Sutton Cottage, Endon
Update Bat Survey

August 2016

Dunelm Ecology
consultant ecologists

Contents

1 Introduction

1.1 Background

1.1.1 Mr and Mrs Pennington propose to convert a Grade II listed barn adjacent Sutton Cottage, Endon into residential accommodation. Planning permission for the proposed development was granted by Staffordshire Moorlands District Council on 27 July 2016 subject to a number of conditions being discharged including condition 3 which states:

1.1.2 *'Prior to the commencement of development there shall be submitted to the Local Planning Authority (LPA) a detailed Ecological Construction Method Statement (ECMA) supported by further appropriate bat survey as necessary in order to plan the work to accord with the latest published Bat Conservation Trust Guidelines and Natural England requirements and which as a minimum sets out seasonal timing of works and working methods as well as providing appropriate roosting sites in the completed development and the development shall be implemented in accordance with the ECMA as approved in writing by the LPA unless subsequently amended by a Natural England European Protected Species (EPS) Licence in which case the work shall be implemented in accordance with the EPS Licence'*.

1.1.3 **Reason**: *To ensure that the development proceeds with appropriate protection and safeguard for European Protected Species*.

1.1.4 This report has been prepared by Dunelm Ecology Ltd and is submitted to discharge the above planning condition. This report presents the results of an update bat survey carried out in summer 2016 and outlines what measures will be undertaken to protect bats and maintain the favourable conservation status of the local bat population. For context, the current report should be read in conjunction with the 2012 and 2014 reports which were produced in support of the original planning application (Dunelm Ecology Ltd 2012, 2014).

2 Methods and Approach

2.1 Field Survey

2.1.1 Update bat surveys of the barn were undertaken following methodologies prescribed in English Nature's *Bat Mitigation Guidelines* (Mitchell-Jones 2004) and the Bat Conservation Trust's: *Bat Surveys Good Practice Guidelines* (Collins 2016); further details of which are provided below.

Daytime Inspection Survey

2.1.2 An inspection of the barn was carried out during daylight hours on 2 August 2016 The survey involved systematically searching the exterior and interior of the building for bats and their field signs with the aid of ladders, endoscope (SnakeVision), close-focusing binoculars (Opticron Countryman BGA 8x42) and a powerful torch (Clulite 1M candle-power). Such signs may include insect remains, droppings, grease marks, urine stains and smoothing or lack of cobwebs.

Dusk Emergence Survey

2.1.3 A dusk emergence survey was carried out on 2 August 2016. The surveys focused on parts of the building where evidence of bats had been found during the inspection survey (Dunelm Ecology Ltd 2015). The surveys aimed to record bats exiting the building and started 15 minutes before sunset and ended up to 90 minutes after sunset. Surveyors were positioned in strategic locations to ensure that potential roosting features could be viewed clearly. The surveys were undertaken using time expansion (Pettersson D240X) and frequency division (Batbox Duet) detectors coupled with automated devices (Anabat Express) to record bat calls for subsequent sound analysis. The time of exit and the number of bats and species (if identifiable) were recorded; whilst any bat activity in the general area was also noted.

2.2 Survey Constraints

2.2.1 The surveys were undertaken at an optimal time of year under favourable weather conditions while access was possible to all parts of the site. As such, no significant constraints are associated with the survey.

Table 1 Summary of Bat Survey Times and Weather Conditions

Survey	Date	Timings	Weather
Dusk emergence	02/08/2016	20:44 – 22:30 (sunset 20:59)	19-18°C, dry, calm, 90% cloud cover.

2.3 Personnel

2.3.1 The update survey was undertaken by Jon Guarnaccio and David Watts both of whom are licensed bat ecologists.

3 Results

3.1 Daytime Inspection Survey

3.1.1 The results of the 2016 update survey are very similar to those of the 2012 and 2014 surveys with approximately 12 fresh brown long-eared bat droppings recorded on the barn floor within the centre of the building, directly below the ridge beam. A solitary brown-long eared bat was also recorded roosting against the ridge beam close to the north east gable of the barn. In contrast to the previous surveys, no evidence of pipistrelle spp. bats was recorded inside the barn. There have been no significant changes to the condition or appearance of the barn since the 2014 survey.

3.2 Dusk Emergence Survey

3.2.1 Low numbers of common pipistrelle bats were recorded foraging around the barn from 21:02 onwards suggesting the presence of a roost nearby given the close proximity to sunset. A common pipistrelle bat was observed flying into the barn at 21:19 via an open window on the northern elevation before emerging through the same window a few minutes later (this may explain why pipistrelle spp. droppings have previously been found in the barn). A brown long-eared bat was also recorded emerging from the same window at 21:13 (presumably the same bat observed inside the barn), the bat flying low and hugging the sides of the building before flying over the hedge on the south side of the barn.

