FOLLOW-UP BAT EMERGENCE AND ACTIVITY SURVEYS TO BARNS AT GROBY LODGE FARM GROBY LEICESTERSHIRE

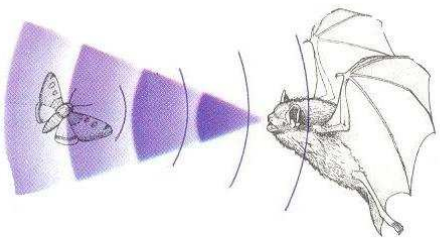
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SUMMARY

This report has been prepared by BJ Collins - Protected Species Surveyor for Thomas Taylor Planning Limited on behalf of the site owner Mr. J Barker.

The survey site was focussed upon the slate roofed brick built barns labelled as Buildings J and M in the plan in Appendix 1. These are the only barns to have been found to support roosting bats, from surveys dating from 2004.

Building J was found to support a roost of Brown long-eared bats in 2006. The status of the roost at that time was a maternity colony of 41 brown long-eared bats making the roost of local conservation significance.

The survey was commissioned to update the status of the two buildings to inform the renewal of lapsed Planning Permission at the express request of Natural England, as Statutory Consultees.

The survey comprised a bat scoping survey and two bat emergence and activity surveys.

Both Building J and Building M were supporting roosting bats during the 2011 surveys with a combined total of seven bats counted during the 16th June survey. There were three bats recorded in Building J alone during the first emergence survey on the 11th May 2011.

The 2011 work has confirmed the assessment of the winter 2008 scoping survey in that the population has declined in this building significantly with a peak of 7 bats compared to 41 in 2006.

The determination and conclusions of all of the surveys since 2006 remains valid. Buildings M and J are legally defined bat roosts and subject to the full protection of The Conservation of Habitats and Species Regulations 2010. The development of these two barns will have to proceed under a European Protected Species (EPS) Licence.

The buildings are also used by breeding swallows; as a result the development will be constrained by the timing of the nesting season.

1. INTRODUCTION

Background

1.1 B J Collins - Protected Species Surveyor was commissioned by Thomas Taylor Planning Limited on behalf of the site owner Mr. J Barker to undertake a bat activity and emergence survey in the peak of the active season to assess Building M and Building J on the Groby Lodge Farm holding for use by bats.

1.2 The farm complex is situated in countryside to the northwest of the village of Groby at grid reference SK 504 077.

1.3 This report details the results of the follow-up survey of the Groby Lodge Farm completed in the summer of 2011. It follows up on a bat scoping survey completed on the 21st February 2008, a bat scoping and activity survey on the 22nd August 2006 and the initial bat scoping and activity survey completed on the 5th May 2004, on behalf of EMEC Ecology. All of these surveys have been completed by B J Collins.

Photograph 1 – Building J from the southeast.



Photograph 2 – Building M from the northwest



Proposed Works

1.4 There are no alterations proposed to the scheme that has already been permitted planning permission, approved in 2008 (Ref. 07/01477/COU). The scope of works is to convert the redundant farm buildings to office and light industrial use.

Survey Aims

1.5 The aim of the survey was to build upon the information from previous surveys and to provide the LPA with an updated status report on the bat roosts that inhabit the farm buildings.

Legislation

1.6 Legislation applicable to Bats

All species of British bat, their roosts and their habitat, are protected under British law by the Wildlife and Countryside Act 1981 (as amended). Bats are also classified as European Protected Species (EPS) under The Conservation of Habitats and Species Regulations 2010. This makes it an offence to kill, injure or disturb a bat and/or to damage or destroy a breeding site and/or resting place.

It is also an offence to disturb the animals such that it impairs their ability to survive; to reproduce; to nurture their young; or such that it impairs their ability to hibernate or migrate. It is an offence to disturb any bat in such a way as to significantly affect the local distribution or abundance of the species.

Under this legislation, development work that could affect a bat or bat roost and/or great crested newt or their habitat as described, can only be permitted under an EPS licence from Natural England.

Licences in respect of European Protected Species affected by development can be granted under Section 53(3) (e) of The Conservation of Habitats and Species Regulations 2010, for the purpose of preserving public health or public safety or other imperative reasons of overriding public interest, including those of social or economic nature and beneficial consequences of primary importance for the environment.

Under Section 53(9) of the Regulations licences can only be issued if Natural England is satisfied that:

- There is no satisfactory alternative to the work specification
- The action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

Natural England aim to process EPS licence applications within 35 working days of receipt.

