2024

Summerleaze Cottage, Green Street, Caldicot NP26 3DE

Bat Activity Survey Report

EcoVigour
Integrated Environmental Management

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1. INTRODUCTION

1.1 SCOPE OF REPORT

1.1.1 EcoVigour Ltd was commissioned by John Williams (the client) to undertake a preliminary roost assessment (PRA) of Summerleaze Cottage, ahead of potential planning application proposal. The current development proposals are unknown.

1.1.2 A Preliminary Roost Assessment (PRA) was undertaken on the 25th January 2024 by Isabella Stephens, a licensed bat ecologist for Natural England and Natural Resources Wales at EcoVigour Ltd. The PRA found the structure to have 'low' potential for bats due to minimal number of potential roosting features found on the north side extension of the property. Please refer to the original PRA (document reference: EV001619/PRA) document for more information. It was recommended that one dusk presence/absence survey was undertaken on the structure.

1.2 SITE DESCRIPTION

1.2.1 The survey area consists of Summerleaze Cottage, Green Street, Caldicot, NP26 3DE. Approx OS: ST 42165 84991.

Figure 1 - Site location and survey area.

1.2.2 The aim of the bat activity surveys undertaken by EcoVigour in May 2024 was to ascertain the following:

- Presence/absence of bat roosts within the cottage including hibernation;
- Status of roosts if present;
- If required, identify opportunities for avoidance, mitigation, or compensation measures and/or further ecological surveys;
- If a European Protected Species (EPS) Development Licence is required to ensure legal compliance.

1.3 Proposed Development

1.3.1 No works are required yet, the survey has been undertaken as part of a future planning proposal. There are no designs of plans completed to date.

2. Methodology

2.1 Preliminary Roost Assessment

2.1.1 An initial Preliminary Roost Assessment (PRA) was undertaken on 25th January 2024 by Isabella Stephens, a licensed bat ecologist for Natural England and Natural Resources Wales at EcoVigour Ltd.

2.1.2 The cottage was assessed to be of 'low' potential for use by roosting bats. This assessment was based on, some low potential roosting features on the north side extension of the cottage. As the building was assessed to be of 'low' potential to support roosting bats, one dusk presence/absence survey was undertaken. The number of surveys undertaken was in accordance with the BCT Guidelines (Collins 2024) as shown in Table 1 below.

Table 1 - Recommended number of surveys for presence/absence surveys

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit, a dusk emergence survey. Surveys can be undertaken from May-August.	Two separate survey visits, at least three weeks apart. Two dusk emergence surveys. Surveys can be undertaken from May – September.	Three separate survey visits, at least three weeks apart. Three dusk emergence surveys. Surveys can be undertaken from May – August.

2.2 Bat activity surveys

2.2.1 One bat activity survey (dusk emergence) was undertaken by EcoVigour in May 2024.

2.2.2 One bat emergence survey was undertaken at the cottage. This utilised two surveyors, equipped with bat detectors as well as night vision aids. The night vision aids used were a combination of Night Fox Vulpes night vision cameras, Canon XA11-60 IR cameras and a Pixfra ARC thermal camera.

2.2.3 The dusk activity survey commenced approximately 15 minutes before local sunset and lasted for approximately 1.5- 2hrs.

2.2.4 The surveyors were positioned at strategic locations to ensure good line of sight onto the potential roosting features of the property as identified from the original PRA visit. Surveyors recorded the times of any foraging, commuting, emerging, or re-entering bats. Additional notes were made on location and direction of flight where bats were deemed to be commuting and utilising the linear habitats at the site. Bat passes were detected using Echometer Touch Pro bat detectors and a Bat Logger M2. Sound files were checked and analysed using a combination of Kaleidoscope and Bat Scan analysis software.

2.2.5 Night Fox Vulpes night vision cameras, Canon XA11/60 IR cameras and a Pixfra ARC thermal camera were used to provide supplementary survey data at strategic locations and to capture any bat activity that may be missed by the surveyors due to deteriorating light conditions.

