

Bat Emergence Report

Land to the North of the Elms, Darland Lane, Rossett
Prepared for: Teqniqa Systems

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CLS-CLS)

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1. Introduction

1.1 Site description, location and context

The client proposes a change of use of a building formerly used for storing equipment for the Darland Golf Club to a workshop/office/research and development building. Pre-application consultations were held with Wrexham County Borough Council (ENQ/2017/0211, 24 November 2017, Philip Forster) whom confirmed an ecological report would be required to support a formal planning application. A Preliminary Ecological Appraisal was carried out 04.04.2018 commenting in relation to bats as follows:

The building has a low potential to hold bats. The study area is suitable for foraging bats due to the presence of grassland, trees, nearby ponds.

1.2 Purpose, aims and objectives of this report

The Preliminary Ecological Assessment (07 06 18) indicates:

“A bat emergence survey on the building is required in order to demonstrate absence / presence within the building”.

The purpose of this report is therefore to establish use of the building for bats by means of one dusk emergence survey. This survey shall be carried out at the identified points of potential entry or shelter for bat species identified in the PEA. We shall aim to establish absence or presence on the development site in reference to the use of the building by bats. The objective of the report is to be able to assess the bat use in the building, the impact of construction and any applicable mitigation measures in relation to the extent and use of the site by bats.

2. Methods

2.1 Summary of survey methods

The BCT January 2016 good practice survey guidelines shall be used to design and inform the survey effort with particular regard to section 7.1 page 49-52. The BCT guidelines recommend a minimum survey effort for buildings with low potential to support roosting bats of one dusk emergence and / or one pre-dawn re-entry survey. Therefore, one dusk emergence survey was undertaken on the Tuesday 6th July 2018 commencing at 21.15, sunset at 21.38 and the survey finished at 23.15.

During the survey two surveyors were positioned to observe potential roost features identified in the PEA. The survey was undertaken in good weather conditions; dry, still, wind little wind, Start temp: 20oC / end temp: 18oC and during the optimal season for bat activity.

Generally the surveyors record weather and all bat activity including the number of bats emerging / passes, species detected, behaviour for example feeding or commuting, flight direction and any relevant comments. Each surveyor used an Echo Meter Touch and a BatBox Duet/Elekon detector. There were no weather or HS related constraints and all bats were detectable with the equipment used.

2.2 Pre Survey data search

The LRC (COFNOD) have a confirmed numerous bat species records within the 1km study area for the PEA.

2.3 Surveyor information

Simon Brain (Managing Director) has attained a Post Graduate Certificate in Biological Recording and has attended FSC Field Courses for Land mammals, Songbird identification, Barn Owls (CIEEM) and Advanced Bird Survey Techniques (Level M). He has four years experience in bat and avian work. He has accumulated over 450 hours of bat contact time and holds an NE Class 2 license (70619:OTH:CSAB:2016) and NRW70619:OTH:CSAB:2016. He has attended courses for trees and bats, bat survey techniques, mitigation and handling and attended three european workshops. Steven Shell has three years experience of bats having attended advanced survey techniques, handling and undertaken hibernation visits and has recently applied for a class 2 NE bat license.

3. Emergence Survey - Results

3.1 Dusk emergence results

Surveyor positions

Simon Brain was positioned at station A and Steven Shell was positioned at B.

Emergence survey summary

No bats were seen to emerge from the building and it was considered that bats and bat roosts were absent from the building during the survey.

Two bat species was recorded on the site (Common Pipistrelle and Noctule species). The first bat record was made at 22.15 by a commuting Common Pipistrelle. The pipistrelle species were observed during the survey commuting east to west and west to east on the northern but particularly the southern site boundaries using the existing hedge as navigation aids with occasional foraging. Up to 10 visual records were made of commuting pipistrelle bats. Noctule records were occasional and showed no particular commuting route preference and only occasional passes over the site itself.

Detailed survey records

Simon Brain Surveyor position south east of building

22.12 Noctule pass visual over adjacent field from west
22.15, 45KHz C pipistrelle, commuting east to west on hedgerow
22.21, 46KHz common pipistrelle, no visual
22.22 45KHz x2 C Pip commuting over hedge to south of building
22.22 Noctule pass over site
22.27, 46KHz C pipistrelle, no visual but feeding.
22.29, 46KHz C pipistrelle, foraging, few visuals and commuting along hedge
22.33 46KHz C Pip commuting and feeding along hedge
22.38 46 KHz C Pip pass over and along hedge west to east
22.45 46KHz C pipistrelle, no visual but feeding.
22.56 46KHz C pipistrelle, no visual but feeding.
23.12 46KHz C pipistrelle, no visual

