



28 Kirlegate, Meare, Somerset BA6 9TA

Mr. Joseph Willmott

Bat Survey – Emergence and Activity Surveys

11/10/2022

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Executive Summary

Quantock Ecology Ltd. undertook a suite of emergence and activity surveys on a barn at 28 Kirlegate, Meare, Somerset BA6 9TA on the 1st August and the 5th September 2022. The survey followed on from a Preliminary Roost Assessment for bats and breeding birds, undertaken by Quantock Ecology during June 2022. The aim of the assessment is to determine the presence or likely absence of bats and if present, characterise the roost including species, numbers and levels of activity, to identify entrance and egress points, and to gain an understanding of the activity of bats using the building in the local landscape.

The current proposals, to be submitted to Mendip District Council is understood to involve the conversion of the barn for residential use.

Table 1: Summary of results

Building reference	Presence/likely absence of roosting	Roost character	Recommendations for further survey and/or mitigation
B1 – Existing building	Likely absence	No roost identified.	No bats were recorded roosting within the structure and as such, there are no anticipated impacts on roosting bats. No further surveys or mitigation is required. However, site enhancements are recommended.

1.0 Introduction and Context

1.1 Background

Quantock Ecology were commissioned by Mr. Joseph Willmott to undertake a suite of emergence and activity surveys at 28 Kirlegate, Meare. The assessment is informed by the Bat Conservation Trust publication: *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, J, (ed.), 2016).

The Preliminary Roost Assessment, undertaken in June 2022 by Quantock Ecology suggested B1 provided a moderate habitat value for roosting bats, with some suitable habitat noted on the building suitable for crevice dwelling species.

1.2 Aims and Objectives

This report provides a description of the bat activity observed and recorded during each survey, notably the egress and entrance points on the building; the numbers and species of bats using the roosts; and the type and levels of activity in and around the roost sites. The aim of the assessment was to determine the presence or likely absence of roosting bats and to gain an understanding of how bats (if present) use the building. The objectives of the surveys were to gain an understanding of the species, numbers and access points, roosting locations, timing of use and type of roost.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform any mitigation and enhancement measures. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve Planning or other statutory consent, and to comply with wildlife legislation.

1.3 Scope of the Report

Survey plans are presented in Appendix 1, showing the location of each surveyor and the bat activity observed and recorded during each survey; site plans showing the proposed development will be shown in Appendix 2 upon receipt and a summary of relevant legislation can be found in Appendix 3. This report should be read in conjunction with the Preliminary Roost Assessment, (Quantock Ecology, 2022).

1.4 Site Context

The site is situated to the west of the village of Meare, Somerset. The village comprises low density housing with connected gardens containing scattered trees. The local landscape surrounding the village is predominantly a mixture of arable and pastoral farmland, bordered by mature hedgerows and Rhynes. Substantial areas of woodland are lacking within the wider landscape; however several orchards are present around the fringes of the local villages. The River Brue runs ~460m north of the site at its closet point. Large wetland areas connected by a network of Rhynes are found ~1km south and ~1.5km north of the site. Connectivity to and from the site into the wider landscape is present; mostly in the form of the residential gardens surrounding the site, leading to mature tree heavy hedgerows and Rhynes.

1.5 Project Description

This report is prepared to accompany a planning application to be submitted to Mendip District Council. It is proposed that the existing building will be converted for residential use. The plan showing the proposed works is included in Appendix 2. The programme for the scheme is yet to be confirmed.

All works areas, storage and haul routes will be included within the site boundaries; access will be provided by existing roads and as such, no additional working footprints are anticipated.

2.0 Methodology

2.1 Site Survey

2.1.1 Surveyors and weather conditions

The surveys were undertaken and overseen by Assistant Ecologist Ella Colenso, BSc (Hons) Licence number: 2022-10564-CL17-BAT. Also present were experienced surveyors Jess Grimbley BSc (Hons), MSc and Jeremy Pidgeon.

Weather conditions for each survey are shown in Table 2 below.

