Bat Survey Report
Bridge End Farm, Slaidburn

Anser Ecology Limited

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Edgeley

Stockport

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Project: **Bridge End Farm, Slaidburn**

Report Reference: **AE66-R02a**

Author: **Laura Dennis**

Approved By: **Jeff Clarke**

Date: **28th July 2023**

CONTENTS

SUMMARY

- This report has been prepared by Anser Ecology Limited in relation to Bridge End Farm, Wood House Lane, Slaidburn, Clitheroe, BB7 3AH.
- A planning application and listed building consent have been submitted to Ribble Valley Borough Council for renovation of the farmhouse and barns including change of use of the first adjoining barn to form part of the residential accommodation (planning refs: 3/2023/0287 and 3/2023/0288).
- A Preliminary Roost Assessment (PRA) was completed by Anser Ecology on 29th March 2023, which is detailed in the Ecological Appraisal and Bat PRA report (AE66/R01, dated 13th April 2023). The PRA identified **high** bat roosting potential of the farmhouse (B1) and adjoining barns (B2a and B2b), therefore requiring three nocturnal surveys to determine presence or absence of roosting bats. A derelict outbuilding (B5) which is also present has **negligible** roosting potential and did not require nocturnal surveys.
- Other buildings included in the PRA are a field barn (B3) and Nissen hut (B4) which have moderate and low roosting potential, respectively. However, these buildings are not included in the planning proposals and so were not subject to further survey at this time.
- Nocturnal emergence surveys of B1, B2a and B2b were conducted at dusk on 6th May, 2nd June and 1st July 2023 by four surveyors, supplemented by three thermal/infrared cameras. All bat surveys were conducted in accordance with Bat Surveys for Professional Ecologists – Good Practice Guidelines (Bat Conservation Trust, 2016).
- The nocturnal surveys identified day roosts common pipistrelle and soprano pipistrelle bats in six roost locations. A maximum of five bats were recorded roosting during any one survey visit, using both the farmhouse (B1) and the west barn (B2b):
    - Visit 1 - 6th May
        - Common pipistrelle x 1 – B1 first-floor south-facing (front) window jamb/frame
    - Visit 2 - 2nd June
        - Soprano pipistrelle x 1 – B1 northeast corner of east gable
        - Soprano pipistrelle x 1 – B1 western gable, near to apex
        - Common pipistrelle x 2 – B2b western gable apex (behind fascia)
        - Soprano pipistrelle x 1 – B1 southeast corner of east gable
    - Visit 3 – 1st July
        - Common pipistrelle x 1 – B1 second-floor window frame on eastern gable
        - Common pipistrelle x 1 - B1 southeast corner of east gable (as per Visit 2).
- The proposed works will involve significant renovations and repairs to the roof, walls and masonry of the buildings which will impact confirmed bat roosts. Therefore, **a protected species mitigation licence from Natural England will be required prior to the commencement of works**. It is only possible to apply for a NE licence once planning consent has been granted.
- Mitigation for loss of current roost locations will be required as part of the licence, and it is proposed that integral bat roost boxes are installed for this purpose as part of renovation works.

1. INTRODUCTION

1.1. This report has been prepared by Anser Ecology Limited on behalf of Andrew Shorten (the Client).

1.2. It details surveys undertaken for bats in relation to Bridge End Farm, Wood House Lane, Slaidburn, Clitheroe, BB7 3AH (approximate site centroid SD 70309 53608), hereafter referred to as 'the site'.

1.3. The site comprises a Georgian farmhouse (B1) and adjoining barns (B2a and B2b) constructed of sandstone with pitched roofs with tile (B1 and B2a) and corrugated steel (B2b) covering. A derelict outbuilding (B5) is also present in the farmyard.

1.4. A planning application and listed building consent have been submitted to Ribble Valley Borough Council for renovation of the farmhouse and barns including change of use of the first adjoining barn (B2a) to form part of the residential accommodation (planning refs: 3/2023/0287 and 3/2023/0288).

1.5. A Preliminary Roost Assessment (PRA) survey was completed by Anser Ecology on 29th March 2023, which is detailed in the Ecological Appraisal and Bat PRA report (AE66/R01, dated 13th April 2023).

1.6. The PRA identified **high** bat roosting potential of the farmhouse (B1) and adjoining barns (B2a and B2b), therefore requiring three nocturnal surveys to determine presence or absence of roosting bats. A derelict outbuilding (B5) which is also present has **negligible** roosting potential and did not require nocturnal surveys.

1.7. Other buildings included in the PRA are a field barn (B3) and Nissen hut (B4) which have moderate and low roosting potential, respectively. However, these buildings are not included in planning proposals and so were not subject to further survey at this time.

1.8. The purpose of this report is to detail nocturnal bat surveys undertaken between May and July 2023 to detect whether roosting bats are present, how bats are utilising the buildings and to determine the scope and requirements for mitigation and licensing works (if roosting bats are present).

