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PROTECTED SPECIES SURVEY

THE ORCHARD

BURTON GREEN, WREXHAM

NORTH WALES

6th July 2023

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1. INTRODUCTION

A preliminary protected species survey (bats and nesting birds) was undertaken on the 5th July 2023. The survey was carried out by David Bennett, a licensed and experienced bat surveyor and ecologist (Natural Resource Wales S091412 & 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 The Orchard, Burton Green, Wrexham, North Wales. A planning consent is being sought to permit a second storey extension to the side of the house above the attached garage.

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 house with an attached garage at the side and areas of garden with lawn and shrubs. The property is located within a rural location surrounded by open farmland with a wooded area to the side.

The house has been constructed from brick/block walls supporting a pitched and timber truss roof covered with tiles, the garage is a similar construction, the house and the garage both have a loft/attic space.

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 5th July 2023, 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

No visible evidence of bats was found, no droppings were apparent and there were no signs of feeding, staining, marking etc. The loft of the house was inspected, nothing was found, all the roof timbers and walls are cobwebbed, the same applies to the small loft area above the garage.

Externally, the roof tiles on the house and garage are all intact and secure with no gaps or holes, the same applies to the ridge tiles which are also secure and intact. The gable ends below the edge of the tiles are sealed with plastic capping to prevent wind damage and also any access to the inner roof structure.

The soffits on the house and garage are made of UPVC and they are very well sealed with no access to the inner cavity space or the tops of the wall. The gable soffits are also very well sealed with no gaps or points of access leading into the inner roof structure.

Overall, there does not appear to be any evidence of use by bats and nothing that would appear to cause any issues with the current proposals. The overall potential for the house to support roosting bats is negligible due to a lack of access to the roof voids or any suitable roost space/dark area.

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 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.

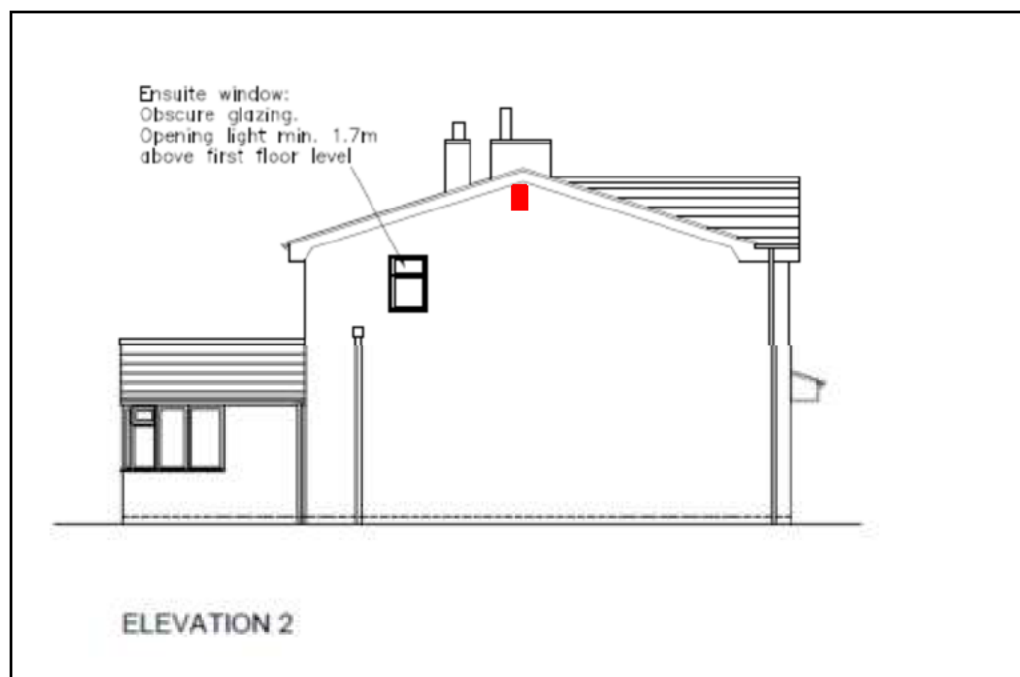
- **All tiles should be carefully removed by hand to ensure that no roosting, torpid or hibernating bats are injured during the proposed works.**
- **Door and window frames should be removed with care to ensure that no roosting, torpid or hibernating bats are injured during the proposed works.**
- **Structural 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 house 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 features should be included to improve and try to encourage bats to use any suitable areas of the building post construction.

