

Scoping Survey for Bats



August 2019

Surveyor: Nicholas Bunn

Address: 33 Glanbrydan Avenue, Uplands, Swansea SA2 0HX

License No:
S086667/1 (Bats)
S085099/1 (Barn Owls)

Client:
Joanne Isaac

Survey Address: Cwmamman Farm, Lower Brynaman, Ammanford SA18 1SN

Grid Reference: SN 714 137

Executive Summary

A full daylight inspection of the above property was carried out on the 21st August 2019.

An emergence survey was carried out on the same evening.

The development proposal is a demolition of the existing structure and new build on the same/similar footprint.

The purpose of the inspection was to establish if the building presents suitable bat roosting opportunities.

No evidence was seen during the building inspection to indicate bat usage. All fascia were uniformly tight to the walls offering no cavity entrances for bats to use as roosting spaces. The clay roof tiles offer no spaces as they are uniformly tight as are the ridge tiles.

Extensive inspections were carried out to the underside of the roof and the various surfaces inside the structure with no evidence of bat guano, live bats or any other evidence of bat occupation such as moth/butterfly wings, urine staining or fur marks.

No bats were seen leaving or entering the building during the evening emergence survey.

It was determined based on the evidence found that this building is not suitable, due to lack of crevice space, to support roosting bats.

No evidence of owl use of the building was seen

No nesting birds were noted using the property at the time of the survey.

No further visits are deemed necessary.

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1. Introduction

1.1 Purpose of Survey

The survey was conducted to produce a summary of the potential of this building to provide roosting opportunities for bats and to establish whether there is evidence to support this potential and also to monitor for live bats exiting during an evening emergence survey.

1.2 Proposed Development

The proposed development is a demolition of the garage to be replaced by a new build on the same footprint.

1.3 Site Context

The site is located in a rural area on the edges of a small urban area (Brynaman). The property is surrounded by mature woodland.



Aerial photograph 1: Site setting (arrowed).

1.4 Survey Details

Survey Personnel:

- **Nicholas Bunn:** Experienced and licensed lead surveyor who has been involved in bat conservation for many years.

Specialist equipment used:

- 1 Anabat Walkabout bat detector, for hand held live recording
- High powered LED LENSER hand held torch (P17.2) and head torch (H14.2)
- Binoculars

Pertinent survey data:

Table 1.

Date of Survey	Time on site	Temperature	Wind Speed	Grid Reference
21.08.2019	19:15 (Scoping inspection) and evening emergence	19 - 18°C	Very Light	SN 714 137

Sunset time was 20:26 and the surveyor remained on site for 1 hour thereafter.



Aerial photograph 2: The survey site in the wider context (survey location arrowed)

The area of woodland around the site presents foraging opportunities for bats. A common pipistrelle (*Pipistrellus pipistrellus*) was detected commuting towards this woodland a full 15 minutes before sunset. The bat arrived from an unknown location south of the survey site.

1.5 Previous Reports

No previous data regarding bat surveys was made available prior to this survey. It is understood that no historic survey for bats has ever taken place at this property.

2. Methodology

2.1 Desk Study

A desktop study was carried out using aerial photographs to determine suitable nearby foraging habitats and potential flight paths. A data search was not deemed necessary as one visit was sufficient to determine that the building is unsuitable for bat use.

2.2 Survey Methodology & Details

A daylight visual assessment of the building was carried out, which involved an external inspection of the structure, seeking signs of the presence of bats. The survey involved examining outer surfaces from the ground and looking for signs such as bat guano on ledges, sills and walls.

A high powered lamp was used to examine potential access and roosting areas. Any gaps or crevices in the structures were inspected as closely as possible. The context of the buildings within the surrounding landscape was also assessed.

External/internal features and cavities for potential bat use were assessed as very unlikely for the following reasons:

- Moulded clay roof/ridge tiles are tightly fitting (see Photos below) and presented no gaps for bat entry.
- No bat guano was found on any external walls, floors, ledges etc.,
- The internal elements of the garage did not present any evidence of bat occupation whatsoever, supporting the view that this property does not have current or past use by bats.