LEGISLATION AND CONSERVATION STATUS

1.9. All UK bat species and their roosts are legally protected in England under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, The Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. This legislation makes 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.

1.10. Several UK bat species are listed as Species of Priority Importance for the conservation of biodiversity under Section 41 of the Natural Environment and Rural Communities Act 2006. As such, planning authorities must have due regard for the conservation of these species during the planning process.

BAT ROOSTING ECOLOGY

1.11. For the purposes of roosting, UK bat species may be split into void dwelling (such as brown long-eared and horseshoe bats) and crevice dwelling (such as pipistrelle and myotis species). All resident UK bats are insectivorous.

1.12. Pipistrelle bats are often found roosting in the crevices and gaps which exist in buildings, but such roosts go largely unnoticed. It is rare for noctule bats to be found roosting in buildings as they prefer larger voids such as those made in trees by woodpeckers. The myotis species, such as Daubenton's bats, are generally found roosting in either cavities or voids but are rarely found in buildings as they are more sensitive to light pollution and human interference. Brown long-eared bats tend to roost in voids and often favour high loft areas but may also roost in gaps and crevices.

1.13. Bat roosts are defined under the following terms:

Day roost	Individuals or small groups of bats, rest or shelter in the day but are rarely found by night in the summer.
Night roost	A resting place 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 perch	One or more bats feed during the night but are rarely present by day. Identified by the presence of prey remains.
Transitional roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation. (Also known as an occasional roost)
Swarming site	Areas where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites
Mating sites	Areas where mating takes place from later summer and winter.
Maternity roost	Where female bats give birth and raise their young to Independence.
Satellite roost	An alternative roost found near the main nursery colony used by a few individual breeding females or small groups of breeding females throughout the breeding season.

2. METHODOLOGY

2.1. All nocturnal surveys were conducted in accordance with the Guidelines (Collins, 2016). Strict adherence to these is not necessary, but where practice deviates from them, clear reasons and rationale are required.

2.2. The main aim of nocturnal surveys is to confirm the presence or absence of roosting bats. Surveys should use sufficient effort to establish what bat species were present at the site, in what numbers, if any bat roosting was taking place and the type of roosting.

2.3. In general, surveys conducted in April or September/October may detect transitional roosts and those conducted in the active season from May to August may detect day and maternity roosts. The Guidelines state that nocturnal surveys must be conducted in suitable weather conditions, ideally at least two weeks apart from April to September.

2.4. Nocturnal surveys are generally conducted in two ways:

- Dusk emergence survey: starting 15 minutes before sunset and ending 1½ to 2 hours after sunset.
- Dawn re-entry survey: starting 1½ to 2 hours before sunrise and ending at sunrise or up to 15 minutes after.

2.5. A decision to conduct dusk emergence or dawn re-entry surveys is made close to the time when they are required. In some circumstances dawn surveys can give more reliable results than those conducted at dusk, while overnight weather conditions are usually more suitable for dusk surveys, particularly at the start of the season.

2.6. The nocturnal surveys detailed in this report were completed as follows:

- First survey: dusk emergence on 6th May 2023.
- Second survey: dusk emergence on 2nd June 2023.
- Third survey: dusk emergence on 1st July 2023.

2.7. Surveyors used bat detectors with full spectrum recording ability which record calls for later analysis and comparison with visual records and were equipped with two-way radios to assist with communicating observed bat activity during each survey.

2.8. Two thermal imaging cameras (Pulsar Helion Pro) and one infrared camera (Nightfox Whisker) were also deployed during surveys to provide additional visual coverage.

2.9. Surveyors were positioned to enable sufficient visual coverage of all potential roost features on areas impacted by the proposal.

