



Dunscombe Farm, Cheriton Fitzpaine, Devon EX17 4JU

Mr. & Mrs. David Fox

Bat Survey – Emergence and Activity Surveys

01/08/2022

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Executive Summary

Quantock Ecology Ltd. undertook a suite of emergence and activity surveys of an existing bungalow located at Dunscombe Farm, Cheriton Fitzpaine, Devon EX17 4JU on the 20th May, 10th June and 1st July 2022. A loft inspection was also undertaken on the 10th June 2022 before the second dusk survey. The aim of the assessment was to determine the presence or likely absence of bats and if present, characterise the roost including species, numbers and levels of activity. The surveys will also identify entrance and egress points, and gain an understanding of how the roosting bats use local landscape surrounding the building.

The development proposals briefly comprise the demolition of the existing bungalow and the erection of a new dwelling.

Table 1: Summary of results

Building reference	Presence/likely absence of roosting	Roost character	Recommendations for further survey and/or mitigation
B1 – Existing Bungalow	Confirmed roost	Occasional summer day roost for a single common pipistrelle <i>Pipistrellus pipistrellus</i> . Occasional summer day roost/transitional roost for a low number of brown long-eared <i>Plecotus auritus</i> bats (confirmed by eDNA analysis).	An application for a European Protected Species Mitigation Licence (EPSML) will need to be submitted and approved by Natural England, in order for the works to proceed. Due to the small number of common species present, the site is suitable to be registered by an approved consultant, under the low impact bat mitigation class license system.

1.0 Introduction and Context

1.1 Background

Quantock Ecology were commissioned Mr. Stephen Talling (Steve Talling Consulting Ltd) on behalf of Mr & Mrs David Fox, to undertake a suite of emergence and activity surveys at a bungalow, referred to within this report as 'B1' which is located on Dunscombe Farm, Cheriton Fitzpaine, Devon EX17 4JU. An internal inspection of the building, including the loft space was also made, using a torch and ladder. 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 September 2021 by Quantock Ecology Ltd, suggested that B1 is a confirmed bat roost, due to the number of droppings identified within the loft.

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 current site layout and proposed development are presented in Appendix 2. Proposed mitigation will be outlined in Appendix 3 once final plans have been received and a summary of relevant legislation can be found in Appendix 4. This report

should be read in conjunction with the Preliminary Roost Assessment, Quantock Ecology Ltd (November 2021)

1.4 Site Context

The site is located at National Grid Reference SS 885 062 and comprises an area of approximately 0.01ha. There is one building (B1) within the survey boundary.

The site is situated ~1.2km west of the village of Cheriton Fitzpaine, Devon. The local landscape is dominated by what appears to be predominantly pastoral farmland, all bordered with mature hedgerows. Small patches of woodland and hedgerows, with an abundance of mature trees are found within the landscape. The closest area of woodland is found ~420m northeast. A single small pond is found ~450m northwest of the site. A small stream is noted ~330m south of the site.

Connectivity to and from the site into the wider landscape is present; mostly in the form of the mature tree heavy hedgerows around the site.

1.5 Project Description

This report has been prepared to accompany a planning application, to be submitted to Mid Devon District Council. It is proposed that the existing dwelling (B1) will be demolished, and a new house built within the current footprint. Plans showing the proposed development had not been received by Quantock Ecology at the time of writing this report. However, these can be included in Appendix 2 upon request, once received. 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 Alex Bridel, BSc (Hons) AMRSB. Alex is an ecologist with over 4 years' experience working with bats. Natural England Class Licence number: 2021-10022-CL17-BAT. Also present was experienced bat surveyor Phillip 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
20/05/2022 (Dusk)	Temperature: 12°C Humidity: 66% Cloud Cover: 30% Wind speed: 2/8 Precipitation: None	Temperature: 9°C Humidity: 78% Cloud Cover: 30% Wind speed: 1/8 Precipitation: None
10/06/2022 (Dusk)	Temperature: 15°C Humidity: 80% Cloud Cover: 70% Wind speed: 1/8 Precipitation: None	Temperature: 14°C Humidity: 87% Cloud Cover: 100% Wind speed: 1/8 Precipitation: None
01/07/2022 (Dawn)	Temperature: 11°C Humidity: 96% Cloud Cover: 50% Wind speed: 0/8 Precipitation: None	Temperature: 10°C Humidity: 96% Cloud Cover: 40% Wind speed: 1/8 Precipitation: None

The survey methods were informed by the Preliminary Roost Assessment (PRA), which identified potential roosting and access points on B1 and bat droppings within the loft. Due to the presence of bat droppings and a number of potential roosting areas and suitable access points, it was necessary to carry out further surveys. Two surveyors were used to provide sufficient coverage of B1, 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	20/05/2022	21:02	20:45	22:35
B1	Confirmed	10/06/2022	21:27	20:12	23:00
B1	Confirmed	01/07/2022	05:05	03:30	05:20

2.1.3 Equipment

Both surveyors utilised high powered torches and echo meter touch (EMT2 Pro) detectors connected to an apple iPad or android device. 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 structure, 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 was undertaken during the optimal survey season.

