremely durable box will last for many decades, maintenance free.

The interior of the 1WQ provides a selection of surface textures and areas with different hanging depths making it easy for different bat species to find their ideal position throughout the year. The entrance area is also purposely designed to allow the bats good grip during their approach and entry. This is particularly important for juvenile and inexperienced bats.

This roost is suitable for typical building-inhabiting species such as pipistrelles.

Suggested locations for the bat boxes in Figures 8 and 9 are included in Figure 10 below.

Figure 8 – Habibat Bat Box – Plain (for rendering).

Figure 9 – 1WQ Schwegler Summer and Winter Bat Box.

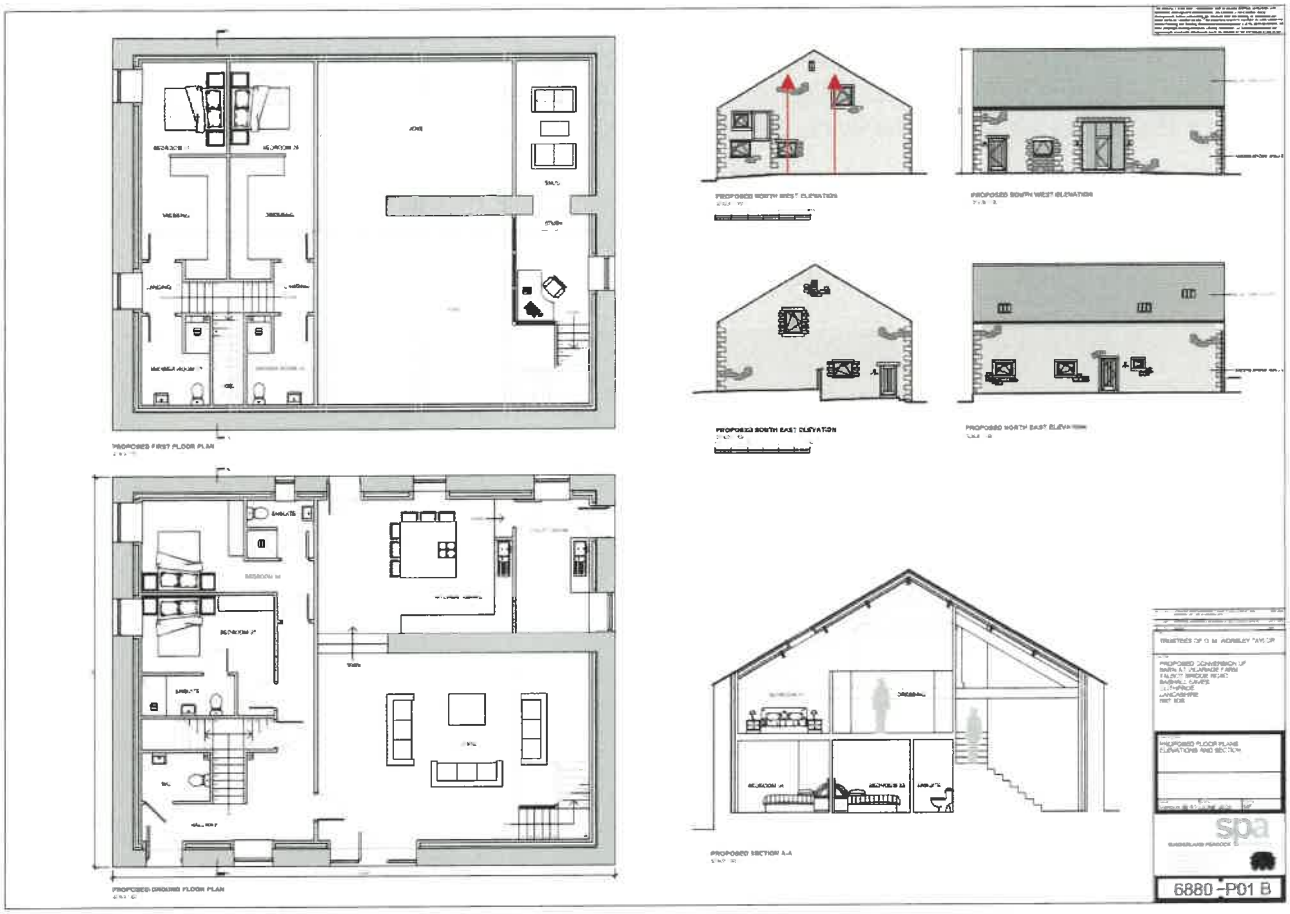

Figure 10 - Suggested location for the Schwegler 1WQ Boxes.