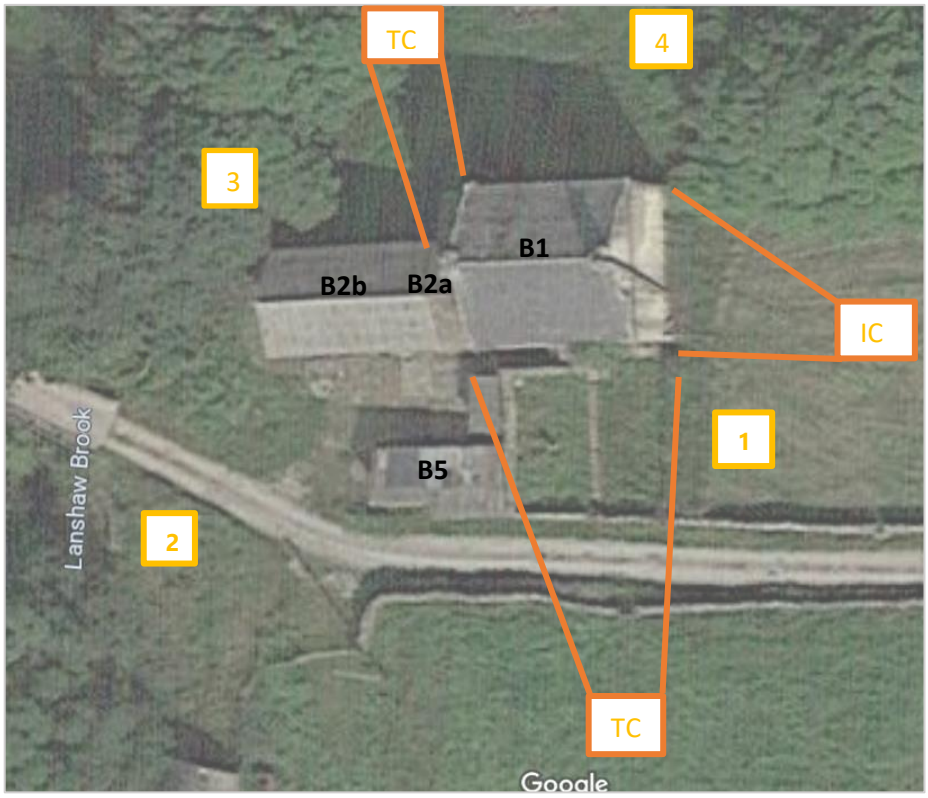
SURVEY LIMITATIONS

2.10. No significant limitations were experienced. Due to the remote, rural location of the site, night-time temperatures were generally more stable and reliable at dusk than overnight/at dawn. Therefore, a decision was made to conduct all three survey visits as dusk emergence surveys. Bat roosts were identified during all three survey visits, and sufficient information was gathered to enable accurate roost characterisation based on the species, number of bats and location of roosts.

3. SURVEY RESULTS

3.1. Surveyor (1-4), thermal camera (TC) and infrared camera (IC) positions are marked on **Figure 1** shown below. This allowed for sufficient visual coverage of all potential roost features.

Figure 1: Approximate positions of surveyors and cameras during nocturnal surveys.



3.2. Survey dates, timings, surveyor details and weather conditions during each survey visit are listed in **Table 1**, below. The results for each survey visit are detailed in **Table 2**.

Table 1: Survey dates, times, surveyors and weather conditions.

Date	Times	Surveyor (& NE Licence Ref)	Weather
06/05/23	Start: 20:35 Sunset: 20:50 Finish: 22.20	Position 1: Dr Elizabeth Barratt (Licence number 2015-14108-CLS-CLS) Position 2: Peter Giles (Licence number 2015-12153-CLS-CLS) Position 3: Jeff Clarke (Licence number 2022-10428-CL18-BAT) Position 4: Laura Dennis (accredited agent under Licence number 2015-10251-CLS-CLS)	Start:13°C, 8/8 cloud, wind BF0, dry Finish: 14°C, 8/8 cloud, wind BF1, very light rain
02/06/23	Start: 21:17 Sunset: 21:32 Finish: 23:02	Position 1: Dr Elizabeth Barratt (Licence number 2015-14108-CLS-CLS) Position 2: Peter Giles (Licence number 2015-12153-CLS-CLS) Position 3: Jeff Clarke (Licence number 2022-10428-CL18-BAT) Position 4: Laura Dennis (accredited agent under Licence number 2015-10251-CLS-CLS)	Start: 11.5°C, 1/8 cloud, wind BF1, dry Finish: 9.0°C, 1/8 cloud, wind BF1, dry

01/07/23	Start: 21:29 Sunset: 21:44 Finish: 23:14	Position 1: Dr Elizabeth Barratt (Licence number 2015-14108-CLS-CLS) Position 2: Peter Giles (Licence number 2015-12153-CLS-CLS) Position 3: Laura Dennis (accredited agent under Licence number 2015-10251-CLS-CLS) Position 4: Jeff Clarke (Licence number 2022-10428-CL18-BAT)	Start: 14.5°C, 4/8 cloud, wind BF4, dry Finish: 14.0°C, 7/8 cloud, wind BF3, dry
Equipment used: Position 1 – Echometer Touch, Positions 2 to 4 – Anabat Walkabout			

Table 2: Results for each nocturnal survey. See Figure 2, below, for a plan showing roost locations (A – F).

