DAYTIME BAT SURVEY AT GWERN-Y-TO, WORTHENBURY, WREXHAM

2014

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1.0 INTRODUCTION

1.1 Rachel Hacking Ecology Limited was commissioned in 2014 by Matthews & Goodman LLP to undertake a bat survey of two buildings at Gwern-y-to, Worthenbury, Wrexham. The site is the subject of a full planning application for the demolition of a cottage on the site and the construction of a detached dwelling. A barn will be converted as part of the proposals and a new access track into the site will be constructed.

1.2 Gwern-y-to is located off Frog Lane, between Worthenbury, Wrexham and Shocklach, Cheshire (O.S. grid reference: SJ430469). The site comprises of a detached two-storey dwelling, a two-storey barn and a dilapidated (roofless) barn. The land around the buildings is overgrown vegetation including patches of dense scrub..

1.3 All bat species are European Protected Species under the Conservation of Habitats and Species Regulations 2010. They are also fully protected under the Wildlife and Countryside Act 1981 (as amended) and included on the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006. It is illegal to disturb or damage a bat roost whether or not there are bats present.

1.4 The presence of a protected species is a material consideration when a planning authority is considering a development proposal, therefore a daytime bat survey is required to determine whether bats are present in the buildings and/or assess the potential for bats to be present.

2.0 METHODOLOGY

2.1 A daytime bat survey was undertaken to search for, and to assess the potential for, a bat roost to be present within the buildings at Gwern-y-to.

2.2 An external survey was carried out, which included, for example, looking for gaps between any soffit boards and walls, gaps between window frames and the walls and looking for bat droppings on the walls and window ledges.

2.3 The buildings were also searched internally for evidence of a bat roost, which included looking for the following signs:

- live or dead bats
- bat droppings
- bat entry/exit points
- bat urine staining
- grease marks on any timbers
- feeding remains such as insect wings
- areas clear of cobwebs.

2.4 A pair of close focussing binoculars, a high-powered torch and an endoscope were used (where required) to search for evidence of bats externally and internally.

Personnel and timing

2.5 Rachel Hacking (Principal Ecologist) and Andy Harmer carried out the daytime bat survey on the 26th November 2014. Both surveyors have over 14 years of experience in protected species surveys.

2.6 Daytime bat assessments can be carried out at any time of year. The weather during the survey was cold and dry. A full inspection of the buildings was undertaken.

3.0 RESULTS

3.1 Gwern-y-to consists of two buildings, plus a dilapidated shippon. All of the buildings are constructed of brick external walls with pitched slate tile roofs.

DETACHED DWELLING

External Survey

3.2 The detached dwelling is an old farmhouse (see Photograph 1), which has been fairly recently occupied. It is two-storey in height with a small brick-built extension to the rear. The window frames and door frames are wooden and are starting to rot. In places, mortar is missing from the brickwork, particularly on the chimneys.

Photograph 1 showing the detached dwelling

3.3 No soffits or barge boards exist on this property. The guttering is coming away from the walls in many places (see Photograph 2).

Photograph 2 showing the rear of the detached dwelling

3.4 The roof is generally intact but slipped tiles do exist. In one place, at the front of the building, a tile is missing (see Photograph 1).