Steven Shell Surveyor north west of building

22.10-22.17 Several (3) Noctule pass over adjacent field from west
22.25, 46KHz common pipistrelle, no visual
22.27 45KHz C Pip commuting northern site boundary
22.29 Noctule pass over adjacent field

22.33 46KHz C Pip commuting and feeding over site and adjacent land
22.38 46 KHz C Pip pass over site
22.44 46KHz C pipistrelle, no visual
22.56 46KHz C pipistrelle, no visual
23.09 46KHz C pipistrelle pass and feeding buzz

4. Constraints and legislation

4.1 Constraints on survey information or equipment

It was considered that no constraints were applicable and all areas of potential roost feature and or bat related interest were adequately viewed.

4.2 Potential impacts of development

All UK bat species and their roosts (occupied or unoccupied) are legally protected and demolition of a roost site is a criminal offence.

4.3 Legislation and Policy guidance

All bats are European Protected Species as defined by Bern and Bonn Conventions, Conservation of Habitats and Species regulations 2010, Habitats Directive Annex 4, some are also Annex 2.

All bats are protected by domestic legislation including Schedule 5 of the Wildlife and Countryside Act 1981 as amended, CROW and NERC Act 2006.

5. Recommendations and mitigation, compensation and enhancement measures

5.1 Further survey effort

In relation to the existing building and in accordance with the BCT good practice guidelines February 2016 absence of bats has been established by means of the emergence survey and therefore further surveys are not required.

5.2 Mitigation, compensation and enhancement measures

No bats were recorded in the building and therefore no measures are required to mitigate the effects of development on bats in this instance or to compensate for their presence. No roosts were identified during the emergence survey and therefore no EPS license is required for development to commence.

Enhancement measures

There is no loss of any roost type on the site and no roosts were discovered on survey. The site is being used for regular commuting and feeding. Specific mitigation for loss of foraging and commuting routes is not required. Under the National Planning Policy Framework 2012 and the NERC Act 2006 there is a requirement to improve existing environment through enhancement.

It is considered that the bat activity on this site comes from bats navigating the sites trees and hedgerows, particularly those on the southern site boundary which are unaffected by development and located behind the building / footpath. Therefore development proposals can maintain the existing ecological connection between the site and the locality. However new planting is to be introduced native tree and shrub planting plan is preferred. Species of local provenance are recommended in preference to non-native, ornamental species. Planting of tree and shrub species that support a high insect biomass and provide a potential food source for bats throughout the bat activity period (spring to autumn) such as rowan, silver birch, alder buckthorn, dogwood, crab apple and wild plum are recommended.

Research has found that lighting can cause considerable disturbances to bats and may interfere with bat navigation during nocturnal commuting flights to suitable feeding sites. It is recommended by the Bat Conservation Trust and Institute of Lighting Engineers that lighting at ground level should be below 3

Lux (BCT & ILE 2008). The site was found to be largely unaffected by lighting and the redevelopment will seek to ensure that lighting will be appropriately designed to ensure minimal light spill, particularly on the southern vegetated boundary of the site. This could be achieved by:

- Ensuring lights are only erected where they are needed, illuminated only during the time period that they will be used, and at levels that enhance visibility.
- Using narrow spectrum bulbs, to lower the range of species affected by lighting, and avoiding the use of light sources that emit ultraviolet.
- Ensuring that there are no bare bulbs or lights that point upwards.
- Ensuring that the spread of light is kept near to or below the horizontal plane.
- Reducing the height of the lighting columns since light at a low level reduces ecological impact.
- Ensuring only low level lighting that is as directional as possible is provided and that light emitted from these fixtures is below 3 lux at ground level.
- LED lighting, ideally amber LED (bat-lamps) that have a negligible UV component may be a preferred option since these show a low insect attractiveness comparable to low pressure sodium lamps and they are more directional, thus reducing light spill
- Where possible, external lights should comprise sensor activated lamps) so that lights are only operational when they are needed.
- Avoiding the illumination of habitat features used by bats, notably the boundary tree and linear hedgerows.

5.3 Mitigation licenses

In relation to the development there are no requirements for mitigation licensing as there is no requirement for anyone to carry out activity prohibited under wildlife legislation.

6. Summary

- 6.1 No bats were found to emerge from the building. As a result no measures are required to mitigate the effects of development on bats and there is no requirement for an EPS license (derogation or low impact) from Natural England in this instance.
- 6.2 Provision shall be made for the use of native tree and shrub planting on the site. A lighting plan that maintains the existing and suitably lit arrangements on the southern boundary is required.