2.2.6 The activity surveys were orchestrated and led by Isabella Stephens an NRW and NE Licensed Bat Ecologist.

2.3 Infra Red, Night Vision and Thermal Imagery

2.3.1 Infra-red, night vision and thermal imagery were utilised at the cottage to further support the survey effort.

2.3.2 These night vision aids were deployed at strategic locations, to add additional visual aids on the structure during the survey. Video footage was downloaded and analysed to help identify bat activity / emergences at these locations.

3. Results

3.1 Activity Survey

Table 2 - Surveyor information

Surveyor	Licences	Ecological experience
Isabella Stephens, Ecologist BSc (Hons), MSc	Level 2 Bat Licence holder for NE and NRW.	Holds a BSc in Wildlife Ecology and Conservation Science and an MSc in Advanced Wildlife Conservation in Practice. Experienced in undertaking a wide range of ecological surveys and assessments and has worked on a variety of projects that vary in scale. Experienced in undertaking bat surveys with 5 years' experience undertaking and leading bat surveys and has been a level 2 bat licenced worker in Wales and England for the past year. including Greater and Lesser Horseshoe bat activity surveys. Experienced in the use of GIS, bat sound analysis software amongst others.
Cameron Quigley		A junior ecologist with EcoVigour who has experience undertaking surveys with EcoVigour. This is Camerons second season.

3.1.1 The potential roosting features identified only consisted of gaps under and between the wooden fascia boards, creating space for crevice dwelling species. These were isolated to the north face extension on the property.so 2 surveyors were utilised with line of sight on the identified PRFs, with the 3x IR cameras and 1x thermal camera used to provide supplementary information. This is to ensure bat activity can be followed around all aspects of the cottage if an emergence/re-entry occurred. (See Figure 2 and 3)

Figure 2 – Potential Roosting Features Identified.

Figure 3 - Survey Design.

Table 3 - Survey Information

Date / Time	Survey Type	Surveyors / Locations	Air temp °C	Sunset / Sunrise	Weather conditions		
					Wind Speed (Beaufort)	Rain	Cloud Cover (%)
29/05/2024 21:02-22:47	Dusk	Isabella Stephens / Cameron Quigley / 3x IR Camera / 1x Thermal Camera	Start: 14 End: 13	21:17	0	0	60%

3.1.2 The results of the bat activity survey (dusk presence/absence) are summarised in Table 4.

Table 4 - Survey Results

Survey	Results	Observations
29/05/2024 - Dusk	There were no emergences or re-entries from the property. There were a number of bats seen foraging and commuting within the general area.	2 species of bats were heard* and some seen foraging and commuting during the surveys, these included: *Pipistrellus pipistrellus* (common pipistrelle) and *Nyctalus noctula* (noctule). *Bat call sonograms can be found in the appendices of the document.

3.1.3 There were no emergences or re-entries from the property during the activity survey.

3.2 Infra-Red and Thermal Video results

3.2.1 The night vision aids deployed on the survey observed general foraging and commuting of bats across the habitat, however they confirmed there were no emergences or re-entries from the property.

3.3 Summary of Findings and Conclusive Comments

3.3.1 No bats were seen to emerge or re-enter from the PRFs that were identified during the PRA. A number of bats were seen to be utilising the linear features and foraging habitat around the property during the survey, however no interest was shown to the cottage.

4. Discussion

4.1 Bats

4.1.1 All British bats and any place used for shelter or protection, or breeding site or resting place (their roosts) are fully protected by law under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).

4.1.2 Together these protect bats from:

- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.
- Deliberate, intentional or reckless killing, injury or taking of bats.
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding (roost) or rest.
- Disturbance of an animal occupying a structure or place.
- The deliberate disturbance of any bat species in such a way as to be significantly likely to affect;
  - their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
  - the local distribution or abundance of that species.

4.1.3 The survey found that no bats were roosting within the cottage. Bat activity was observed with common pipistrelles foraging along the linear features of the property including the small ditch behind the property and the adjacent SSSI land. It is recommended that care is taken during planning proposals to retain the linear features utilised by the bats, including the hedgerow at the front of the property. Care should be taken with lighting levels emitted from the property and should match that of the current property on the site. If outdoor lighting is used it is recommended that it only illuminates the entrance path the structure and is not erected on the north, east and west sides of the property to avoid illumination of the foraging paths of the property.