Table 1: Weather conditions during surveys

Date of survey	Weather conditions at start of survey	Weather conditions at end of survey
01/08/2022 (Dusk)	Temperature: 20°C Humidity: 77% Cloud Cover: 100% Wind speed: 0/8 Precipitation: None	Temperature: 19°C Humidity: 85% Cloud Cover: 60% Wind speed: 0/8 Precipitation: None
05/09/2022 (Dawn)	Temperature: 15°C Humidity: 98% Cloud Cover: 0% Wind speed: 0 Precipitation: None	Temperature: 13°C Humidity: 99% Cloud Cover: 0% Wind speed: 0 Precipitation: None

The survey methods were informed by the Preliminary Roost Assessment (PRA), which identified potential roosting and access points on the building. One building was subject to survey; two surveyors were used to provide sufficient coverage of all suitable structures on site. The location of each surveyor during each survey is shown in Appendix 1.

2.1.2 Timing

The dates and times of each survey are shown in the table below.

Table 2: Survey schedule, dates and times

Reference	Suitability	Survey date	Sunset/sunrise time	Survey start time	Survey end time
B1	Moderate	01/08/2022	20:57	20:40	22:30
B1	Moderate	05/09/2022	06:30	05:00	06:45

2.1.3 Equipment

All surveyors utilised high powered torches, an echo meter touch (EMT2 Pro) connected to an apple iPad. Two-way radios were also used to communicate between surveyors across the site.

2.2 Limitations

This survey follows best practice guidance to confirm presence/absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the structures and trees, and site as a whole, by bats, at all times cannot be established based on this information.

No site-specific limitations were noted during the surveys, which were undertaken during the optimal survey season.

3.0 Results

3.1 Survey Results

3.1.1 Presence/absence and roost characterisation surveys

Building B1

No bats were recorded emerging from or re-entering the building during either of the surveys. Foraging and commuting activity was recorded across the site; notably around the garden to the south of the site. The dawn survey confirmed the residential building to the south of the site is a confirmed roost for a single soprano pipistrelle, however this is off site.

This information is shown on the plans in Appendix 1 and in tables 4 and 5.

Table 3: Summary of survey results, Survey Date: 01/09/2022

Surveyors: A: Ella Colenso B: Jess Grimbley			
Survey Date: 01/09/2022			
Building reference	Surveyor and Position	Start Time – End Time	Brief summary of passes and behaviour observed
B1 - Existing building	Surveyor A, (located southwest of the building)	20:40 – 22:30	Unseen noctules <i>Nyctalus noctula</i> were recorded frequently throughout the survey from 21:18 until the final pass at 22:01. At 21:26 and 21:28 noctules flew southeast to northwest, high over the site. Soprano pipistrelles <i>Pipistrellus pygmaeus</i> were recorded flying south to north to the west of B1 at 21:20 and 21:32. Further soprano pipistrelles were recorded foraging around the garden to the south of B1 from 21:33 until 21:36, flying west along the southern elevation of B1 at 21:38 and passing unseen at 22:10 and 22:21. Unseen serotines <i>Eptesicus serotinus</i> were recorded at 21:31 and 21:44 and them occasionally from 22:02 until 22:16. Serotines were also recorded passing across the garden to the south of B1 at 21:34, 21:35 and 21:48. Common pipistrelles <i>Pipistrellus pipistrellus</i> commuted past the western elevation of B1 at 21:32, 21:36 and 21:43. Unseen common pipistrelles were recorded occasionally from 21:58 until 22:12 while unseen myotis bats <i>Myotis sp.</i> passed as 22:05 and 22:20. No bats were recorded emerging from B1 during the survey.
B1 - Existing building	Surveyor B, (positioned north of the building)	As above	The first bat recorded was a common pipistrelle flying south to west past B1 at 21:21. This was followed by an unseen common pipistrelle recorded at 21:33. Two soprano pipistrelles were recorded foraging around the north of B1 from 21:35 until 21:40 before a final unseen pass at 22:11. Unseen noctules were recorded occasionally from 21:34 until 22:01.