Visit 1 (dusk) 06/05/2023	• 21.04 - The surveyors at Positions 2 & 3 detected the first bat, a commuting common pipistrelle working the edge of the river SW to NE. • The following species were recorded during the survey: common pipistrelle, soprano pipistrelle, brown long-eared, noctule and a minimum of two Myotis species (calls typical of whiskered/Brandt's and Natterer's). • High levels of foraging activity were focused on the riparian woodland immediately north of the buildings. • 22.05 - A common pipistrelle re-entered B1 (Roost Location A) on the southern (front) elevation, inserting itself into a crack in the left edge of the lefthand first-floor window jamb/frame. The bat exited the roost at 22.18. Captured on thermal camera and species confirmed by surveyor's bat detector at Position 1. • **1 x common pipistrelle re-entered and later emerged from B1.**
Visit 2 (dusk) 02/06/2023	• 21:41 - first bat recorded by surveyor at Position 2, a common pipistrelle commuting from SW to NE. • As during the first survey, most of the bat activity was focussed on the riparian woodland along Lanshaw Brook to the north of the target buildings. • 21.43 – Emergence: a soprano pipistrelle from a hole in the masonry at northeast corner of B1 eastern gable (Roost Location B), observed by surveyor at position 3. • 21.50 – Emergence: a soprano pipistrelle from a small crack in masonry under west gable of B1 (Roost Location C), observed by surveyor at Position 3. • 21:56 – Emergence: Two common pipistrelle from behind the fascia board at the western gable end of B2b (Roost Location D), observed by surveyor at Position 2. • 22.05 – Emergence: a soprano pipistrelle from a crack in the masonry under the southeast edge of B1 eastern gable (Roost Location E). Captured on thermal camera and species confirmed by surveyor's bat detector at Position 1. • Other species noted during the survey were brown long-eared and Myotis sp. (whiskered/Brandt's). • **A total of five emergences from four roost locations: 2 x common (B2b) and 3 x soprano pipistrelles (B1).**
Visit 3 (dusk) 01/07/2023	• 21.36 – Emergence: a common pipistrelle (Roost Location E) captured by thermal camera and surveyor at Position 2. • 22.10 – Emergence: a common pipistrelle from a gap in the edge of the second-floor window frame at the eastern gable end of B1 (Roost Location F), recorded by surveyor at Position 1 and captured on thermal camera. • Other bats recorded during the survey included soprano pipistrelle and myotis sp. (whiskered/Brandt's). • **2 x common pipistrelles emerged from B1.**

Summary of Findings

3.3. Overall, the nocturnal surveys identified day roosts of common and soprano pipistrelle bats in six roost locations (A – F). A maximum of five bats were recorded roosting during any one survey visit, using the farmhouse (B1) and the west barn (B2b). A plan and photographs showing the roost locations (A-F) are provided in **Figure 2** below.

3.4. No roosting was recorded in association with the eastern barn (B2a).

3.5. A minimum of six species, common pipistrelle, soprano pipistrelle, noctule, two *Myotis* species (whiskered/Brandt's and Natterer's bat) and brown long-eared bat were recorded in the general area of the site during the nocturnal surveys.

3.6. The majority of commuting and foraging activity was recorded in association with the riparian habitat along Lanshaw Brook.

Nesting Birds

3.7. No evidence of active nesting by birds was recorded during the nocturnal bat surveys. Evidence of previous nesting by barn swallow, blackbird and wren was noted in the barns (B2a and B2b) during the initial building PRA survey.

Figure 2: Roost locations A – F.

4. EVALUATION

4.1. The farmhouse and adjoining barns (B1, B2a and B2b) have many Potential Roost Features (PRF) suitable for use by roosting bats and were evaluated as having **'high'** bat roosting potential.

4.2. The weather conditions were suitable to produce valid nocturnal surveys and bat activity was recorded during all visits.

4.3. The nocturnal surveys confirmed that at least six bat species were present locally at the time of the surveys: common pipistrelle, soprano pipistrelle, noctule, brown long-eared and at least two *Myotis* species, with echolocation calls typical of whiskered/Brandt's and Natterer's bats.

4.4. There are foraging opportunities for bats within the immediate environs of the site, particularly along the route of Lanshaw Brook and the line of mature sycamore trees.

4.5. Roosting bats were recorded during all nocturnal survey visits, using either the farmhouse (B1) or western barn (B2b). No evidence of roosting was recorded in associated with B2a, but many PRFs are present and this building retains 'high' bat roosting potential and may have suitability as a hibernation site. If works impacting buildings B2a and B2b are scheduled for the winter hibernation period, it is advised that an update PRA and the deployment of static detectors in both buildings be undertaken during the winter of 2023/24 to ascertain the potential usage of these 'void' buildings by cavity bats for hibernation purposes.

4.6. A maximum number of three soprano pipistrelle and two common pipistrelle bats were recorded 'day' roosting during any one nocturnal survey visit, and a total of six different roost locations were identified (roost locations A – F). Five out of six roost locations were identified in the farmhouse (B1).

4.7. It is likely that the bats observed roosting during each survey included some of the same individuals roosting in different locations based on varying environmental/climatic conditions at the time of each survey.

4.8. The findings of the surveys confirm that the proposed renovation and structural works to the buildings will impact roosting bats. All bat species in the UK are afforded the highest level of legal protection and therefore the appropriate Protected Species Licence from Natural England will be required prior to the commencement of works. The licence cannot be obtained until planning approval has been granted.

4.9. No evidence of maternity roosting at the site was recorded during any of the nocturnal surveys, which were spread across May, June and July.

4.10. All ecological records will be sent to the relevant local recording centre (LRC), in accordance with the guidelines and personal licensing requirements.

4.11. The mitigation and recommendations in **Section 5** aim to ensure that the development is implemented in accordance with all wildlife legislation, Natural England guidance, principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.