4.2.3 Assigned Ecological Clerk of Works

At the pre-commencement stage, a suitably qualified ecologist will provide an induction 'toolbox talk' on possible bat presence and present/discuss document features taken from the licence i.e., Licence, Method Statement, Mitigation Figures and Work Schedule to be kept on site for the duration of the work.

Prior to any work being undertaken the presence/absence bats as far as is possible will be established by undertaking detailed investigation of any areas to be affected. This will focus on areas which have been identified as holding potential for roosting bats.

All identified roost ingress/egress points on the main building should not be altered in any way and must be retained as part of the property. Should this not be possible then works must stop, advice sought from a suitably qualified ecologist.

(i) Work undertaken by the Ecologist

Capture/Exclusion

Once an EPSML licence is in place, the contractor will provide a safe means of access to allow the ecologist to investigate the building for bat roosts. In addition, wherever opportunities for bats exist in other parts of the barn the supervised dismantling will extend to these areas at the discretion of the ecologist in attendance. A bat licenced ecologist may need to oversee the works until they are satisfied that there is a low likelihood of bats being present within.

In the event of bat(s) being present, it/they will be removed, placed in a secure box with soft tissue and immediately transferred into the receptor bat boxes that will have previously been erected on a suitable feature e.g., Figure 12 (these boxes must remain in-situ in perpetuity. Once it has been established by the ecologist that bat(s) are absent the works will continue to completion.

In the unlikely event that bats are found outside of supervision time, then as legal requirement and conditions of the granted licence work will immediately cease and the ecologist contacted for further advice; contractors must not touch, handle or in any way cause bats to move.

Figure 12 - Suggested locations for bat boxes to be erected during the renovation works.

4.2.4 Further Design Recommendations

(i) External lighting

In all cases illumination of suitable bat habitat should be avoided. Where lighting is required, this must be low level, low intensity and directed downwards away from boundaries. The following principles will apply;

- Where and if lighting is required, this will be directed internally within the site avoiding spillage towards boundary habitats. In particular, spillage to the north, east and south towards the mature trees should be avoided.
- The use of low powered sodium lights or similar will be used and these will be fitted with cowls / covers that prevent lateral light spillage towards boundary habitats.
- Wherever possible and only if required low level (1-1.5m high) bollard lighting will be used.
- If required lights will be fitted with timer controls that minimise the duration of lighting.

Lighting requirements will follow guidance provided by the Bat Conservation Trust; links are provided below.

- Bat Conservation Trust's Acritical Lighting Guidance. Webpage link https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting

- Bat Conservation Trust and Institute of Lighting Professionals Guidance Note 08/23: Bats and Artificial Lighting in the UK. Webpage link https://cdn.bats.org.uk/uploads/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?v=1542109349.

(ii) Ridge access

Where appropriate, ridge tile access should be made with the incorporation of traditional Bitumen 1F underfelt immediately beneath ridge tiles. Breathable BRM membrane can cause significant problems where bats are in contact with it, whereby their fine claws become entangled within the fibres of the membrane, entrapping, and killing bats.

4.2.5 Barn Owl

All birds are protected at their nest under the Wildlife and Countryside Act (WCA) 1981 (as amended) but barn owl are afforded additional protection being listed in Schedule 1 of the WCA which makes it an offence to "recklessly disturb a barn owl whilst it is building a nest, or recklessly disturb a barn owl whilst near a nest, or recklessly disturb dependent young of a barn owl."

Due to the presence of a pair of breeding barn owl within the barn, proportionate mitigation needs to be implemented so to account for the loss anticpated loss of the banr owl breeding site.