4.1.4 If the client is interested in further suggestions to enhance the habitat for bat species, then a full plan can be proposed to for the property once designs have been completed.

4.2 Bird Species

4.2.1 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. All birds, their nest and eggs are protected by law under this legislation, it is an offence (with certain exceptions), to recklessly or intentionally:

- Intentionally kill, injure or take any wild bird.
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

4.2.2 **Note**: Nesting birds found outside of nesting season are protected by the same level of protection as that within the standard nesting period.

4.2.3 If nests are present, then a minimum 5m exclusion zone should be established around the nest(s) and no de-vegetation or other heavy machinery work should be carried out within the exclusion zone(s) until it is confirmed that the nest(s) is completed and that the young have fledged.

5. APPENDIX

5.1 CALL SONOGRAMS.

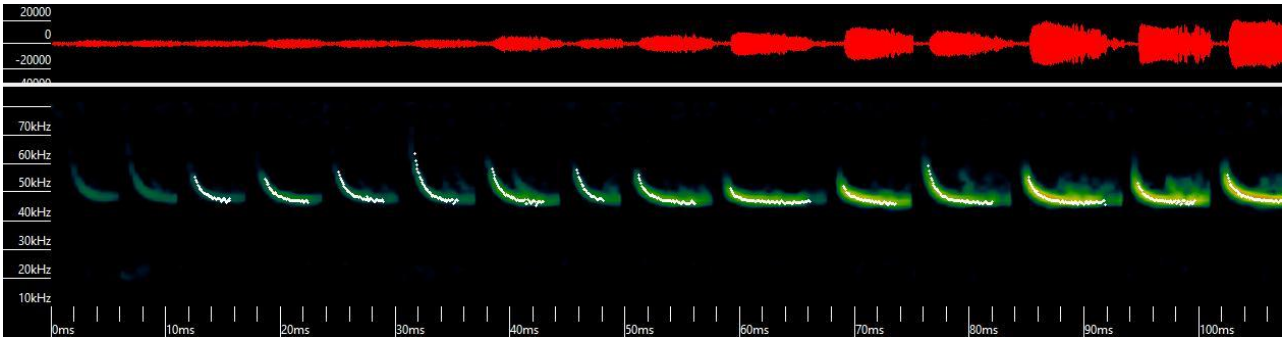

Figure 5 - Common pipistrelle Call Sonogram.

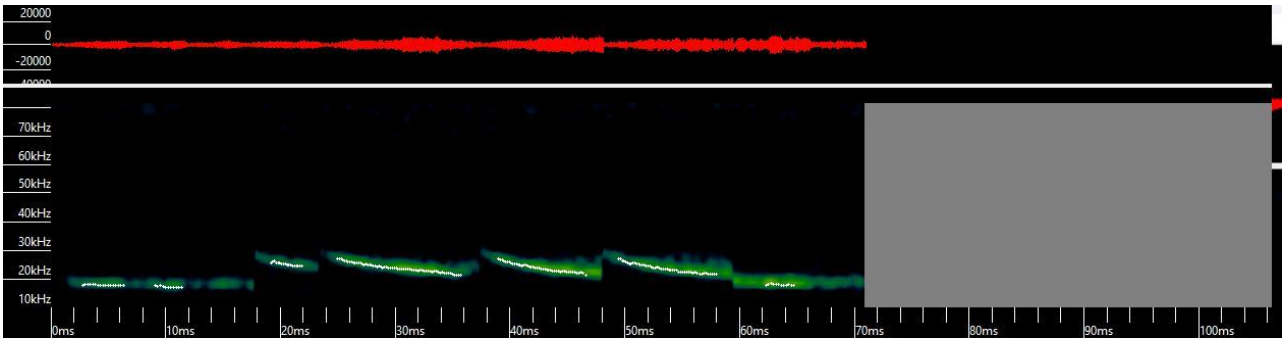

Figure 4 - Noctule Call Sonogram.

6. REFERENCES

- Collins, J. (ed), (2024). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). Bat Conservation Trust London.