1.7 Legislation applicable to Breeding Birds

Under the Wildlife and Countryside Act 1981 (as amended), all native birds and their nests, whilst in use, are protected from harm, disturbance or destruction during the breeding season. To avoid conflicts development work that could affect breeding birds should be timed for outside of the breeding season, variable between March and August. Note that a nest is protected from the beginning of its construction until the young have fledged and have left the nest.

SITE DESCRIPTION

2.1 Apart from a continued deterioration of the roof coverings of the traditional buildings on the farm there have been no significant changes between the two surveys to the two bat roost structures. The barns surrounding them have deteriorated and the roof coverings are missing from most.

2.2 *Buildings J - The two-storey barn.*
This is the largest of the traditional buildings on the site. It is a large barn constructed from three separate sections joined via a central passageway. It is constructed from solid brick walls and is covered with a slate roof. The eastern end section has been re-roofed in the past and is now lined with bitumastic underfelt. The other two sections have been re-roofed to the north only with a bitumastic felt underlining to the northern aspect and no lining to that of the south. The ground floor of the barn is accessed via a large double door to the centre of the south aspect. Access to the first floor is via a central stairwell. The first floor is divided into three separate areas by solid brick walls. The western and central rooms are open for storage; the eastern room contains access to a grain silo. The first floor areas are lit by four open windows to the southern boundary wall.

2.3 *Building M – The garages*
This building is constructed from solid brick and stone. It is covered with a slate roof on a timber frame. The building is underlined with roofing felt and has been re-roofed in the past, at some time before the new owner took residence in 1997. It comprises two attached buildings. The first is the garage and storage area accessed via doors on the northern aspect. The second is built on a lower level and is accessed via the southern aspect.

3. SURVEY METHODOLOGY

Bats – Building search, internal and external

3.1 The buildings were searched by an experienced, licensed bat worker (20110362).

3.2 As part of the follow-up survey the two buildings were searched in order to locate evidence of bats in the form of bats, droppings and feeding signs. Equipment utilised to assist in this survey included for a powerful torch (1,000,000 candlepower), a camera and binoculars. Access to inspect all internal and external areas was available. The follow-up survey was specifically assessing the change in the extent of evidence as compared to the last visit on the 21st February 2008 and as such referenced site photographs and previous field notes.

Bats: May/June emergence and activity survey

3.3 The principal element of this follow-up survey was to complete emergence and activity surveys for bats. The objective to establish if a maternity roost or a roost of several individuals was present and to determine the status for the bats roosting inside the two buildings.

3.4 To achieve the objective two surveyors watched the external elevations of Building J on the 11th May 2011. One at the western corner, one at the eastern corner. The surveyor with no bat emergence then covered the interior of Building M every 10 minutes to check for pre-emerging brown long-eared (*Plecotus auritus*) bats.

3.5 Internally Building J was monitored using remote night vision videos (Sony) supported by infrared floodlights (Sentient and Wheat). One was placed watching the western end of the first floor of the barn, there has been no roosting bats noted in this area previously, one watching the roost area in the central first floor section.

3.6 Externally the surveyors used bat detectors including an Anabat SD1, and a Batbox Duet bat detector with recordings to a Tascam DR-07.

3.7 The weather at the time of the study was dry but with clear skies. Wind was very light recorded at the start at Beaufort scale 0 to 1. Sunset on the evening was at 20.46 hours (Garmin). Ambient temperatures at the start of the survey interval were 13.3^{o}C.

3.8 A second emergence survey of Building J was completed on the 16th June 2011 with the express aim of identifying the bat access point into Building J, to inform the future mitigation plans.

Personnel

3.9 The follow-up bat scoping survey and the activity and emergence surveys were completed by Mr B J Collins MSc MIEEM assisted by Mr M Cook MSc AIEEM, Natural England license 20110707.

4. SURVEY RESULTS

Habitat Assessment

4.1 The search of Building M found a similar extent of evidence of bat use as that found in 2008 but less than that found in 2006. There were no aggregations of droppings found and no fresh dropping noted in any location.

4.2 The search of the first floors of Building J located a greater amount of evidence than that which was recorded in 2008. There was an even scatter of fresh droppings located under the ridge running through all three sections. This scattering was light but fresh with 10 droppings per square metre under the ridge.