It is recommended that a nesting chamber be incorporated within the building design. The chambers design will adhere to that which is included as part of the best practice guidelines as proposed by the Barn Owl Trust. Dimensions and recommendations are included below (Figre 13 provides a visualisation of a barn owl nest box chamber);

- Floor area of nest chamber: absolute minimum 0.4m^2 (e.g. 500mm x 800mm or 400mm x 1m), ideal size is 1m^2 (1 metre x 1 metre). These dimensions are bigger than those for nestboxes because built-in provision usually lacks an external exercise platform that would permit maximum wing stretching prior to fledging.
- Where there is no external exercise platform the internal box depth from bottom of entrance hole to floor of nesting area must be not less than 700mm. Note: the ideal depth for Barn Owls is at least 1 metre which should be achieved wherever space permits.
- Depth from bottom of entrance hole to floor of nesting area must be not less than 450mm provided that there will definitely be an easy-to-grip external exercise platform for fledglings to stand on outside the owl hole.
- In a large loft simply partition off a section behind the owls' entrance hole.
- Stone, brick and timber are all suitable materials. Although owls are not destructive and seem unharmed by soft insulation materials, these are usually best avoided.
- In an unheated building, no insulation is required.
- Lining the space is not essential, but a thin layer of wood flakes encourages occupation.
- An internal perch positioned as high or higher than the access hole may be beneficial as long as the space is big enough to accommodate one without resulting in one perched bird defecating on another underneath.
- There should be some form of moisture insulation between the owl space and the building interior.
- Where space is at a premium, use a highly efficient heat insulation board (e.g. 50mm Celotex polyurethane foam).
- Where space allows, use a more environmentally sustainable (and thicker) heat insulation board (e.g. a wood fibre board like Pavatex) to which a sound insulation board can be added (e.g. 60mm Pavatherm) if required.

- Human access is essential as the nest space will need to be cleared out very occasionally.
- A generous removable inspection hatch or door in the back of the owl space (accessible from the building interior) is usually the preferred option but in some cases an external arrangement may be a practical option.
- In the case of a loft partition, create an integral crawl-through doorway.
- The access should permit all or most of the nest space floor to be reached by hand.

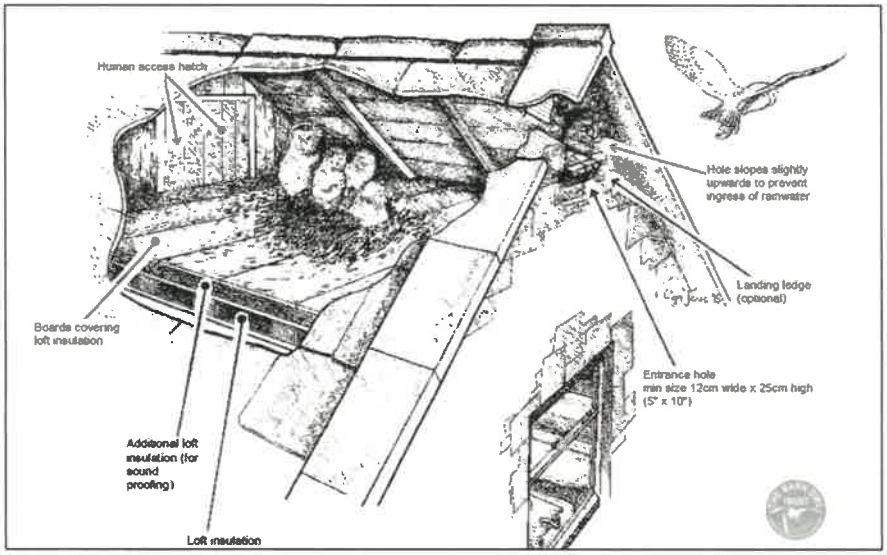

Figure 13 - Visualisation of a barn owl nest box chamber.