5. MITIGATION

5.1. To proceed with the planning proposals the development will require a Protected Species Licence from Natural England (NE) prior to the commencement of works (including roof, masonry, or other structural works). The NE licence application can only be actioned once planning approval has been received from Ribble Valley Borough Council.

5.2. The NE licence application must include a detailed method statement and work schedule for the proposed works that will impact roosting bats, and details of mitigation measures. This must include the erection of a suitable 'lifeboat' bat box prior to the commencement of work e.g. Large Multi-Chamber Woodstone Bat Box (wildcare.co.uk) in proximity of the target building under the guidance of the Suitably Qualified Ecologist (SQE).

5.3. Works to the roof and exterior of the buildings should ideally be conducted at a time to minimise the risk of an active bat roost being present. The nocturnal surveys suggest that bats are using the site for day roosting throughout the summer months. When considered in combination with potential nesting bird constraints, the most appropriate time is considered to be the latter part of the active bat season (September – October).

5.4. If works are due to commence on the site during the active bat season (April – October), it is recommended that an emergence or re-entry survey is conducted immediately prior to any works to gather up-to-date information regarding the location of roosting bats.

5.5. Prior to the commencement of works all contractors should be given a 'toolbox talk' by the SQE.

5.6. The identified roost locations and other areas of high risk must be inspected and/or dismantled by hand under the supervision of the SQE prior to repairs/works. If bats are discovered in the presence of the SQE, the bats will be transferred, under licence, to the pre-located 'lifeboat' bat box.

5.7. Once the critical areas of the building have been checked the ecologist can leave the site but remain on an on-call basis. If a bat, or signs of bats, are discovered on site at any point, all works must cease, and contact must be made with the SQE.

5.8. The survey data will be valid until 31st March 2025. If work to the buildings under a NE licence have not commenced by this date, an additional PRA (building inspection) will be required to ensure the nature of the site or surrounding area hasn't materially changed. This PRA will guide the need for further nocturnal surveys in the 2025 active season for bats.

5.9. The preferred option in the Guidelines is for bat roosts to be retained wherever possible, but this is not an option here. The development must therefore incorporate compensation features for the lost bat roosts. Appropriately placed features e.g., bat tiles, slates or integrated bat boxes should be incorporated in the rebuild, taking into consideration any heritage constraints (the site is Grade II listed). These features should be placed at different heights and facing differing directions to provide variable climatic conditions for bats.

5.10. The client or their architect should work with the SQE to agree the most appropriate roost compensation measures to be incorporated into the renovated buildings. The option most likely to be adopted would be to use integrated boxes placed close to the highest point of gable apexes, but not directly above any windows or accesses.

5.11. There are many design options for integrated bat boxes available. A range of bat boxes suitable for this purpose are shown here: Integrated Bat Boxes | NHBS Practical Conservation Equipment.

5.12. The erection of six general purpose bat boxes on the line of sycamore trees, running east to west adjacent to B1, will provide suitable alternative roost opportunities during the intervening period while renovations works are ongoing. A suitable box for tree mounting is the Vivara Pro WoodStone Bat Box | NHBS Practical Conservation Equipment.

5.13. Lighting impacts are a key consideration on the behaviour of bats and other wildlife. The site is in a very rural 'dark skies' location and it is imperative that any external lighting features associated with the newly renovated house and garden are sensitively deployed and kept to an absolute minimum to reduce light-spill pollution, particularly onto the riparian habitat along Lanshaw Brook and the Sycamore tree line to the east of the farmhouse (B1). No light spill should impact any new integrated bat roost features on any of the buildings. Guidance for architects and clients is available here: Guidance Note 8 Bats and artificial lighting (theilp.org.uk).

Action Required if a bat is discovered in the absence of a Suitably Qualified Ecologist (SQE):

5.14. If a bat, or signs of bats, are discovered at any point during the works, work must cease, and a suitably qualified ecologist (SQE) contacted for advice.

- If individual bats are discovered unexpectedly, including during periods of adverse weather, then the following steps must be taken:
  I. Works to that building/structure must stop immediately. If a licensed bat handler is not on site, he/she must be contacted immediately to attend the site.
  II. Do not expose the bat or cause it to fly out of the roost on its own accord.
  III. The bat must only be handled by a suitably skilled and qualified bat ecologist unless it is in immediate danger. The bat must be carefully placed in a lidded ventilated box with a piece of clean cloth and a small shallow container with some water. The box must be kept in a safe, quiet location.
  IV. Care must be taken to avoid rousing the bat during transfer to a suitable location – which may be a suitable hibernation box or other alternative roost constructed, providing a safe, quiet environment with stable, suitable temperature and relatively high humidity, safe from further disturbance.
  V. The bat ecologist must re-assess the structure and determine whether works can continue. A written record must be kept of this decision and made available to Natural England or any police officer on request.
  VI. Any underweight or injured bats must be taken into temporary care by an experienced bat carer, until such time that the bat can be transferred to a suitable replacement roost at the same site, or weather conditions are suitable for release at the same site.

