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PROTECTED SPECIES SURVEY

BROOKSIDE COTTAGE

GARTH, LLANGOLLEN

NORTH WALES

FOR

Mr S Boulton-Oliver

31st January 2022

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1. INTRODUCTION

A preliminary protected species survey (bats and nesting birds) was undertaken on the 26th January 2022. The survey was carried out by David Bennett, a licensed and experienced bat surveyor and ecologist (Natural Resource Wales S089663 & Natural England licenses) following a request by the current owners of the property. The survey was requested to satisfy planning requirements in respect of any protected species issues for Brookside Cottage, Garth, Llangollen, North Wales. A planning consent is being sought to permit some alterations to the property including removal of the small outbuilding and construction of a new side extension in its place.

2. BAT BIOLOGY

There are now 17 species of bat (breeding) 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 been superseded by The Conservation of Habitats and Species Regulations 2017.

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 tend 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. The Environment (Wales) Act 2016 (Section 6) Biodiversity and resilience of ecosystems duty states that “A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions”.

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 carrying out the proposed works.
3. To suggest mitigation measures as appropriate.

5. STUDY AREA

The site consists of the detached cottage with a small stone outbuilding at the side and areas of garden. The property is located within a small rural community surrounded by open countryside with trees, hedgerows and fields.

The cottage has been constructed in a traditional manner with stone walls supporting a pitched and timber framed roof covered with slate. The roof has recently been replaced by the previous owner just prior to purchase (two Velux windows were also installed at the same time). The fascias and soffits are all new and have just been replaced by the current owner, internally there is currently no ceiling although this will be replaced in due course.

The small stone building in front of the cottage has a timber framed roof with a metal sheet roof with no insulation.

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 26th January 2022, the weather conditions were dry and clear. As much of the building as possible was searched (health and safety and access permitting) using an LED rechargeable lamp, a Seesnake endoscope (paying particular attention to the roof sections, ledges and any gaps or cavities). 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

Cottage

No visible evidence of bats was found, no droppings were apparent and there were no signs of feeding, staining, marking etc. The upper floor/open roof area was inspected, nothing was found, no droppings on the roof timbers, walls, floor or on any of the numerous stored materials.

The roof has recently been completely replaced by the previous owner along with the ridge tiles and the inclusion of two Velux windows. The roof area is now completely sealed with intact mortar below the slate edge on each gable end.

The fascias and soffits have all just been replaced and in most areas they are sealed and tight to the wall, including the south-east gable end where the new extension is proposed. There are a few gaps on the rear and also on the other end of the cottage where the walls slightly undulate which would allow access into the box cavity.

The walls are well pointed with no large gaps or deep cavities on all four elevations and the stone will be left exposed (no rendering is proposed). The two chimneys are well sealed with intact lead flashing with no gaps (all relatively new).

Stone building

No evidence of bats was found in this building, no droppings, feeding remains, marks or stains. The interior is all exposed with a metal sheet roof and all areas including the tops of the walls at eaves level can be viewed. The walls are well pointed and there are no visible holes or cavities.

In respect of the cottage, it has a new roof which is all well sealed and intact with no visible points of access into the inner roof structure. All the mortar below the slate edge on the gable ends is sealed with no gaps. There are a few gaps around the edges of the soffits at the rear and on the end west elevation, the ones on the front are well sealed and tight to the wall. These gaps do offer potential for bats but the works are now complete and no further disturbance is planned. There are also two well-made bat boxes on the south-east gable elevation (where the extension is proposed) but these will also remain as they are with the new extension coming in at a slightly lower level as shown on the plans.

The small stone building in front of the cottage has a negligible potential for bats due to the roof being open with no loft, metals sheets with no insulation and walls with no large gaps or cavities.

8. CONCLUSIONS, IMPACTS AND MITIGATION FOR BATS

No visible evidence of bats was found within the cottage although the gaps on the rear and side elevation fascia/soffits are suitable for bats. The bat boxes on the south-east gable end are also likely to be used by bats. However, the new extension will not disturb or have any direct impact upon these areas so there would seem little point in carrying out further emergence survey work. The inclusion of bat boxes and creation of the soffit gaps already mitigates for crevice dwelling bats. An additional two Beaumaris midi bat boxes will be installed on the front south-west facing elevation to provide additional bat roosting habitat (as shown on the plan below). The Velux windows on the new extension will have blinds fitted to them to remove any extraneous light.

The small stone building is open internally and all areas can be viewed with no evidence of bats and a negligible potential. In this particular case no additional survey work is thought to be required for this small building.

It therefore appears that there are no apparent issues relating to the proposed works 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 construction phase.

- **All roof tiles/coverings should be carefully removed by hand to ensure that no roosting, torpid or hibernating bats are injured during the proposed works.**
- **Door and window frames should be removed with care to ensure that no roosting, 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 roosting, torpid or hibernating bats are injured during the proposed works.**
- **In the unlikely event that bats were found during the construction process then all work should cease and Natural Resource Wales Species Officer 0300 065 3000 and/or a licensed bat worker should be contacted for further advice.**

The alterations to the cottage offer 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 retained or created. The following additional features should be included to improve and try to encourage bats to use any suitable areas of the building post construction.