Suggested location(s) (only one is required) of the nest box chamber is included in Figure 14. The barn owl present within the building in 2024 are habituated to human disturbance given the farm is attened daily by the tenant farmer and the adjacent residential dwelling parks their cars within the farm courtyard to the south west of the barn. The suggested location on Old Vicarage Lane is a quiet road so the risk of young fledgings being struck by vehicles is deemed to be low.

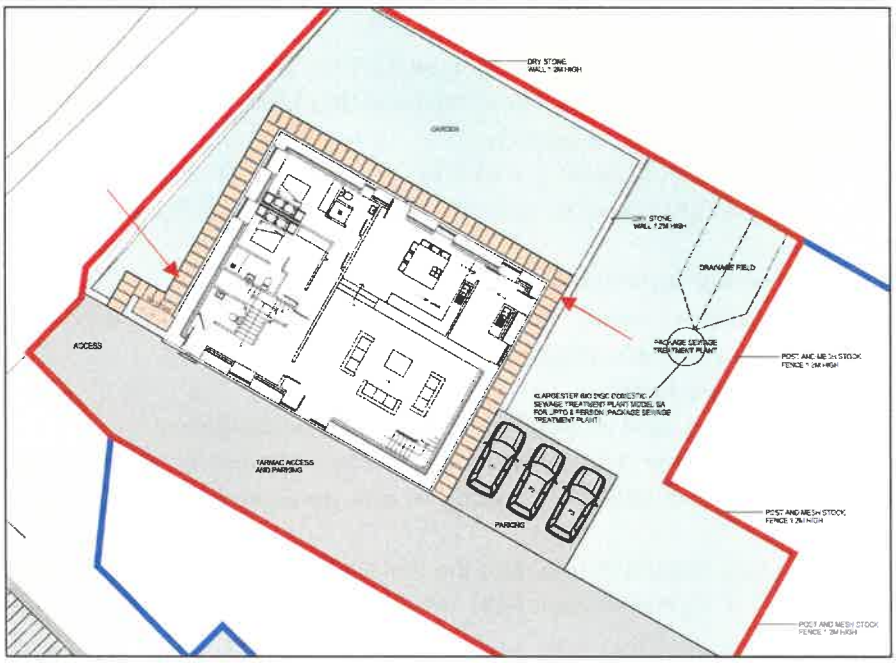

Figure 14 – Suggested locations for positioning a barn ow nest box chamber (marked by red arrows).

REFERENCES

Bat Conservation Trust (BCT), 2023. *Bats and artificial lighting in the UK: Bats and the Built Environment series*. Available from: https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/

CIEEM et al, 2019. *Biodiversity Net Gain: Good practice principles for development*. Available from: www.cieem.net/data/files/Publications/Biodiversity_Net_Gain_Principles.pdf

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

Mitchell-Jones, A. J., 2004. *Bat Mitigation Guidelines*. External Relations Team, English Nature, Northminster House, Peterborough, PE1 1UA.

Mitchell-Jones, A. J. (ed.), 1987. *The Bat Worker's Manual*. Dept. BWM, Nature Conservancy Council, Northminster House, Peterborough, PE1 1UA.

Google Earth. Accessed various dates. Latest access July 2024

Appendix A: Bat and Barn Owl Legislation and Policy

Bats

Legislation

All British bats and their roosts[2] are afforded protection under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579). When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the Regulations, that has a statutory duty as the local authority to have due regard to the provisions of the Regulations in the exercise of its functions.

The relevant sections of the Wildlife and Countryside Act 1981 (as amended) make it 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;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

The relevant sections of the Conservation of Habitats and Species Regulations 2019 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; and,
- Damage or destroy a breeding site or resting place of such an animal.

Where it is likely that the scheme would result in contravention of this legislation, a bat mitigation licence would be required to allow the works to proceed. As part of this process, the application must meet 'three tests' for licencing under the Conservation of Habitats and Species Regulations 2019. Planning guidance and case law also require the Local Planning Authority (LPA) to address these three tests when deciding whether to grant planning permission. The three tests are as follows:

- Regulation 55 (2) (e) states that a derogation license 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.