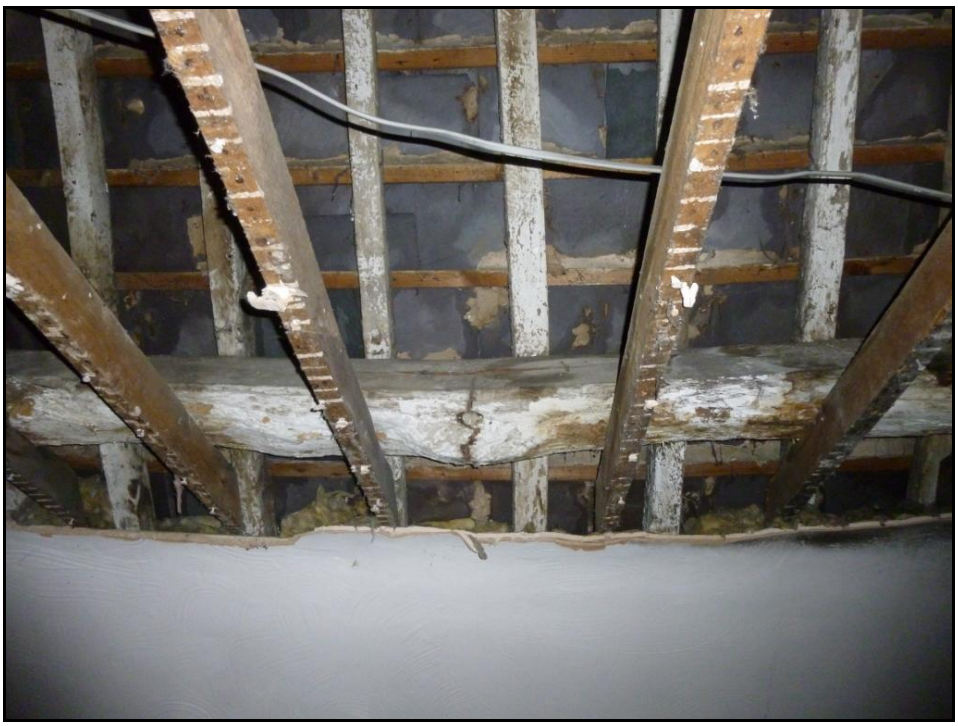
Internal Survey

3.5 Internally, the property has been stripped. Interior walls remain standing. Water damage has occurred, making the stairs and upstairs flooring unsound. Mould and damp occur throughout.

3.6 The ceilings within the first floor have been removed, allowing the whole interior roof to be viewed (see Photograph 3). Where roof tiles have slipped, expanding foam has been used in an attempt to plug any gaps. Extensive water damage has occurred beneath the slipped slates.

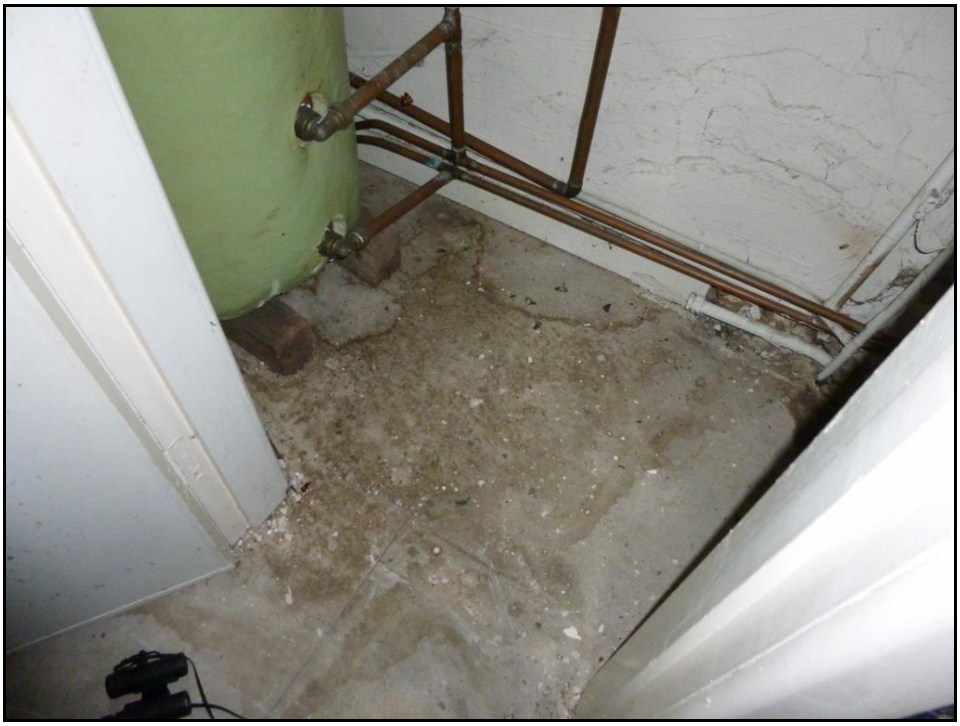
Photograph 3 showing the roof and ceiling joists

3.7 The slate tiles are flush to the brick gable ends of the building. Here, the mortar is intact. Mortar is missing from the slate tiles in many places (see Photograph 4). The wooden beams, roof and ceiling joists are intact, with no cracks or gaps evident. They are becoming mouldy due to water ingress. Where small parts of ceiling plasterboard remain, these could be easily inspected behind.