Nesting Birds

5.15. No works can commence whilst birds are nesting at the site. The site should be checked for active nests by an SQE before works impacting the buildings if the timing of commencement coincides with the nesting bird season (core period March to August, inclusive).

5.16. Nesting opportunities for birds should also be considered within reconstructed building, e.g., house sparrow and common swift nest boxes.

REFERENCES

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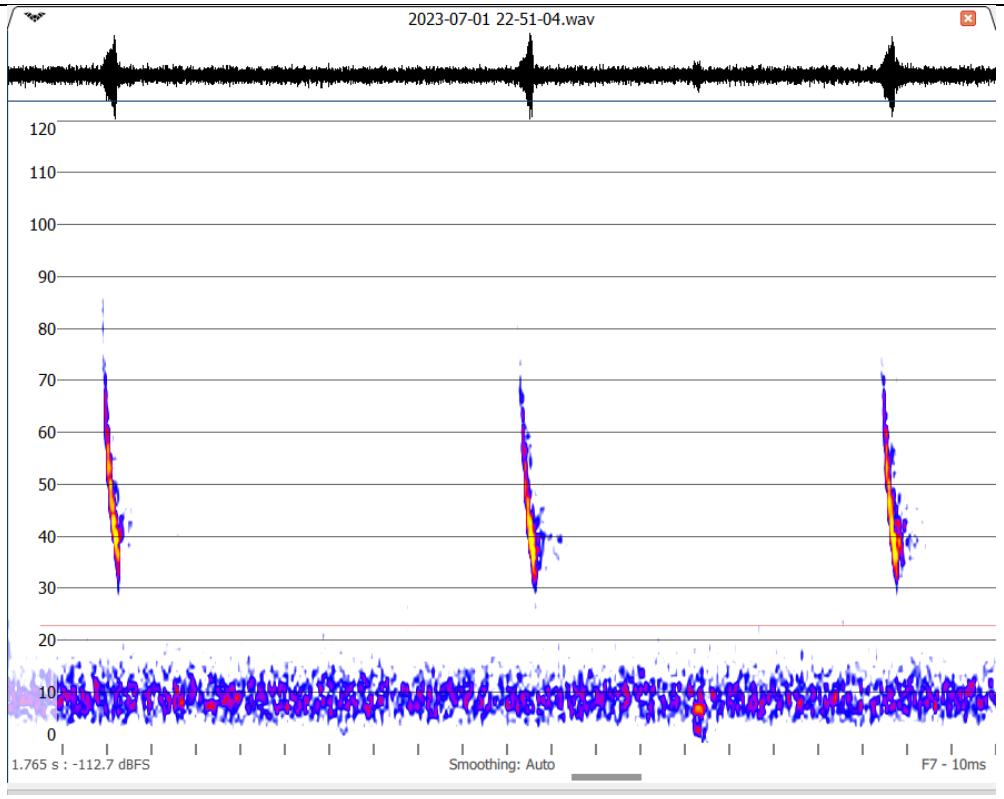
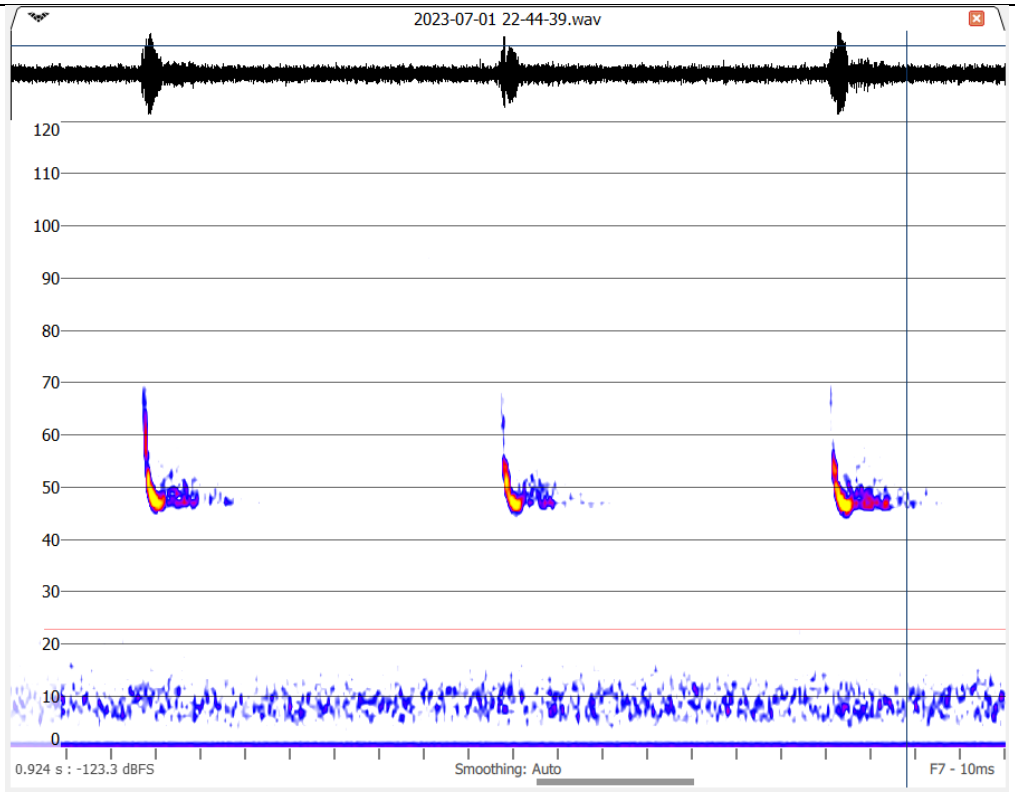
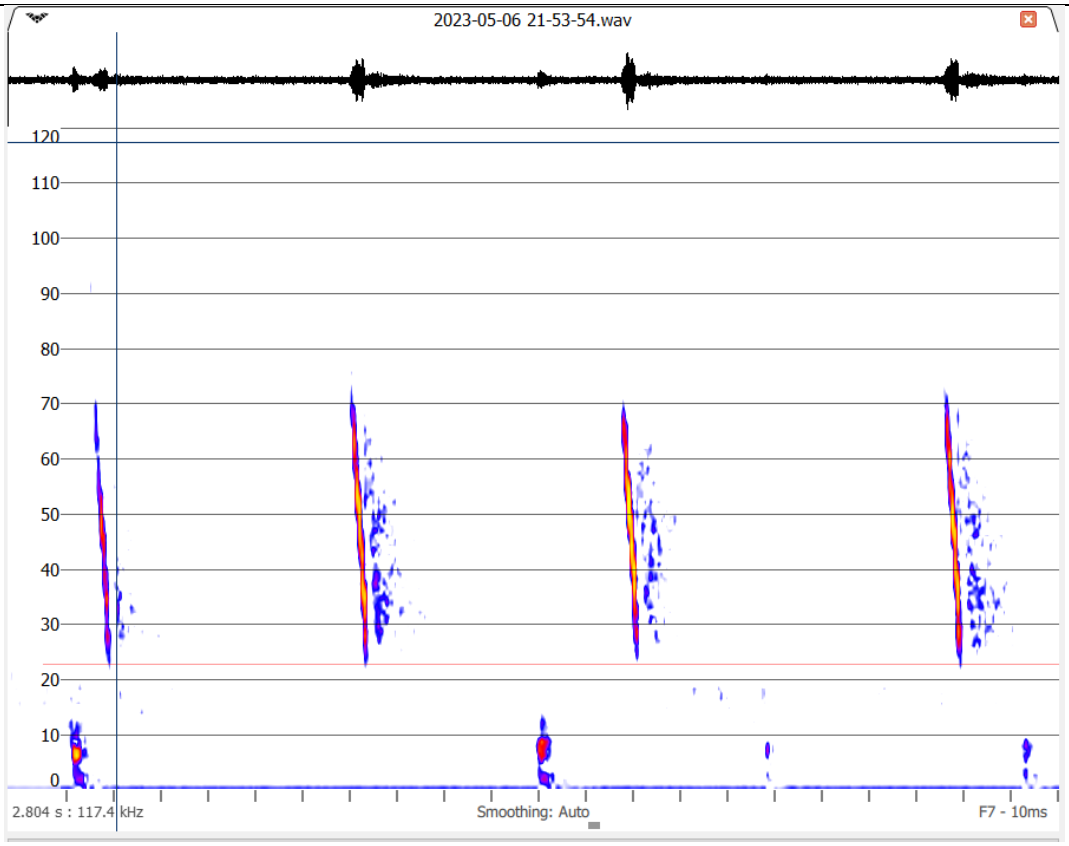
APPENDIX 1: EXAMPLES OF RECORDED BAT CALLS