Policy

Paragraph 180 of the National Policy Planning Framework (as revised in July 2021) states:

180. When determining planning applications, local planning authorities should apply the following principles:

[2] *The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats and Species Regulations (2019) (EU Exit) (Regulation 43 (d) the term roost is not used but refers to "a breeding site or resting place of such an animal" and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation*

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and,

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Bats in Lancashire

Up to 11 bat species have been recorded in Lancashire, most of which are likely to use built structures e.g., buildings, bridges, culverts etc. as well as features in trees e.g., knot holes, woodpecker holes, peeling bark, torn limbs etc. The most frequently encountered species are the common and soprano pipistrelle bats; their abundant status in Lancashire is reflective of the UK distribution of these species.

Barn Owl

The barn owl is a relatively scarce breeding species for which there is conservation concern in the UK, the population having declined by about 70% between 1932 and 1985, from an estimated 12,000 to 3,800 breeding pairs in England and Wales, 600 in Scotland and 40 in the Channel Isles (Shawyer 1987). The most recent survey of the UK, which was completed in 1997, recorded a similar breeding population of about 4,000 pairs (Toms et al. 2001). Similar levels of decline have occurred across Europe and elsewhere in the world (Colvin 1985, BirdLife International 2004).

The barn owl qualified under international criteria as a Species of European Conservation Concern, SPEC Category 3 (Tucker and Heath 1994, Hagemeijer et al. 1997) because of its 'moderate decline' in Europe. Since 2002, it has been included on the Amber List of Birds of Conservation Concern in the UK (BoCC) because of its 'declining breeding range of between 25 and 49%' and it's listing as a species with 'unfavourable conservation status in Europe' (Eaton et al. 2009a).

A UK Species Action Plan (SAP) for the barn owl was first developed by the Joint Nature Conservation Committee (JNCC) and the RSPB (Williams and Galbraith 1992). Most of the detail of this action plan is included within the Barn Owl SAPs that have since been produced by Governmental and other national bodies, such as the Highways Agency, Crown Estates and Association of Drainage Authorities (Wynne et al. 1995, Highways Agency 2002, Shawyer 2009). In addition a large number of local Biodiversity Action Plans (LBAPs), including those of water companies, such as Anglian Water, internal drainage boards and numerous counties such as, Warwickshire, Sussex, Devon and Norfolk (Shawyer 2011), have been produced to include the barn owl under Agenda 21 of the International Convention on Biodiversity.

The conservation importance of the barn owl can also be judged by its inclusion on the UK Government Farmland Bird Index of Sustainable Development, its Public Service Agreement target to reverse the decline in the index by 2020 and its appearance in the annual publication The State of the UK's Birds (Eaton et al. 2009b).

By 2009, the barn owl population in the UK, with the exception of Northern Ireland, is believed to have increased to over 6,000 pairs, most of the major increases having occurred in those areas where concerted efforts have been made to conserve this bird (1Shawyer 2009). A demonstrable increase in population since 1997 is also consistent with the preliminary findings of the BTO/JNCC/RSPB Breeding Bird Survey (Dadam et al. 2011).

Aside from concern about its conservation status, the barn owl is specially protected on Schedule 1 of the Wildlife and Countryside Act 1981 from intentional or reckless actions that may cause disturbance in the breeding season. As such the barn owl is one of a number of protected species in the UK and the Republic of Ireland whose presence must be given high nature conservation priority and special legal protection when a potential development is being considered (see: Appendix I - Wildlife Law and Planning Guidance).

UK Domestic Legislation

The Conservation of Habitat and Species Regulations 2010. These Regulations implement the EU Habitats Directive for the UK. They consolidate all of the amendments made since 1994 to the Conservation (Natural Habitats etc.) Regulations 1994 (S1 1994/2716).

The Wildlife and Countryside Act 1981

There are four parts to the Wildlife and Countryside Act (WCA) of which Part 1 sets out the protection that is afforded to all wild birds and certain animals and plants. Sections 1-8 relate to the protection of birds. The WCA is the primary legislation affecting birds in England, Wales and Scotland. This Act is amended in England and Wales by the Environmental Protection Act 1990, Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006 and in Scotland by the Nature Conservation Scotland Act (NCSA) 2004 and the Wildlife and Natural Environment (Scotland) Act 2011. See below for details of these more recent Acts and their relevant amendments.

