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PROTECTED SPECIES SURVEY

ALTHREY FARM, BANGOR ON DEE

WREXHAM, LL13 0DA

FOR

Mr & Mrs Shehab

17th September 2010

David Bennett MSc MIEEM

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1. INTRODUCTION

A preliminary ecological survey was undertaken on the 15th September 2010. The survey was carried out by David Bennett, a licensed and experienced bat surveyor and ecologist (CCW & Natural England licenses) following a request by Mr & Mrs Shehab. The survey was requested to satisfy planning requirements in respect of any protected species issues for a disused house situated at Bangor on Dee, Wrexham, North Wales. A planning consent is being sought to permit the renovation of the building into residential accommodation and offices.

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 renovating/converting the building.
3. To suggest mitigation measures as appropriate.

5. STUDY AREA

The site consists of a large detached house which has not been lived in for several years. The house is constructed in a traditional manner with load bearing brick walls with a pitched timber framed roof covered with slates (no underfelt). The house is in a state of disrepair with several broken windows, cracks in the walls, missing tiles - rain penetration has caused small amounts of damp and timber decay. Part of the house is two storey while the remainder is set on three floors, there is a small cellar accessed by an external doorway.

The surrounding habitat includes areas of improved grassland, hedgerows and mature trees. The River Dee lies approximately 250 metres north of the property; this site is designated as a Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI).

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

6. METHODOLOGY

The building was subjected to an internal and external survey on the 15th September 2010; the weather conditions were overcast and clear. As much of the building as possible was searched (health and safety and access permitting) using a Cluson rechargeable lamp, a Seesnake endoscope and a Petzl head torch (paying particular attention to the roof sections, ledges and any gaps in the 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

There are two attic areas, one above each section of the house, both have exposed timbers. The attic above the two storey section is the largest and most intact while part of the other attic is now exposed where the ceiling has collapsed. The roof was apparently in a poor condition and had several holes where tiles had fallen off; these have only just been fixed to make the building more watertight. Even now the roof is quite airy with light coming in from underneath loose tiles and other gaps. Some of the timbers showed evidence of rain penetration and damp although generally the roof is quite dry.

No evidence of recent use by bats was found anywhere in the roof voids. No droppings were apparent on any of the cobwebbed areas and there were no signs of feeding perches. A search underneath piles of old cluster flies near the ridge beam in the large void (above the two storey section) revealed a few very old looking droppings from the brown long eared bat. Although droppings can be difficult to age it was very obvious that these were many years old and it was clear that long eared bats are no longer present in this building. There is no underfelt and all areas of the roof beneath the tiles can be viewed to a good standard.

The various fireplaces throughout the house were viewed and there did not appear to be any evidence such as piles of droppings or dead bats which are sometimes found in these locations. The cellar was inspected (which is actually quite small compared to the size of the house) but no evidence was found to suggest any use by hibernating bats. The cellar is actually quite damp and at present is not really suitable as a hibernacula.

8. CONCLUSIONS, IMPACTS AND MITIGATION FOR BATS

No evidence suggesting bat use has been found during this survey and for the reasons suggested is thought unlikely and no further survey work is required. It therefore appears that there are no apparent issues relating to the proposed conversion/renovation in respect of bats at the present time. As outlined above it is often difficult to inspect every crevice or hidden section in a building (due to access or health and safety issues). In addition bats tend to be nomadic, which reduces the chances of finding bats on one or even several visits. This situation arises frequently when carrying out this type of survey. However, the survey has been completed to a good standard and it is not anticipated that any problems will occur. Carrying out the survey also puts in place demonstrable safeguards regarding the avoidance of illegal activities.

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/renovation phase.

- **At present it appears that the roof may not need replacing. However, if it does then the tiles should be 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.

The conversion/renovation of the building offers the opportunity to create 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 created. Brown long eared bats could be attracted to use the large open roof void above the two storey section by creating suitable points of access. Other features which they require such as rough sawn timbers and relatively uncluttered space already exists.

It is recommended that the following be included in the conversion to try and encourage bats.