3.0 Results

3.1 Survey Results

3.1.1 Presence/absence and roost characterisation surveys

Building 1

A total of one individual common pipistrelle bat was recorded emerging and re-entering near the centre of the ridge line during the second dusk survey (10/06/2022) and dawn survey (01/07/2022) respectively. Droppings found within the loft void of the building also confirm the presence of brown long-eared bats (confirmed by eDNA analysis). Low levels of foraging and commuting activity were recorded across the site; mostly from common pipistrelle foraging within the garden surrounding the B1

This information is shown on the plans in Appendix 1 and in tables 4, 5 and 6.

Table 3: Summary of survey results, Survey Date: 20/05/2022

Surveyors: A: Alex Bridel B: Philip Pidgeon			
Survey Date: 20/05/2022			
Building reference	Surveyor and Position	Start Time – End Time	Brief summary of passes and behaviour observed
B1 Existing Bungalow	Surveyor A, (located on the southwest corner observing the west and south elevations)	20:45 – 22:35	The first bat recorded was a passing common pipistrelle <i>Pipistrellus pipistrellus</i> , noted flying from northwest over the building then to the south at 21:28. Unseen common pipistrelles were recorded passing at 21:32 and 21:58. Common pipistrelles were recorded passing west to east at 21:40 and east to west at 21:47.
B1 Existing Bungalow	Surveyor B (located on the northeast corner observing the north and east elevations)	As above	A single common pipistrelle was recorded passing over the building towards surveyor A at 21:28. Further unseen passes of common pipistrelles were recorded at 21:40, 21:47 and 21:48.

Table 5: Summary of survey results, Survey Date: 10/06/2022

Surveyors: A: Alex Bridel B: Philip Pidgeon			
Survey Date: 10/06/2022			
Building reference	Surveyor and Position	Start Time – End Time	Brief summary of passes and behavior observed (text in bold refers to emerging bats)
B1 Existing Bungalow	Surveyor A, (located on the southwest corner observing the west and south elevations)	20:45 – 22:35	The first bat recorded was a common pipistrelle emerging from the center of the ridgeline on the southern elevation of B1 at 21:58. The bat flew off west. Unseen common pipistrelles were recorded passing at 22:03 and 22:50. Brief foraging activity of common pipistrelles was recorded at 22:12, 22:18 and 22:25. A single noctule was recorded passing at 22:12. A single unidentified myotis <i>Myotis</i> sp. was recorded passing northwest past the western gable of the building. The final bat recorded was a common pipistrelle passing south along the western elevation of B1 at 22:33.
B1 Existing Bungalow	Surveyor B (located on the northeast corner observing the north and east elevations)	As above	The first bat recorded was an unseen long-eared bat passing at 21:56. Unseen common pipistrelles were recorded passing at 22:00 and 22:24. A common pipistrelle was recorded foraging within the garden to the east of B1 until 22:11. A single unseen noctule <i>Nyctalus noctula</i> was recorded passing at 22:19. A single common pipistrelle was recorded foraging within the garden to the north of B1 from 22:18 until ~22:20.

Table 6: Summary of survey results, Survey Date: 01/07/2022

Surveyors: A: Alex Bridel B: Philip Pidgeon			
Survey Date: 01/07/2022			
Building reference	Surveyor and Position	Start Time – End Time	Brief summary of passes and behaviour observed (text in bold refers to emerging bats)
B1 Existing Bungalow	Surveyor A, (located on the southwest corner observing the west and south elevations)	20:45 – 22:35	The first bat recorded was an unseen passing common pipistrelle at 03:56. An individual common pipistrelle passed west between the surveyor and the building at 04:36. A single common pipistrel was recorded re-entering into the center of the southern side of the ridge line at 04:55. The bat was seen circling the garden to the south of B1 before re-entering.
B1 Existing Bungalow	Surveyor B (located on the northeast corner observing the north and east elevations)	As above	Common pipistrelles were recorded passing unseen at 03:56 and again at 04:36.