Survey Photographs:



Photo 1: South-east facing gable end



Photo 2: North-east facing tight soffits/fascia boards



Photo 3: South-west facing elevation



Photo 4: View of the roof/fascia interface



Photo 5: South-west facing gable end

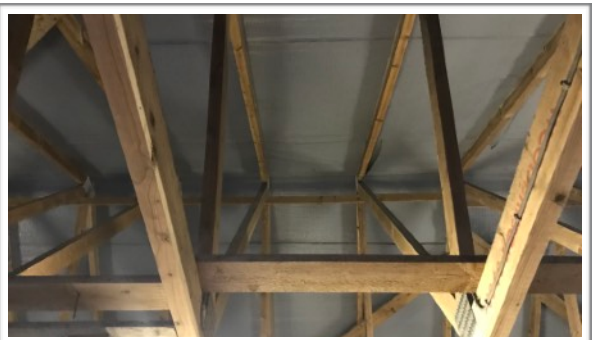


Photo 6: Internal timber frame

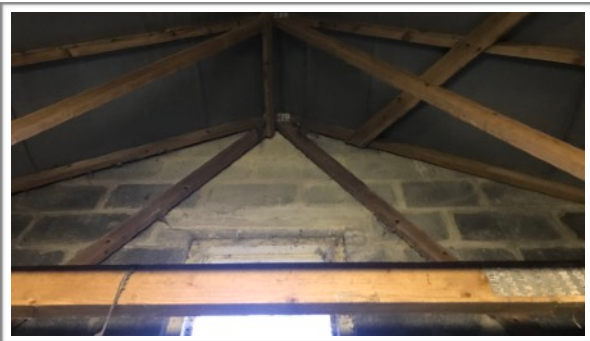


Photo 7: Internal north-west facing gable end



Photo 8: North-west facing gable end

The surveyor was using an Anabat Walkabout detector, with the capability of producing live sonograms for assistance with immediate species identification, as was the case with the foraging/commuting bats detected flying overhead during the early part of the evening emergence survey.

3. Results

3.1 Preliminary Roost Assessment

The building was erected sometime in the last quarter of the 20th C and is a brick built, pebble-dashed garage on a concrete base. Water goods are uPVC. The roof comprises moulded clay tiles.

3.2 Roost Characterisation

This building was not deemed suitable for bat use.

3.3 Bat Activity Summary

No bats were seen or recorded leaving the building although commuting bats (described above) passed close enough to be picked up by the bat detectors.

4. Discussion

4.1 Data Evaluation

No data relating to positive bat use of this building was collected during the survey.

Bat call analysis software (Anabat Insight) was used on an Apple desktop computer to re-analyse the data collected on the Anabat Walkabout. As described above the commuting bat analysis was commensurate with the assessment of the live sonograms produced on the device and viewed during the survey.

4.2 Limitations of Survey

The pertinent limitation of this survey is that the external components of the roof were not directly accessed at the apex but were viewed in sufficient detail with binoculars from the ground. The roof apex was accessed from the inside.

4.3 Relevant EU & UK Legislation

Planners and Natural Resources Wales will require that the site maintains, restores or creates such features on completion of the work that will encourage continued/new use of the location by bats, and that the status of the species is not jeopardised if they consent to the development proceeding.

All bats and their roosts are protected by various legislation including:

- 1. The Wildlife and Countryside Act 1981 (as amended).**
- 2. The Conservation of Habitats and Species Regulations 2017.**

Under these laws it is an offence to deliberately kill or injure a bat, to disturb a bat or to damage, destroy or block access to a roost. Bat roosts are protected under these laws whether the animals are present at the time of survey or not. Natural Resources Wales are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest.