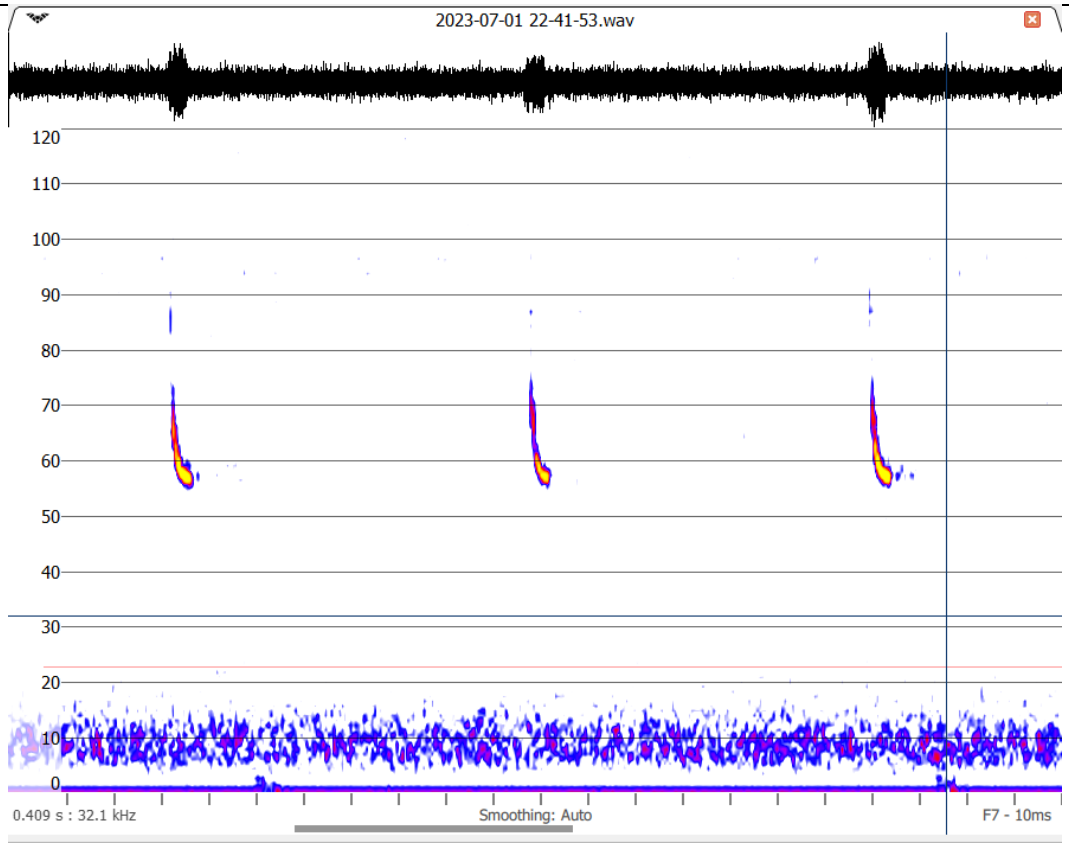
Whiskered/Brandt's – Bridge End Farm, Slaidburn (1st July 2023)