Table 4: Summary of survey results, Survey date: 05/09/2022

Surveyors: A: Ella Colenso C: Jeremy Pidgeon			
Survey Date: 05/09/2022			
Building reference	Surveyor and Position	Start Time – End Time	Brief summary of passes and behaviour observed
B1 - Existing building	Surveyor A, (located southwest of the building)	05:00 – 06:45	The first bats recorded were unseen Leisler's bats <i>Nyctalus leisleri</i> passing at 05:08 and 05:17. Soprano pipistrelles passed unseen at 05:37 and 06:07. Further soprano pipistrelles were recorded commuting south across the southern garden at 05:52 and 05:54 and foraging around the southern garden from 06:08 until one re-entered under a hanging tile on the southwest corner of the main residential dwelling to the south of B1 (off site). Common pipistrelles were recorded foraging around the south and west of B1 at 05:48, passing north and south past the barn at 05:51 and 05:54 and foraging around the southern garden from 05:55 until 06:06. No bats were recorded re-entering the building B1 during the survey.
B1 - Existing building	Surveyor C, (positioned north of the building)	As above	The first bat recorded was an unseen Myotis species passing at 05:06. This was followed by an unseen noctule at 05:09 before an unseen serotine was recorded at 05:17. At 05:37 a soprano pipistrelles was recorded but not seen. At 05:41 a common pipistrelle flew north past the building before common pipistrelles could be seen foraging occasionally around the southern garden from 5:49. Long-eared bats were recorded flying west to east along the road to the north of the building at 05:50 before an unseen pass at 05:53. No bats were recorded re-entering the building B1 during the survey.

4.0 Conclusions and Impact Assessment

4.1 Conclusions

The main conclusions of the PRA and emergence surveys undertaken at this site are described below. One building was surveyed, following recommendations made in the PRA. No bats were recorded roosting within the existing building (B1) during the survey. During the PRA a single, very old bat dropping was identified within the building. However due to the lack of activity recorded, in addition to no new evidence of bats identified within the building during an inspection prior to the dusk survey, it is assessed that this dropping is representative of a historical, exploratory visit from a bat, and that no bats are currently utilising the structure as a roost. Foraging and commuting activity was recorded particularly around the garden to the south of the building.

4.2 Impact Assessment

No bats were recorded present roosting within the building and as such, there are no impacts anticipated on the species. Bats are protected under the Wildlife and Countryside Act and Conservation Regulations; see Appendix 3 for a summary of legislation protecting bats in the UK.

4.3 Recommendations

4.3.1 Mitigation

There is a likely absence of roosting bats within the existing building (B1). As such, no mitigation measures are required. However, if bats are found during any stage of the development, work should stop immediately and a suitably qualified ecologist contacted to seek further advice. Careful consideration should be given to any future lighting across the site. Foraging and commuting activity was recorded around the garden to the south of the site. As such, the lighting of this area should be maintained as close to current conditions as possible. Any future lighting should be kept to a minimum, and in line with guidance produced by the Bat Conservation Trust and Institute of Lighting Professionals: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>.

4.3.2 Enhancements

The installation of a single Schwegler 1FF or 2FN bat box could be considered and erected on the proposed dwelling or any suitable trees on site. This should be installed facing a southerly direction and approximately 3-5m above ground level. Such bat boxes would provide additional roosting habitat for bats present within the local area.

5.0 Bibliography

- Barn Owl Trust (2012) Barn Owl Conservation Handbook, Pelagic Publishing, Exeter.
- British Trust for Ornithology (2016) www.bto.org/about-birds/nnbw/putting-up-a-nest-box
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendices

Appendix 1: Survey Plan



Appendix 2: Proposed Site Plan

To be added upon receipt.

Appendix 3: Legislation and Planning Policy related to bats

LEGAL PROTECTION

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young
 - (ii) to hibernate or migrate
 - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

Effect on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant statutory authority (e.g. Natural England) will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008)

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

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