- If at some point the roof needs to be replaced use traditional bitumen roofing felt rather than plastic membrane which bats have difficulty gripping onto. This only needs to apply to the two storey section as the attics in the three storey section may be extended into accommodation/offices.
- Install 300mm of mineral insulation between the joists at ceiling level.
- Install three or four of the ridge tiles using option A or B in the attached example to allow bats access into the roof void (on the two storey section).
- If roof ventilator tiles are required for the three storey roof (where the rooms will extend into the loft) cut out the internal mesh to allow bats to access the space between tile and batten.
- If possible leave a few gaps between the top of the walls and the roof; 20-30mm high and at least 100mm long. Cut a few slits in the timber to allow access to the internal box sections on underside of the roof overhang. (these gaps are good for swifts as well).
- Ensure any 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 owls (or any other species of owl) was found anywhere within the building.

Three swallow nests were noted within the small lean-to at the rear, also house martin nests under the roof overhang on the gable ends.

Several small gaps were noticed in the external brickwork of the house. It is very likely that these will be used during the nesting season by sparrows and possibly swifts. If any pointing or brickwork repairs are required during the summer months then care should be taken to ensure that any nest sites are not accidentally blocked or disturbed.

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).

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.

It will not really be possible to mitigate for the loss of swallow nest sites because of the nature and design of the property and there are no suitable outbuildings which can be used. In respect of house-martins they can still continue to use the overhangs on the gable ends.

10. REFERENCES

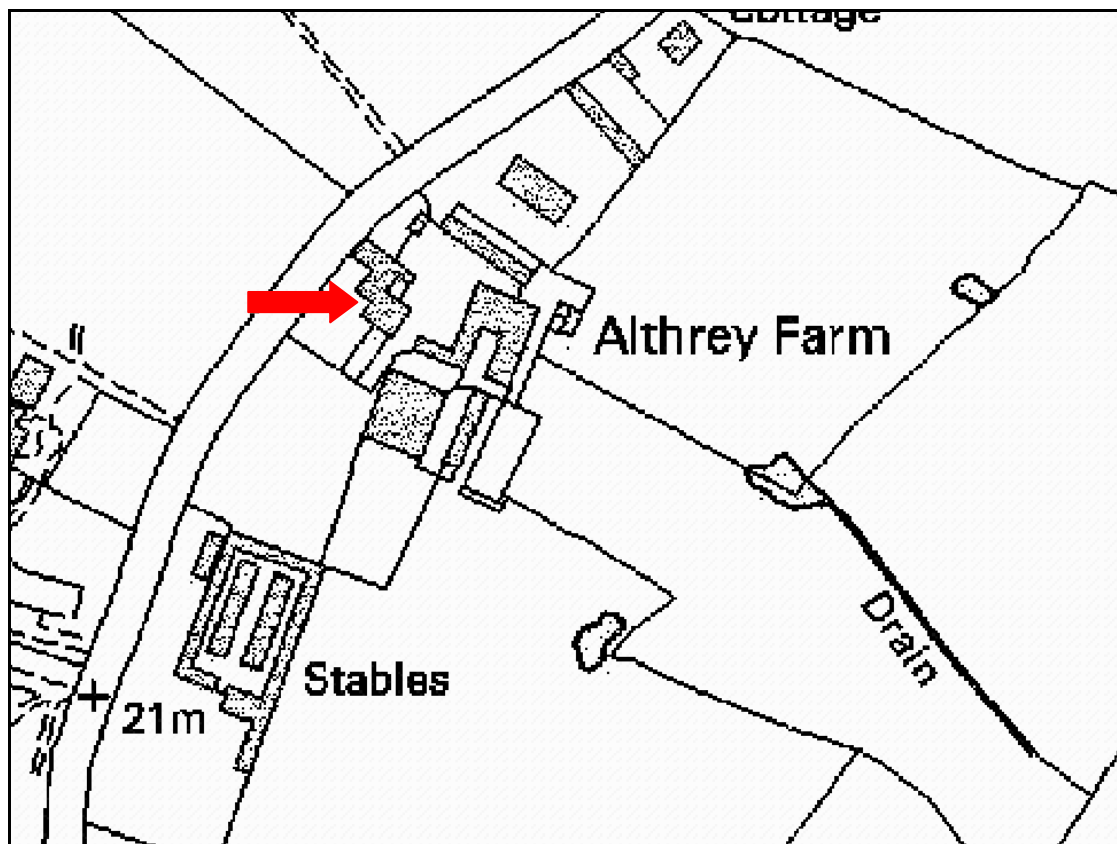
BCT 2007 *Bat Survey Guidelines* London UK