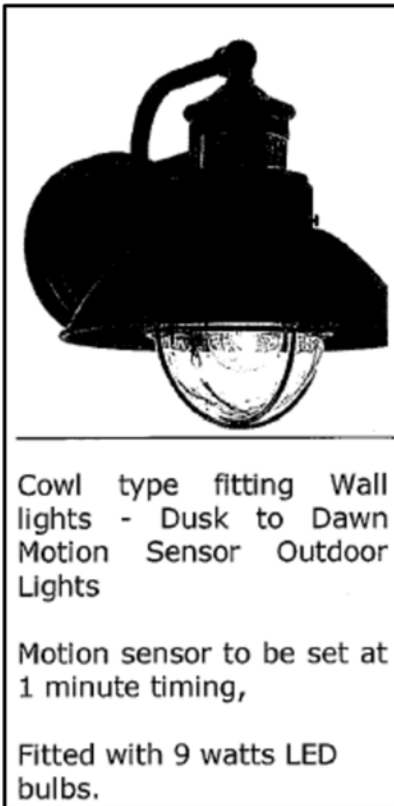
Pictures of the examples are shown in Appendix 3.

- A Vivara Pro build in woodstone bat tube will be built into to the new south-east facing elevation wall area as shown below.



- All external lighting for the house 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 south-east elevation near where the bat box 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.

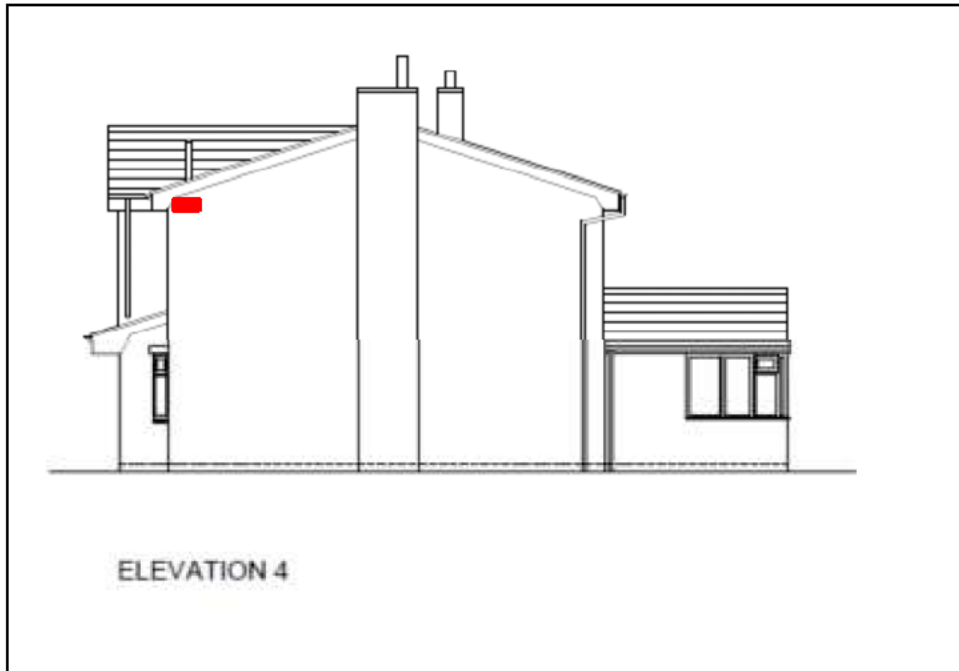
- Any external lighting should be on a short timer with a cowling to prevent any up-lighting or light spread.



9. NESTING BIRDS

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

A Woodstone Estella house sparrow nest box will be secured to the wall on the north-east elevation as shown below.



Any removal of shrubs or other vegetation (to facilitate the extension) should only be carried out between September and February inclusive to avoid any disturbance to nesting birds.

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).