4.3 On the stairs leading up to the first floor there was a dead brown long-eared bat, it is not unusual to find a dead bat in a regular roost area, as naturally the animals can die of old age, insufficient fat reserves to see out the winter or disease. There was no sign of any other trauma affecting this individual.

4.4 In the eastern end of Building J there remained the aggregation of old droppings found in 2008 alongside the dividing wall and below the ridgeboard on the platform.

4.5 In general there was, as recorded in the 21st February 2008 scoping survey, a lack of any aggregations of droppings in any area.

May Bat Activity and Emergence Survey

4.6 No bats were recorded emerging from Building M during the study and no bats were recorded flying internally.

4.7 A total of 3 brown long-eared bats were recorded inside the first floor area of Building J with activity mostly centred upon the eastern end room. There was no bat flying in the western void from the examination of the night vision video recordings.

4.8 The surveyor watching the broken window in the eastern gable wall observed the bats emerging from this area.

4.9 The surveyor watching the west and north elevations recorded no bats emerging.

4.10 Common pipistrelle (*Pipistrellus pipistrellus*) bats remained active in the area of the buildings throughout the survey.

June Bat Activity and Emergence Survey

4.11 In contrast to the results of the May survey there were two brown long-eared bats found inside Building M during the survey. The bats were observed after the emergence from Building J was completed and as such could have been bats entering this area from the main roost site opposite.

4.12 A total of 5 Brown long-eared bats were recorded inside the eastern section of the first floor of Building J. These were noted to leave from the open window. However a bat was also observed returning to the first floor area at approximately 22.20 hours via the opening above the extractor fan set above the former mill.

4.13 Again common pipistrelle bats were active in the area of the buildings throughout the survey.

5 CONCLUSIONS AND RECOMMENDATIONS

Bats – Findings and Implications

5.1 The same results were recorded by the 2011 activity surveys as were recorded in previous years with Building J and Building M supporting roosting brown long-eared bats. The assessment of the winter scoping survey of 2008 was verified by the suite of emergence and activity studies over 2011 with a significantly reduced roost size to that of 2006.

5.2 The number of bats present in 2011 suggests a small maternity roost of this species. It is also possible that Building J is now a secondary roost located close to the main maternity site. There are buildings with extensive roof voids in the immediate locality, but outside of the development search area, that offer support to this hypothesis.

5.3 The conversion of Buildings J and M will require a European Protected Species (EPS) Licence. This will require adequate mitigation for any loss of the roost.

5.4 The principal mitigation design from 2008 remains valid with two options potentially achieving adequate mitigation.

5.5 The first is to install a roof void within Building J, the two storey barn. This should measure 2.8 metres from the ridgeboard internally to the ceiling. The extent of this roof void should incorporate the entire central and eastern sections of the roofs of the barn. Bat access points will be required in this roof and the roofing materials will need to be one that is suitable for this species of bat, principally slate and bitumastic felt. The requirements for ventilating the roof timbers will need to reflect this specification. A low energy and low output roof heater should be installed within the central section of the roof void, the eastern end left as is with a small access created in the dividing wall between the two. Other construction details such as a double ridgeboard or adapted ridgeboard should be incorporated. The safest period for undertaking works is late September to late October when bats are active enough to re-locate to other roosts if disturbed and there are no dependent young.

5.6 The second option is to put aside the entire room void at the eastern end of the two-storey barn. The room containing the mill hopper. This should be permanently closed at the dividing wall with the windows adapted to allow bird and bat access and access for inspection and cleaning by the bat ecologist or local bat group as applicable. The roost heater detail should also be used in this instance.

5.7 To conclude the final design of this mitigation needs to be developed as an integral and essential stage of a European Protected Species licence submission.

5.8 The submission of an EPS Licence cannot be registered without full Planning Permission being granted. Any conditions relating to protected species must be fully addressed and satisfied before the licence submission will be assessed.

Breeding Birds – Findings and Implications

5.9 There were breeding swallows using the interior of both Building J and Building M. To ensure that there is no conflict with this and the conversion work it is recommended that the work is completed outside of the breeding bird season, March to September depending upon the species.

5.10 If works are likely to extend into this period then the window openings and gaps in doors should be closed (in consultation with the ecologist) and all doors left shut before the start of the active season of the year that development begins. This effectively provides a window between October and April to complete this action. All birds are protected under the Wildlife and Countryside Act 1981 (as amended) whilst breeding. This legislation protects nests, eggs and unfledged young from damage, or destruction.

APPENDIX 1: PLAN OF THE SURVEY AREA