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. Three storey section where the ceiling has collapsed – the roof void in this section will be converted



2. Two storey section on the right where the roof void/attic will remain



3. Rear elevation



4. Rear elevation – swallows have used this former toilet



5. Main entrance



6. Hole next to the door leads into the cellar – ventilation panel is absent



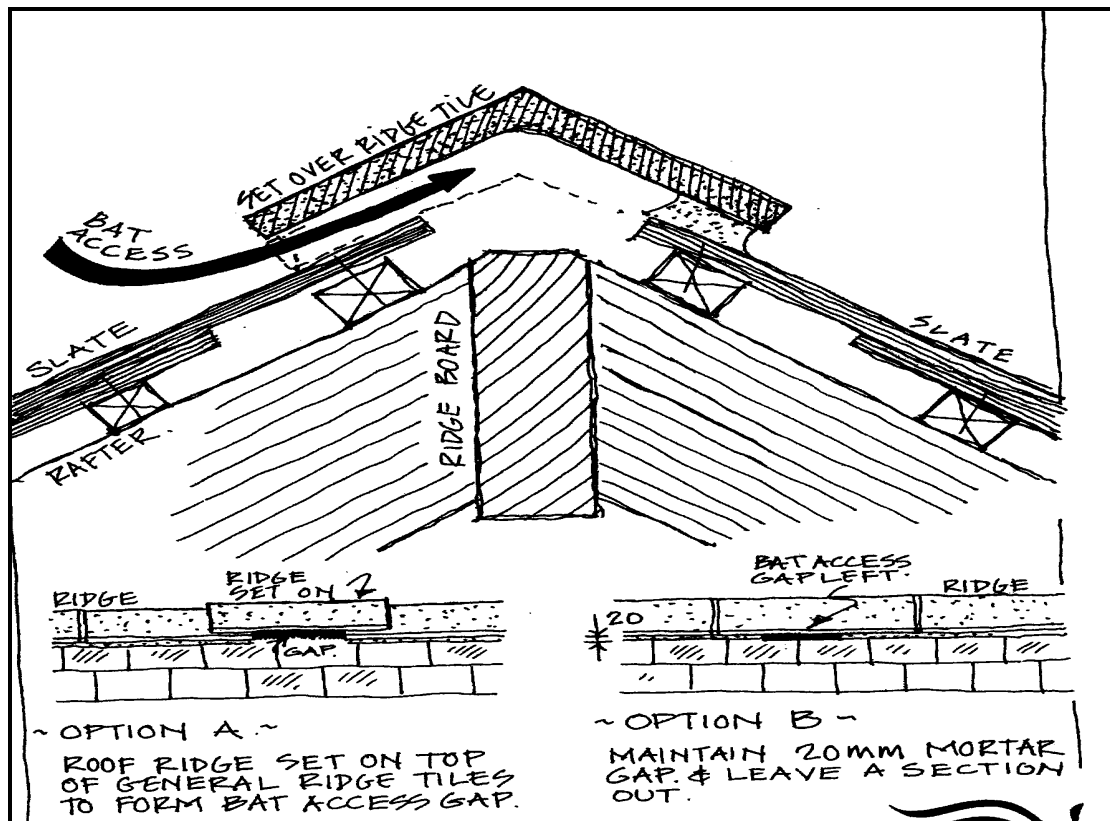
7. Ceiling which has collapsed



8. Overhangs on gable ends which are used by house martins



Appendix 3 – Bat mitigation



Morris style bat slates

