



Bat Survey - Emergence and Activity Surveys

Ashgrove House, Shawbridge Street, Clitheroe, Lancashire BB7 1LZ

Diane Green

Status	Issue	Name	Date
Draft	1	Jo Gregory BA (Hons) MSc GradCIEEM, Senior Consultant	21/06/2018
Reviewed	1.1	Chris Formaggia BSc (Joint Hons) CBiol CEnv MCIEEM MRBS VR - Principal	22/06/2018
Final	2	Jo Gregory BA (Hons) MSc GradCIEEM, Senior Consultant	22/06/2018

Arbtech Consultant's Contact details:

Jo Gregory BA (Hons) MSc GradCIEEM
Senior Consultant

Tel: 07748275573 Email: jg@arbtech.co.uk

Arbtech Consulting Ltd
<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named Client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Executive summary

Arbtech Consulting Ltd. undertook a suite of emergence and activity surveys on Ashgrove House, Shawbridge Street, Clitheroe, Lancashire BB7 1LZ on 15th June 2018. The aim of the assessment was to confirm the presence/likely-absence of a bat roost and to provide a current status on all survey features.

This includes providing evidence for species, numbers and levels of activity, to identify any entrance and egress points, and to gain an understanding of the activity of bats using the site in the local landscape

The development proposals are to re-roof and insulate the existing 1970s extension. A planning application has been submitted to Ribble Valley Borough Council.

Recommendations

Survey feature / Roost type	Recommendation
B1 – No roost confirmed	No bat roost confirmed in B1. Bats are very unlikely to be roosting within B1 and as such, there are not anticipated to be any impacts on bats as a result of the proposed works. In the highly unlikely event that bats are unexpectedly found during any stage of the development, work should stop immediately and a suitably qualified ecologist should be contacted to seek further advice. Enhancements of the site for bats have been recommended.

For full justification of these recommendations, please go straight to section [4.0 Conclusions, Impacts and Recommendations](#). Otherwise, the full report starts below.

Contents

1.0 Introduction and Context	5
1.1 Background	5
1.2 Site Context	5
1.3 Scope of the report	5
1.4 Project Description	6
2.0 Methodology	6
2.1 Desk Study methodology	6
2.2 Site Survey methodology	6
2.3 Surveyors	7
2.4 Survey Timings and Weather Conditions	7
2.5 Limitations – evaluation of the methodology	8
3.0 Results and Evaluation	9
3.6 Survey Results	9
4.0 Conclusions, Impacts and Recommendations	10
4.1 Informative guidelines	10
4.2 Evaluation	10
5.0 Bibliography	11
Appendix 1: Survey Plan	12
Appendix 2: Proposed Site Plan	13
Appendix 3: Legislation and Planning Policy related to bats	14

1.0 Introduction and Context

1.1 Background

Arbtech were commissioned by Diane Green to undertake a suite of emergence/re-entry and activity surveys at Ashgrove House, Shawbridge Street, Clitheroe, Lancashire BB7 1LZ. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

This survey was completed following recommendations made in the Preliminary Roost Assessment Survey report (Arbtech Consulting Ltd. May 2018).

1.2 Site Context

The site is located at National Grid Reference SD 74755 41679, and comprises an area of approximately 0.1ha. There are two buildings within the site boundaries. One building was surveyed as this will be affected by the proposed development.

1.3 Scope of the report

This report provides a description of the bat activity observed and recorded during the survey. The aim of the assessment was to characterise any roosts present including species, numbers and access points, roosting locations, timing of use and type of roost, and to gain an understanding of how bats use the site.

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 mitigation and enhancement. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve planning permission, and statutory consent to comply with wildlife legislation.

To achieve the aims of the assessment, the following steps have been taken:

- A desk study has been carried out including a request for information from Lancashire Environment Record Network - please refer to the Preliminary Roost Assessment Survey report (Arbtech, May 2018)
- A field survey has been undertaken, including an external survey and internal inspection.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on European Protected Species Mitigation Licensing if appropriate.