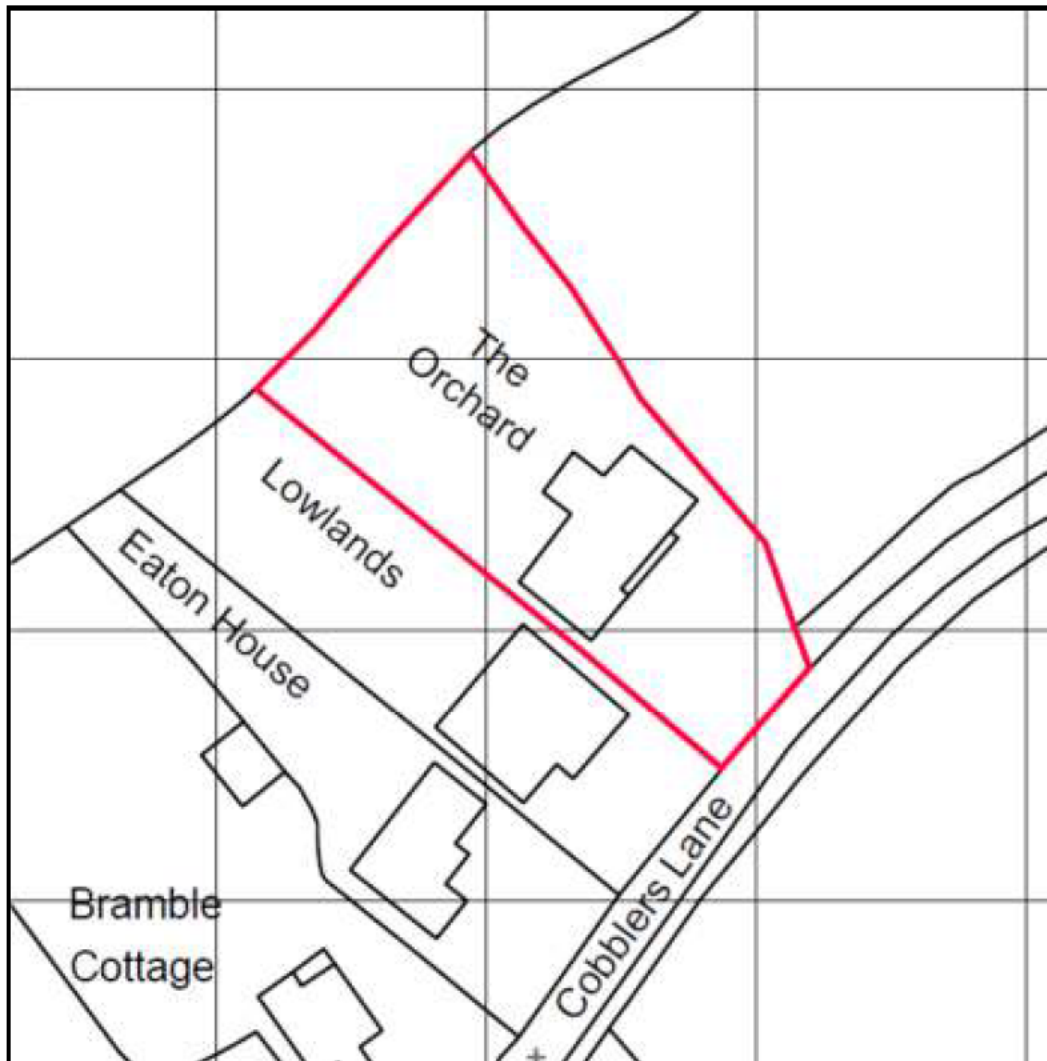
10. REFERENCES

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 plan



Appendix 2 – Site Photos

Front elevation



Side elevation



Rear elevation



Side elevation with garage



Roof areas are all intact and well sealed



Garage roof tiles are all secure



UPVC soffits are sealed



Gable soffits are sealed



Front overhang soffit is sealed



Garage soffit is well sealed



Garage roof is intact with secure ridge tiles



Garage gable end is well sealed



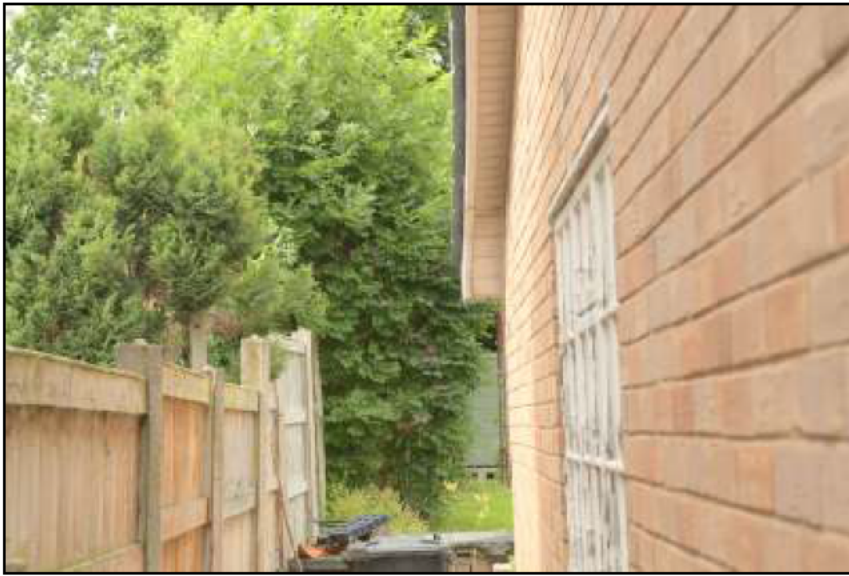
Garage gable area is well sealed



Garage gable ridge is sealed



Garage gable is well sealed



Main roof is all intact and sealed with no gaps



House gable is well sealed



As above



UPVC soffits and fascia areas are well sealed



All well sealed



Rear of the garage is well sealed



As above



Lead flashing is intact with no gaps



Garage roof is well sealed



Appendix 3 – Mitigation

Vivara Pro build in woodstone bat tube



Woodstone Estella house sparrow box