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 (B1) was surveyed, following recommendations made in the PRA.

B1 has been proven to support roosting bats, the surveys have confirmed that a single bat was observed emerging/re-entering on two of the three surveys and therefore the roost can be characterised as an occasional summer roost for a single common pipistrelle bat, with the bat roosting within the centre of the ridgeline of the building. Droppings found within the loft space of B1 during the initial PRA confirmed (by eDNA analysis) the presence of brown long-eared bats *Plecotus auritus*. A low number of droppings were present, however no long-eared bats were recorded emerging from the building or roosting within the loft space during the initial PRA and subsequent loft check on the 10th June 2022. As such, it is assessed that a low number of brown long-eared bats use the building as an occasional summer day roost or as a transitional roost. The building is considered very unlikely to be in use as a maternity or hibernation roost.

4.2 Impact Assessment

As the proposals involve the complete demolition of B1, the bat roosts will be destroyed. This would result in a contravention of legislation protecting bats, and a European Protected Species Mitigation Licence issued by Natural England is required to ensure legal compliance.

Bats are protected under the Wildlife and Countryside Act and Conservation Regulations; see Appendix 4 for a summary of legislation protecting bats in the UK.

4.3 Recommendations

4.3.1 Mitigation

The surveys undertaken to date in and around B1 provide sufficient information to inform a European Protected Species Mitigation license (EPSML). An EPSML will be required to enable the proposed works to be undertaken on this building lawfully, whilst ensuring the maintenance of the populations of the species concerned at a favourable conservation status in their natural range; detailed mitigation will be described in the EPSML Method Statement.

Natural England's *European Protected Species Guidance: How to get a licence* states: "In order to obtain a licence to allow for the capture of EPS, damage or destruction of breeding sites, etc., in advance of any otherwise legitimate activity which may impact on the favourable conservation status of the EPS concerned, you must demonstrate that the damage will be adequately compensated for to satisfy Regulation 53(9)(b)". Current Natural England advice is that there should be no net loss in the local population status of the species concerned, taking into account factors such as population size, viability and connectivity. Hence, when it is unavoidable that an activity will affect an EPS population, the mitigation should aim to maintain a population of equivalent status on or near the original site".

The survey efforts undertaken to date, confirm that 'Duncombe Farm' can be a registered, under Natural England's Low Impact Bat Mitigation Class License system, by an approved registered consultant.

As such, mitigation will include soft stripping of the building under supervision by the registered consultant and the creation of suitable roosting sites within the proposed new building. This will be in the form of a Schwegler 2F Universal Bat Box (or equivalent) to be placed on the proposed dwelling. A Schwegler 1FR Bat Tube will also be placed within an exterior wall of the proposed building. These should be installed facing a southerly direction, approximately 3-5m above ground level away from any artificial lighting.

Careful consideration should be given to any future lighting across the site. Bats were observed using the gardens to the north and south of the building for foraging and commuting. As such, the lighting of these areas 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 at least one Schwegler 1FF or 2FN (or similar woodstone) bat box will also be required; erected on the existing dwelling or any suitable trees on site. This should be installed facing a southerly direction, approximately 3-5m above ground level. Such bat boxes would provide additional roosting habitat for bats present within the local area. The box(es) would also provide a location to place any bats found during the supervised removal of the roof structure of B1 once the mitigation licence has been approved.

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: Proposed Mitigation

To be added upon receipt of final plans.

Appendix 4: 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.

Appendix 5: eDNA analysis Results



RESULTS

SAMPLE REFERENCE	CLIENT REF	DNA CONCENTRATION	BARCODE SIGNAL	READS QUALITY	CONTROL
BAT22005_DA002	Dunscombe Farm	10.5 ng/µl	Passed	57.3 %HQ	Passed

All controls performed as expected.

CONCLUSIONS

The results indicate bat species identification in the samples corresponding to the following project samples:

SAMPLE REFERENCE	CLIENT REF	COMMON NAME	ORGANISM	GRADE SCORE (%)
BAT22005_DA002	Dunscombe Farm	Brown Big-Eared Bat	<i>Plecotus Auritus</i>	100.0%

The Grade Score is a weighted score for the result comprised of:

- the E-Value (the number of times one can "expect" to see the result by chance when searching a database of a particular size),
- the Pairwise Identity (the percentage of pairwise residues that are identical in the alignment),
- and the Query Coverage (the percentage of the query sequence covered by the result).

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