Under the Wildlife and Countryside Act 1981, all nesting birds and their nests are protected. Once a bird places a single piece of material then it constitutes a nest. It is then an offence to cause damage to the bird, nest, eggs or chicks and immediate habitat which is likely to result in damage by causing the bird to desert its nest. This covers all bird species, with a small number of exceptions (pest species which can be controlled by special license).

5. Impact Assessment

5.1 Summary

It would be desirable to encourage bats to use the building post development by incorporating suitable accommodation for bats. **The following information is for guidance only:**

Crevices dwellers in general will typically find roosting opportunities at gable end apexes provided suitable gaps are present. Other areas are also used i.e. behind barge boards, within soffits, beneath roof tiles and ridge tiles, around chimneys, etc., this list is not exhaustive but illustrates the diversity of locations within a building that bats will use for roosting purposes.

It will not be practical to incorporate all of these features but one or more of the following would be desirable to enhance the potential for bats to roost in the property post development:

- Gaps behind hanging tiles and/or weather boarding.
- Small gaps behind fascia boards and entrances to soffits.
- Specialist roof tiles designed to allow bats to crawl into the void between roof tile and felt.
- Specialist bat bricks to be incorporated into walls at suitable height (optional).
- Mortar free end ridge tiles to allow access within the gaps.
- Bat boxes may be placed on the building itself or nearby trees.

If any of the above features are incorporated, the surveyor will monitor the building post development to assess any potential success in bat use of the new features.

5.2 Considerations for External Lighting

External lights can delay the timing and prolong the duration of emergence for some species. External lighting reduced the number of *Pipistrellus pygmaeus* emerging from roosts (Downs et al. 2003)¹.

¹ Downs, N.C., Beaton, V., Guest, J., Polanski, J., Robinson, S.L. & Racey, P.A. (2003) The effects of illuminating the roost entrance on the emergence behaviour of *Pipistrellus pygmaeus*. *Biological Conservation*, 111, 247-252.

Bats may miss the peak in abundance of insects that occurs at dusk, thereby reducing the quality of foraging time, impacting the fitness of individuals and the roost as a whole. Lighting which spills directly into a roost can cause roost abandonment or death and should be avoided. Such disturbance would constitute an offence.

Illumination of a roost entrance can have consequences for predation and connectivity. Bats may be forced to use alternative exits if available. Alternative exits may be suboptimal in terms of predation risk.

Alternative exits may increase predation risk due to their location in relation to the surrounding landscape (e.g., bats may be forced to fly across open areas or roads once leaving the exit) or due to their situation (e.g., located low to the ground or near a window sill enabling easy access for predators such as domestic cats)². External lighting should be kept to a minimum and not be directed at roost entrances or emergence pathways.

Lighting should be positioned below the horizontal plane of bat emergence points and have Passive Infra Red (PIR) triggers to minimise illumination.

5.3 Notes on Roofing Membranes

When bats and breathable roofing membranes come together, anecdotal evidence suggests it may not end well for either party. There have been some reports of bats becoming entangled in membranes and damage to membranes caused by bats. When/if roofing felt is to be installed in a roof that is used by bats then the use of bituminous roofing felt is encouraged. Bituminous felt is dark-coloured, with a rough surface that bats can grip onto and will help maintain a suitable and safe environment for bats within the roof void/structure.

Breathable Roofing Membranes (BRMs), made from spun-bond polypropylene/polyethylene filaments, should not be installed into a roof that is used by bats.

The long fibres that make up BRMs have a tendency to be pulled out by roosting bats and pose an entanglement threat to the bats.

² Stone, E.L. (2013) Bats and lighting: Overview of current evidence and mitigation

BRMs are not obligatory under any Building Regulations. Ventilation, regardless of the roofing felt or BRM used, is still required (see British Standard BS 5250:2011).

6. Recommendations

6.1 Further Surveys

No further action is necessary with respect to bat monitoring of this property based on the findings of this survey.

6.2 EPS License Requirements

No licensing is required with regard to bats at this property.

Signed: 

Appendix A

Site Layout & Features

Site Layout & Features