4 Discussion

4.1 Assessment

4.1.1 Taking into account the results of the 2016 update survey, it is considered that the results and conclusions of the 2012 and 2014 assessments remain valid – i.e. that the barn continues to be used by low numbers of non-breeding brown long-eared bats. As discussed in the 2012 report it is considered highly unlikely that the building is used as maternity roost site as such roosts typically display numerous (clustered) droppings and several bats are often seen or heard, especially during summer when all surveys have been undertaken. Taking this information into account, the value of the site to bats and the impact assessment remains unchanged from that presented in the 2012 protected species survey report (Dunelm Ecology Ltd 2012). Similarly, the mitigation strategy remains the same and this is detailed below. Implementation of these measures should ensure that bat legislation is not infringed and the conservation status of the local bat population is maintained therefore complying with local planning policy.

4.1.2 As a low impact scheme concerning one roost site of a common species, the works would qualify for Natural England's Bat Low Impact Class Licence (BLICL). Such licences take only ten working days to obtain as opposed to at least 30 working days for standard EPS licenses. However, they cannot be applied for more than three months in advance of works commencing and all works must be completed within six months while survey data must be less than one year old.

Timing of Works

4.1.3 Despite there being no major timing restrictions where summer non-breeding roosts are concerned, it is possible that pipistrelle spp. and brown long-eared bats may hibernate in the rubble-fill walls of the barn. As a precautionary measure, it is recommended that works affecting the walls of the building (i.e. re-pointing and installation of new windows/doorways) take place outside the hibernation period which lasts from 1 November to 31 March inclusive.

Sensitive Working Methods

4.1.4 It is recommended that renovation works affecting potential roosting features (i.e. wall crevices and the roof) are carried out under the supervision of the BLICL holder. Before work starts, two Schwegler 2F bat boxes should be installed with the adjacent barn which would be retained. The bat boxes would be sited approximately 3 - 4 m above ground level and remain on site permanently. In the event of a bat being encountered during the soft strip, the bat would be left to disperse of its own accord, or if torpid, placed within one of the bat boxes by the licensed bat ecologist. Builders and contractors would be prohibited from handling bats.

4.1.5 Prior to works commencing on the walls of the barn, it is recommended that a bat ecologist carefully examines all internal and external crevices with an endoscope to ensure that no bats are present. Providing crevices can be thoroughly examined and no bats are found, the features should be blocked with newspaper to prevent bats entering in the future.

4.1.6 In the event of bats or signs of bats being found, one way exclusion valves would be placed over roost exit/entry points allowing bats to exit but not re-enter. These may vary in their design, according to the physical properties of the gap being sealed, but are likely to comprise acetate sheets or plastic bags with the bottom half cut away and secured by duct tape. These devices would have a minimum length of 400 mm to reduce the risk of bats re-gaining entry. This process should preferably take place between April and October inclusive when bats are active. At other times of the year, bats may be hibernating deep within the rubble fill and risk going unnoticed. Exclusion devices would be left in place for at least four consecutive nights when night time air temperatures are 8 ºC or above.

4.1.7 It is advised that roof timbers and boarding are treated by hand-brush during the winter months, using a permethrin or cypermethrin based product. Such compounds are not toxic to bats once dry.

Roost Retention and Creation

4.1.8 As discussed above, there are numerous access points into the rubble fill walls of the barn. It would not be possible to retain internal crevices but external recesses extending over 100 mm deep would be kept as roosting habitat by inserting rolls of paper or wooden battens into existing crevices and pointing around these. The battens/paper rolls would then be removed before the mortar fully dries; ensuring that access points into the rubble fill are retained and bats are not entombed.

4.1.9 On completion of the works, a suitably experienced and licensed bat ecologist would inspect the mitigation measures provided and personally supervise any amendments should they be required.

4.2 Conclusions and Residual Impacts

4.2.1 The development proposals would result in the loss of a relatively low status brown long-eared bat roost site. Overall, the impacts are assessed to be of low magnitude, and they would not affect the conservation status of the local bat population, particularly following implementation of the mitigation measures. A Natural England BLICL would, however, need to be obtained to ensure that the development does not infringe bat legislation.

5 References

Collins J (2016). *Bat Surveys Good Practice Guidelines*. Bat Conservation Trust, London.

Dunelm Ecology Ltd (2014). Update *Bat Survey Report*. Unpublished report.

Dunelm Ecology Ltd (2012). *Bat Survey Report*. Unpublished report.

Mitchell-Jones AJ (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.