A survey plan is presented in Appendix 1 showing the location of each surveyor and the bat activity observed and recorded during each survey, the proposed plan is included in Appendix 2 (where available), and a summary of relevant legislation can be found in the Appendix 3.

1.4 Project Description

This report is prepared in support of a planning application that has been submitted to Ribble Valley Borough Council. The proposed development is described as: The re-roofing and insulating of the existing 1970s extension. The proposed site plan is included in Appendix 2 (where available).

2.0 Methodology

2.1 Desk Study methodology

Existing bat records relating to the site and a surrounding 2km radius (the study area) are required to conform to national guidelines and these were requested from Lancashire Environment Record Network. A review of the landscape structure using aerial images from Google Earth and OS maps, and designated sites, habitat and granted EPSL records held on Magic.gov.uk was completed to inform the PRA Survey. Please refer to the Preliminary Roost Assessment Survey report (Arbtech, May 2018).

2.2 Site Survey methodology

The survey methods were informed by the Preliminary Roost Assessment Survey completed by Arbtech Consulting Ltd (May 2018). This survey identified the following survey requirements in line with best practice:

B1: This building has a low likelihood of supporting roosting bats. One bat emergence survey is required during the active bat season (May – September) to determine the presence/likely absence of bat roosts. This survey should be completed during the optimal survey period mid-May to August inclusive. The survey can be either a dusk emergence or dawn re-entry survey. Two surveyors are required to provide full coverage of the building. If bat roosts are confirmed two further surveys will be required to inform a European Protected Species Mitigation Licence application to Natural England.

The surveys involved surveyors positioned around the building ensuring that all elevations and roof sections could be clearly observed. Particular attention was paid to the areas of the building identified as providing suitable access points to bat roosts. The location of each surveyor during each survey is shown in Appendix 1. Each surveyor was assigned an area of the building to observe for the duration of the survey. Surveyors used Heterodyne and Frequency Division bat detectors, and Wildlife Acoustics EM3+ and Echo Meter Touch detectors connected to iPads. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required. That is, the Echo Meter Touch includes an Auto ID bat species, however this is not 100% accurate and further post-survey sound analysis is often required to confirm species misidentified by the Auto ID software during the survey. Surveyors also used survey record sheets, pens/pencils, head torches for recording all activity observed during the surveys including foraging and commuting behaviour as well as emergence/re-entries by bats. Surveyors equipped with night vision binoculars and/or thermal imaging equipment are identified by “NV” or “ThIm” in Table 7. All surveyors had hand held radios for communication between surveyors to assist with confirming obscure bat activity e.g. a bat emergence or a bat passing over the building.

In accordance with the latest bat survey guidelines (Collins, J. 2016) dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility. Dawn re-entry surveys commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

Surveys were completed during optimal weather conditions i.e. when temperatures were above 10°C, with no rain or strong winds, as these environmental variables can impact upon bat emergence and foraging behaviour.

2.3 Surveyors

The lead surveyor is Jo Gregory (Natural England Bat Licence Number: 2015-11994 CLS-CLS) and was assisted by one other surveyor during the visit, both surveyors have several years of bat survey experience. Two surveyors were used to provide sufficient cover of the building during the survey. The designated position of each surveyor during the survey is detailed in the tables in Section 3.6 below, and shown on the plan in Appendix 1.

2.4 Survey Timings and Weather Conditions

The dates and times of each survey are presented in Table 1, along with sunset/sunrise times as applicable and the weather conditions at the start and end of each survey.

Table 1: Survey schedule and weather conditions

Reference	Survey date	Survey Start and End Times Sunset/sunrise time	Weather Conditions Start	Weather Conditions END
B1	15/06/18	21:15 – 23:00 Sunset: 21:42	Temp: 18.5°C Humidity: 50% Cloud Cover: 20% Wind: 0.0mph Rain: None	Temp: 9.3°C Humidity: 79.5% Cloud Cover: 40% Wind: 0.0mph Rain: None

2.5 Limitations – evaluation of the methodology

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 building, and the site as a whole by bats, at all times cannot be established based on this information.