Photograph 4 showing roof tiles and wooden beams

3.8 Bat droppings and feeding remains (butterfly wings) were found throughout the first floor, scattered on the floorboards (see Photographs 5 and 6).



Photograph 5 showing bat droppings in an old airing cupboard

Photograph 6 showing feeding remains (butterfly wings)

BARN

External Survey

3.9 The barn is two-storey in height, of brick construction, with many repairs apparent (see Photograph 7). It has a pitched slate tile roof. All of the windows and doors have been securely sealed with wooden boards (see Photograph 2).

Photograph 7 showing the barn in the summer (taken from client stock)

Photograph 8 showing the secured windows of the barn

3.10 Externally, the barn offers potential for bats., There are gaps within the brickwork and some of the roof slates have slipped.

Internal Survey

3.11 Internally, the barn has been stripped. The first floor ceiling has been removed allowing the interior of the roof to be viewed. Gaps within the roof, window frames and door frames have been sealed with expanding foam.

3.12 Bat droppings were located, scattered on the floorboards of the first floor. The remains of a Blue Tit were also found.

3.13 The ground floor of the barn is split into storage rooms, which are white-washed. The whole barn was easy to inspect.

DILAPIDATED SHIPPON

3.14 A dilapidated shippon exists on the site at Gwern-y-to. This has no roof (see Photograph 9). This was inspected and found to support no suitable roosting areas for bats.

Photograph 9 showing the dilapidated shippon

SURROUNDING LAND

3.15 Gwern-y-to is located in a rural area. Linear features such as tree belts and hedgerows exist on site and leading away from the site. There is good habitat connectivity and good foraging and commuting habitat for bats in the locality.

4.0 SUMMARY AND RECOMMENDATIONS

4.1 Evidence of bat activity was located within the detached dwelling and the barn during the daytime bat survey. Bat droppings and feeding remains were found scattered within the buildings on the first floors.

4.2 Both buildings offer potential for roosting bats and offer entry and exit points, although these are limited due to the maintenance work carried out using expanding foam. Gaps exist externally, for example, beneath roofing slates, within mortar and where ventilation gaps exist. Neither of the buildings supports a roof void as the first floor ceilings have been removed.

4.3 Further bat survey work is recommended to determine the type of bat roost present and the species of bat present. Three activity surveys are recommended, at least one of these being a dawn survey, to observe the two buildings for emerging or re-entering bats. Bat activity surveys can be undertaken between April and September, in suitable weather conditions.

4.4 A mitigation strategy will be required. For example, a bat roost may need to be created within the converted barn or within the new build. Or multiple bat boxes may be required.

4.5 If bat activity surveys cannot be carried out for whatever reason, the bat mitigation should be designed for both Pipistrelle *Pipistrellus* sp. and Brown Long-eared *Plecotus auritus* bats, with both plenty of crevices and sufficient flying room. The bat mitigation should be drawn up by an architect and include truss-free flying areas and must not include breathable roofing membrane.

4.6 A Natural England European Protected Species (EPS) licence may be required before any work can be carried out to the buildings. This can be applied for once full planning permission has been granted.

4.7 If works to the properties are delayed by longer than two years from the date of this survey, a further bat survey will be required to update the findings.

REFERENCES

Hundt, L. 2012. *Bat Surveys: Good Practice Guidelines, 2nd Edition*. Bat Conservation Trust.

Mitchell-Jones, A. J. 2004. *Bat Mitigation Guidelines*. English Nature.