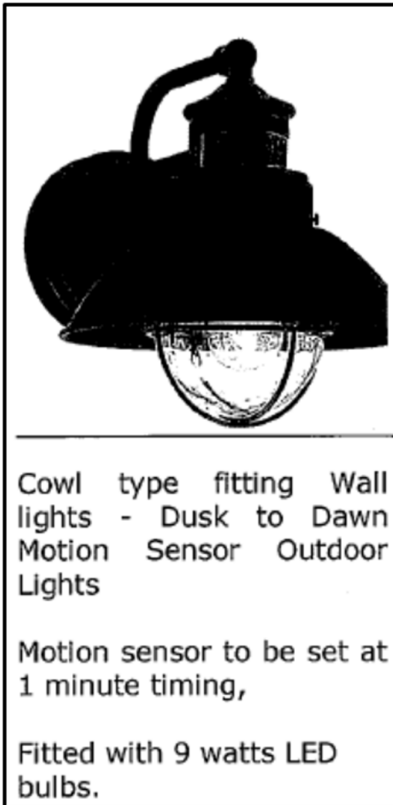
Pictures of the examples are shown in Appendix 3.

- A Beaumaris “midi” bat box will be secured to the south-west facing elevation above each dormer (two boxes total) as shown below.



- Two well-made and very suitable timber bat boxes have already been installed on the south-east (side) elevation ridge area (as shown in the photos below).
- Gaps have been left around the fascia/soffit edges on the rear and far end elevation (other end from the extension), these are all suitable for access by crevice dwelling bats.
- All external lighting for the cottage will be of a low luminance and directional towards the ground (lighting type example shown below). There will be no high-level illumination or halogen lighting which will discourage bats and there will be no external lighting on the front elevation where the bat boxes will be located. All external lighting will include a motion sensor and a one-minute timer to avoid them being left on continually.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component. Lights should feature peak wave lengths higher than 550nm to avoid the component of light most disturbing to bats. This will be achieved by using LED light bulbs.
- Any external lighting should be on a short timer with a cowling to prevent any up-lighting or light spread.

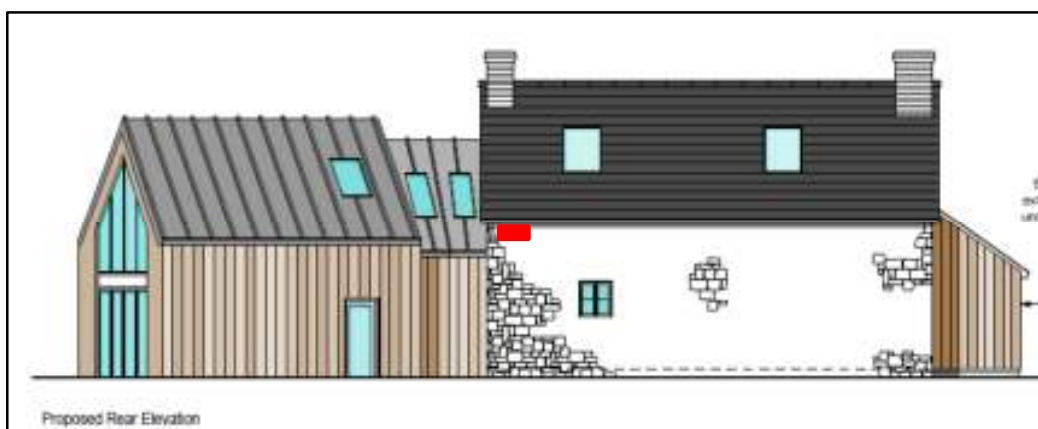
- Blinds will be fitted to the Velux windows to reduce external light spill at night.



9. NESTING BIRDS

At the time of the survey there was no evidence of nesting birds anywhere in or around the structure of the cottage or within the outbuilding.

A single Schwegler 1SP sparrow terrace nest box (or similar multi hole box if this is unavailable) should be fitted to the north-east (rear) elevation eaves as shown below.



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).

10. REFERENCES

BCT 2016 Good Practice Guidelines 2nd Edition 2016 BCT

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 location plan



Appendix 2 – Site Photos

Front elevation



Side elevation where the extension will be constructed below the existing roofline, approximately as shown by the red line – the soffits/fascias on this elevation are all well sealed and the wall is well pointed



Side elevation with small monopitch extension



Bats boxes already installed on the south-east elevation



Rear elevation



Gaps along the soffits at the rear



Gable area is well sealed on the extension end



Gable fascias are well sealed on the extension end



Gable end wall where the extension is proposed is well pointed, mortar below the slate edge is all recent so no gaps



As above



Front dormers are well sealed



Front soffit is tight to the wall



West gable ridge is well sealed



Two Velux in the rear elevation



Roof has recently been re-slatted



Interior insulation, ceiling to be put back in



Small stone outbuilding with metal roof



Rear and side elevation



Side elevation with brick repairs



Interior all open and light



Appendix 3 – Mitigation

Beaumaris bat box



Schwegler 1SP sparrow terrace nest box