There were no specific limitations to the survey.

3.0 Results and Evaluation

3.6 Survey Results

The results of the survey are provided in the tables below.

Table 2: Survey results – Dusk Emergence Survey

Date		15/06/18
Start and End Times		21:15 – 23:00 Sunset: 21:42
Surveyor (position) As shown in Appendix 1		Jo Gregory (NV) - Natural England Bat Licence Number: 2015-11994 CLS-CLS (Position 1 – observing the northeast roof structure of B1) Liz Neale – professional bat surveyor with over 6yrs experience of conducting these types of surveys (Position 2 – observing the southeast roof structure of B1) NB: As both surveyors were positioned quite close together the same bat activity was recorded and therefore the survey results have been combined.
Building Reference	Surveyor Position	Notes/observations:
B1	1 & 2	Pass with foraging activity by two common pipistrelles from 22:05 to 22:28 with the bats foraging above the trees to the south of B1. Pass by a common pipistrelle at 22:13 flying through the garden in front of B1 from southwest to northeast. Pass with chasing behaviour by two common pipistrelles at 22:16 flying around the tree canopy from the southwest heading east. Pass with foraging activity by a common pipistrelle at 22:20, 22:21 and 22:24 each time flying from northeast to southwest through the garden and over B1. Foraging activity by a common pipistrelle at 22:24 flying around the tree canopy behind B1. Pass by a common pipistrelle at 22:26 flying from the trees heading west along the front of B1. Pass by a common pipistrelle at 22:29 flying from the southwest through the garden heading northeast. Pass by two common pipistrelles chasing each other at 22:30 flying from the southwest across the garden, into the neighbouring garden to the northwest foraging around the ivy growth on the building to the northwest of the site then returned to the neighbouring garden to forage. Pass by a common pipistrelle at 22:38 flying from the northwest through the garden heading northeast. Pass by a silent pipistrelle (not echolocating) at 22:46 flying from the southwest around the garden then turned northwest. Fast distant pass by a common pipistrelle at 22:50 bat not seen but direction of echolocation calls indicated the bat was flying along the tree line next to the southeast site boundary. Foraging activity by a common pipistrelle at 22:55 bat not seen but direction of echolocation calls indicated the bat was foraging above the tree canopy of the tree line next to the southeast site boundary. No further activity.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

The surveys undertaken to date in and around B1 provide sufficient information to inform a planning decision. A European Protected Species Mitigation Licence (EPSML) **will not be required** to enable the proposed works to be lawfully undertaken. Appropriate justification for this assessment is provided in Section 3 and Table 2 of this report.

4.2 Evaluation

Taking the desk based assessment and site survey results into account, the following recommendations are reached for each site survey feature.

Table 5: Evaluation of building on site

Ref	Survey assessment conclusions (Type of bat roost present)	Foreseen impacts	Recommendations / Mitigation	Enhancements
B1	No roost confirmed	No bat roost confirmed in B1. Bats are very unlikely to be roosting within B1 and as such, there are not anticipated to be any impacts on bats as a result of the proposed works.	In the highly unlikely event that bats are unexpectedly found during any stage of the development, work should stop immediately and a suitably qualified ecologist should be contacted to seek further advice.	The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99 The site can be enhanced for the common pipistrelles observed to be foraging and commuting across the site during the survey by installing of a minimum of two bat boxes on mature trees within the garden (e.g. the two large beech trees) e.g. 2F Schwegler Bat Box or 1FF Schwegler Bat Box. Box Bat boxes should be positioned 3-5m above ground level facing in a south/south-westerly direction with a clear flight path to and from the entrance. Bat boxes should also be positioned away from any artificial light sources.

5.0 Bibliography

- 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?
- Google Earth (2018).
- Magic database (2017) <http://www.magic.gov.uk/MagicMap.aspx>.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1: Survey Plan



Appendix 2: Proposed Site Plan

Not applicable: re-roofing works only

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 2010 (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)

Emergence and Activity Bat Surveys

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.