Common Pipistrelle – Bridge End Farm (1st July 2023)



Probable Natterer's Bat – Bridge End Farm, Slaidburn (6th May 2023)



Soprano Pipistrelle – Bridge End Farm, Slaidburn (1st July 2023)

APPENDIX 2: EXAMPLE OF THERMAL CAMERA IMAGE

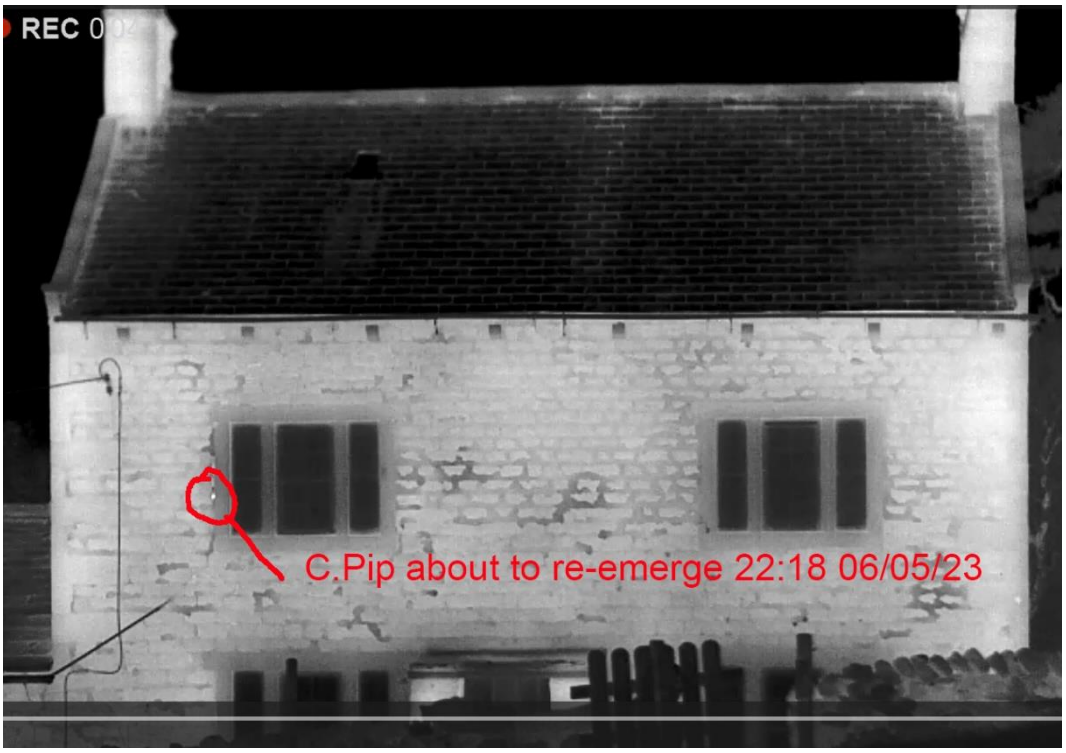


Image taken on 6th May 2023, roost location A.