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PROTECTED SPECIES SURVEY

WOODLANDS FARM

GWERSYLLT, WREXHAM

NORTH WALES

FOR

Brookdale Consulting Ltd

30th July 2012

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1. INTRODUCTION

A preliminary bat and bird survey was undertaken on the 25th July 2012. The survey was carried out by David Bennett, a licensed and experienced bat surveyor and ecologist (CCW & Natural England licenses) following a request by Brookdale Consulting on behalf of their client. The survey was requested to satisfy planning requirements in respect of any protected species issues for outbuildings located at Woodlands Farm, Gwersyllt, Wrexham, North Wales. A planning consent is being sought to permit the conversion of the outbuildings into residential accommodation.

2. BAT BIOLOGY

There are now 17 species of bat in the UK, many of which can be found within this part of Wales. Each bat gives birth just once a year, early in summer, the females tending to gather together in a communal roost to give birth and bring up their young. This is the time when they are most likely to use buildings. By the end of the summer the roosts are often vacated for other more suitable hibernation sites such as caves, mines or trees. Hibernation sites are usually characterised by stable temperatures with a high level of humidity. When temperatures fall and food becomes scarce they hibernate and live off body fat stored during the autumn. During mild winters bats can still often be seen on an evening flying and looking for food. Bats use a variety of different structures for the purposes of roosting, these can include mature trees, caves, mines, buildings (old and new), bridges and tunnels.

Bats will generally cause no harm to buildings or the people that occupy the buildings. They can be very discreet and are often not noticed because of their preference to occupy tiny spaces, cracks and crevices in roof voids. Some species such as the brown long eared bat will utilise open loft areas for flying and moving around in. They will roost on bare exposed timber beams, typically beneath the ridge beam. The droppings produced are harmless (largely made up of insect fragments) and do not carry any disease although a very large roost can sometimes produce large quantities of droppings.

3. LEGISLATION

All of our species of domestic bat are protected under both UK and European legislation. In the UK they are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994. The Habitats Directive has recently been superseded by The Conservation of Habitats and Species Regulations 2010 which came into force on the 1st April 2010

To summarise it is illegal not only to intentionally kill, injure or take any bat but also too recklessly or intentionally damage, destroy or obstruct access to any place that a bat uses for shelter or protection, or to disturb a bat while it is occupying such a place. A roost is protected whether or not bats are present at the time. The reason for this is that bats have a tendency to remain loyal to certain roost sites, often over a long period of time.

The presence of a species protected under European or UK legislation is a material consideration when a planning authority is considering a development proposal which, if carried out would be likely to result in disturbance or harm to the species or its habitat. Section 74 (2) of the CroW Act 2000 (now updated by Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006 requires the publication of lists of habitats and species that are of principal importance for the purpose of conserving biological diversity. The list is regularly changed and updated and many bat species appear on it. NERC consolidates the requirements of the CroW Act in placing duties upon government agencies, including local authorities, to ensure the conservation of Biodiversity.

4. AIMS

The aims of the survey were:

1. To describe any evidence of protected species in the study area.
2. To assess the impact of converting the buildings.
3. To suggest mitigation measures as appropriate.

5. STUDY AREA

The site consists of a stone farmhouse (not part of the application) with a range of traditional farm buildings situated directly opposite the house. The surrounding habitat includes areas of semi-improved neutral grassland, wide uncut hedgerows and mature trees. The fields to the side and rear of the barns have not been cut or grazed and appear to be reasonably species rich.

The focus of this report is the stone/brick buildings which are situated directly opposite to the house. These are all incorporated in a single row with a small return forming an elongated L shape.

The buildings are constructed in a traditional manner with stone/brick walls supporting a timber framed roof covered with slates (no underfelt). The southern end of the buildings is lower but still supports a loft space while the remainder is two storey with a full size loft space. The northern end section (forming the return) although joined is separate from the remainder which are all joined internally.

The buildings are generally very light and well ventilated due to gaps in the ridge, holes in the walls and also open windows and doors. The buildings have missing sections of roof with holes as shown in the photos below. Therefore and as discussed they are also damp and exposed to rain penetration.

The site plan is shown in Appendix 1 and the photos are shown in Appendix 2.

6. METHODOLOGY

The buildings were subjected to an internal and external survey on the 25th July 2012; the weather conditions were warm, dry and clear. As much of the buildings as possible was searched (health and safety and access permitting) using a Cluson rechargeable lamp, a Seesnake endoscope (paying particular attention to the roof sections, ledges and any gaps in the stone/brickwork). A search was made for bat droppings, staining, odour, old skeletons and feeding signs (such as wing casings etc). Other evidence such as bird's nests and other signs of nesting birds was also looked for both internally and externally.

7. RESULTS

No evidence of bats was found anywhere inside or outside of the buildings. No droppings were apparent on the floor, roof and wall areas and there were no signs of feeding perches.

There are various stored materials in the buildings which appear to have been present for a long time (boxes, sacks, timber, etc). Any droppings from past roosting or feeding bats would normally be clearly visible on these surfaces when there has been little or no disturbance.

However and as discussed because of the state of the buildings it was not safe to walk within all of the first floor areas. They were accessed and viewed where a safe footing could be gained, the remainder was viewed from the ground floor by putting a ladder up and looking through the holes in the floor.