Section 1(1) of the WCA makes it an offence (in the absence of an appropriate licence) to intentionally kill, injure or take (capture, possess or control) any wild bird or anything derived from that bird, or intentionally to take damage or destroy its nest, eggs or young. (This requires that persons who are not qualified ringers but wish to handle any live bird to undertake biometric studies, must apply for a special licence to do so).

Section 1(2) makes it an offence to possess or have in your possession any live or dead wild bird or anything derived from such a bird, or any wild bird egg whether it is viable or abandoned. (A general licence is issued by the SNCO's in England, Wales and Scotland which permits the removal and immediate destruction of unsuccessful eggs from nestboxes between 1st August and 31st January, before the next breeding season, for the purpose of conserving wild birds).

Section 1(5)(a) and 1(5)(b) also affords additional and special protection to barn owls and certain other vulnerable species of birds, which are listed on Schedule 1 making it unlawful to intentionally and recklessly disturb these birds whilst they are building a nest or are in, on or near a nest containing eggs or young (5a) or to disturb their dependent young (5b). Barn owls do not 'build a nest' in the true sense but this activity is replaced by the shredding of pellets on which eggs are eventually laid. (Schedule 1 Species are those of high nature conservation priority or those in special need of legal protection but are not necessarily Red or Amber List species or Priority Species in the UKBAP).

Section 4(2)(c)) states that in England and Wales, a person shall not be guilty of an offence under Section 1 if his actions were the incidental result of a lawful operation and could not reasonably have been avoided. This means that should a person's actions leading to the committing of an offence in these two countries be of an accidental or unforeseen nature as the result of an otherwise legitimate action, this could offer a defence to the offence of disturbance. In Scotland, a number of specific caveats, conditions or tests apply to this particular defence. In either case it would be for a court to decide whether this defence could be relied upon.

The barn owl is also listed on Schedule 9 of the WCA, which controls the release of certain species to the wild (Department of the Environment 1992), making it an offence to release or allow a barn owl held in captivity to escape into the wild, except in the case of a disabled/injured wild bird which has been successfully treated and rehabilitated.

In addition to the Sections in the WCA (as amended by subsequent legislation) which include birds and other fauna and flora, Section 28 charges the SNCO of the relevant country with a duty to select and designate Sites of Special Scientific Interest (SSSI) and in Northern Ireland, Areas of Special Scientific Interest (ASSI), and to notify these to the owner/occupier of the land, relevant planning authority, Environment Agency and Secretary of State for the Environment.

The Countryside and Rights of Way (CRoW) Act 2000

Part 3 of Countryside and Rights of Way Act 2000, deals with nature conservation. In England and Wales this amended the WCA and created a new offence of recklessly disturbing a Schedule 1 bird whilst it is at, on or near an active nest or its dependent young. Actions are likely to be considered reckless if no thought was given to whether or not there was a risk of disturbance, that there was a failure to consider disturbance as an obvious risk or the risk of disturbance was foreseen and the risk was taken.

The Natural Environment and Rural Communities (NERC) Act 2006

This Act increased protection for biodiversity imposing a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, 'to have due regard, so far as is consistent with the proper exercise of those functions, for the purpose of conserving biodiversity' [Section 40 (1)] and similarly in Scotland the NCSA 2004 imposes a duty on every public body and office holder, in exercising any function 'to further the conservation of biodiversity so far as it is consistent with the proper exercise of those functions' [Section 1 (1)].

A provision under the NERC Act 2006, not unlike that of the NSCA, makes it an offence to take, damage or destroy, at any time of the year, the nesting places of particularly vulnerable birds of prey which re-use their nests and are listed on Schedule ZA1. These birds are Golden Eagle Aquila chrysaetos, White-tailed Eagle and Osprey Pandion haliaetus. This year-round protection does not, however, apply to the nest sites of other Schedule 1 birds such as barn owls.