In general the buildings are not particularly attractive to bats because of high light levels, air flow and fluctuating temperatures. The internal timbers are mainly pitch pine and generally do not support features used by bats, many are also damp and decayed. The roof does not have underfelt and there are very few places which would be able to support roosting bats.

There are only a few cavities in the walls both internally and externally where a brick may have fallen out. Any potential cavities inside the barn which could be accessed were inspected with an endoscope along with any that looked suitable on outside (some missing bricks are just ventilation gaps). Nothing was found in any of the cavities at the time of the survey although birds have or are nesting in one or two of them.

8. CONCLUSIONS, IMPACTS AND MITIGATION FOR BATS

No evidence suggesting a bat roost has been found during this survey and for the reasons suggested is thought unlikely. However because the first floor areas cannot be fully accessed it is recommended that emergence survey work is undertake between the months of May and September. Wrexham Borough Council have a policy where 3 surveys are required for buildings with medium/high potential. This building in the surveyors opinion and based on previous experience only has low potential and would probably only be used as a transitional or night roost. It is suggested that one evening emergence survey should be undertaken using at least three surveyors and depending on the results of that survey discuss the matter with WBC.

As a general note, most buildings offer potential for over-wintering and seasonal occupancy for individual bats. This use can be sporadic during the season and actual presence through emergence surveys cannot be fully confirmed. It is therefore recommended that the following precautionary recommendations should be undertaken as good working practice during the conversion phase.

- **All roof tiles should be carefully removed by hand to ensure that no torpid or hibernating bats are injured during the proposed works.**
- **Door and window frames should be removed with care to ensure that no torpid or hibernating bats are injured during the proposed works.**
- **Structural members, lintel bearings, purlins or wall plates should be removed with care to ensure that no torpid or hibernating bats are injured during the proposed works.**
- **In the event that bats were found during the conversion then all work should cease and CCW (Mold office) and/or a licensed bat worker should be contacted for further advice.**

Depending on the results of the additional survey work the conversion of the buildings offers the opportunity to create and retain some bat friendly features. *Pipistrelle sp.* and other crevice dwellers such as *Myotis* bats will readily take to new and/or converted buildings as long as suitable access points and features are retained or created

To secure biodiversity enhancement in accordance with Welsh Assembly Government guidance TAN 5 it is suggested that the following features be included in the conversion to try and encourage bats to use the converted buildings.

Pictures of the examples are shown in Appendix 3.

- **Use traditional bitumen roofing felt rather than plastic membrane which bats have difficulty clinging onto.**
- **Install several of the ridge tiles using option A or B in the attached example to allow bats access to the spaces between the tiles and underfelt.**

- **Retain access to the space at the top of the walls/wall-plate under the eaves (as per the existing design), a 30mm gap should be available.**
- **If boxed soffits are proposed then slits can be cut as shown in the drawings below.**
- **Ensure all timber treatment is undertaken using chemicals shown to be safe for bats.**
- **Ensure any external lighting is low level and directional towards the ground.**

9. BARN OWLS & NESTING BIRDS

Barn owls *Tyto alba* are protected under Schedules 1 & 9 of the Wildlife and Countryside Act (amended by the CROW Act 2000); they are a species of conservation concern.

No evidence of barn owl (or any other species of owl) was found anywhere within the buildings at the time of the survey.

Evidence of nesting birds was found in most areas of the buildings including swallows on ledges and roof timbers (at least 20 nests are present so an important site), nests on wall ledges and elsewhere. House sparrows which are a declining species were seen in good numbers using the space above the wall plate and also elsewhere within the buildings.

Some form of mitigation will be required for the swallows because once converted there will no longer be anywhere left for them to nest on the site. They need to nest inside a building or under a car port/open garage or similar arrangement, external boxes/pouches are no good for this species.

In addition the buildings form important roost areas for house sparrows which are a species currently on the decline. The space created for bats under the eaves on top of the wall plate is suitable for sparrows. In addition at least four Schwegler 1SP sparrow terrace nest boxes should be installed on the north and north-west facing elevation.

All breeding birds are protected under Section 1(1) and 1(2) of the Wildlife and Countryside Act 1981, as amended. This makes it an offence to damage, disturb, or obstruct access to nests during the bird breeding season (generally March to August).

Swifts are a declining species and it is certainly possible that they nest in the area. Access is currently available under the eaves of the barns and this space should be retained post conversion as described above.

Care should be taken if undertaking any works during the bird nesting season to avoid any disturbance. If a nest was found (or in the course of being made) then all work should cease until the young have fledged. Particular care should be taken with swallows because they will often be present until well into September.

10. REFERENCES

BCT 2007 *Bat Survey Guidelines* London UK

English Nature 2002 *Bats in roofs: a guide for surveyors* English Nature Peterborough UK

Joint Nature Conservation Committee 2004 *Bat Workers Manual* JNCC Peterborough

Mitchell-Jones A J 2004 *Bat Mitigation Guidelines* English Nature Peterborough UK

Appendix 1 – Site plan



Appendix 2 – Site Photos

1. Overview of the site from the entrance



2. The brick building forming the return of the L shape



3. Front view of the main section



4. End and rear elevation



5. Example of the roof condition



6. Internal view showing collapsed roof timbers



7. High light levels



8. Again high light levels, high air flow and no underfelt



9. Missing roof tiles



10. Holes in the roof



Appendix 3 – Bat mitigation





