



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PHASE 2 BAT ACTIVITY SURVEY

UPPER UCHELDRE

Arbor Vitae Environment Ltd, Lower Betton Farm, Cross Houses, Shrewsbury, Shropshire, SY5

6JD

Project name: Upper Ucheldre, Brooks, Welshpool, Powys,
SY21 8QW

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning consent will be sought for the demolition of an existing dwelling to be replaced with a new property. A Preliminary Bat Roost Assessment was carried out in May 2021.

The house has ‘moderate’ potential as a bat roost given a number of external potential roosting features and a small enclosed loft space. During the inspection, no evidence of bats was found within the loft space.

1.2 SCOPE OF SURVEY

Arbor Vitae were commissioned to undertake two bat activity surveys to determine if the house at Upper Ucheldre is in use by roosting bats.

The survey was also designed to assess the presence of any wild breeding birds using the building.

1.3 KEY PRINCIPLES

All ecological surveys conducted by Arbor Vitae Environment Ltd are underpinned by the following key principles, as outlined by CIEEM (2018):

Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).

Mitigation - Adverse effects should be avoided or minimized through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.

Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.

Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

2 SITE DESCRIPTION

2.1 LOCATION, LANDSCAPE, AND BACKGROUND

The house is located at Upper Ucheldre farm, accessed by a long private track from the main highway. There are several other buildings on site including steel and timber framed agricultural buildings. The farm is located between Tregynon and Berriew just north of Bettws Cedewain (Figure 1).

The surrounding landscape is made up primarily of agricultural grassland with a hedgerow system in place at the field boundaries (Figure 2). There are some small areas of broadleaved woodland within the wider landscape and several wooded corridors adjacent to the site. The gardens surrounding the property are made up primarily of amenity grassland with some planted shrubs and flower beds. The adjacent farmyard contains several different buildings including traditional and modern agricultural structures.

2.2 BUILDING DESCRIPTION

House: A two storey brick built house which has had render applied to all elevations. The roof is slate with clay ridge tiles and the verges of the roof are covered with metal capping. The eaves are boxed in with timber soffits and fascia boards and a central chimney breast is sealed in place with lead flashing.

There is a small loft space above the house which is approximately 1m in height at the apex, supported by a mixture of old and new timbers. The roof has been re-lined relatively recently and therefore has a mixture of breathable and bituminous lining. There is a thick layer of insulation on the floor and one small access hatch.

The house is double fronted with a single storey extension at the north-west elevation and a low two storey extension at the north-east facing gable end. The rear extension at the north-west has a slightly sloping roof covered with corrugated tin and sealed with timber fascia boards.

The extension at the north-east gable has a steeply pitched roof, covered with corrugated tin and fitted with timber fascia boards. The exterior of the extension is partially clad with planed timber boarding to the north and west facing elevation. The first floor of the extension does not have a loft space but is boarded up to the rafters. Parts of the ceiling are failing due to water damage and the breathable lining of the roof is visible.

Garage: There is a single storey, steel framed garage to the south of the house which sits on an area of existing hardstanding. The base of the garage is built from blockwork and the structure has a tin roof and cladding with an elevation.

3 SURVEY METHODOLOGY

3.1 VISUAL INSPECTION

One visit was made to carry out a preliminary visual assessment of the property 28th May 2021.

The objective of the survey was to find and record any signs of use by bats, for example:

- Droppings, sometimes in concentrations below roost sites,
- Feeding signs such as butterfly and moth wings,
- Staining of timber, brickwork around access points.

The general structure of the building was assessed for its potential to provide bats with roosting opportunities.

3.2 ACTIVITY SURVEYS

DATE	SURVEY TIME	SUNSET	WEATHER	OBSERVERS	STATIC RECORDERS
09.06.2021	21:20-23:05	21:35	Cloud: 100% Rain: - Wind: 2 (BFT) Temp: 17°C	Will Prestwood Phillipa Stirling	Anabat Express internally x2
29.07.2021	04:00-05:45	05:27	Cloud: 50% Rain: - Wind: 2 (BFT) Temp: 13°C	Phillipa Stirling Joy Williams	Anabat Express internally x2
Bat activity was registered and recorded externally using Echometer 2 Pro microphone with iPad Air.					

3.3 BREEDING BIRDS

The building was assessed for its potential to provide birds with nest sites, and to record any existing evidence of previous nesting.

3.4 PERSONNEL

Three surveyors were used in total over the two surveys: William Prestwood BSc Senior Ecologist (2017-31632-CLS-CLS), Phillipa Stirling MSc ACIEEM Ecologist S089403-1 and Joy Williams an experienced bat surveyor.

3.5 CONSTRAINTS

There were no constraints to the survey according to the Bat Conservation Trust good practice guidance.

4 SURVEY RESULTS

4.1 VISUAL INSPECTION

The timber soffits of the property are showing some signs of deterioration and there are a small number of gaps at the top of the wall plate on the house. There is one small access point visible within the loft space at the north-east facing gable.

The tin roof coverings on the extensions do not offer suitable roosting opportunities for bat species and the timber cladding appears to be uniform with limited gaps or crevices.

There is no evidence within the loft space of the house or first floor of the extension to suggest that either are in use by bat species. Given the internal loft and small number of Potential Roosting Features present, the property has 'moderate' potential as a bat roost.

The garage does not offer any suitable opportunities for bat species. This structure provides 'negligible' potential as a bat roost.

4.2 ACTIVITY SURVEYS

Dusk emergence survey: 09/06/2021

The first bat recorded was a soprano pipistrelle at 21:43 foraging around the gardens to the north of the house. At 22:42 a common pipistrelle was observed foraging along the farm track to the house. Soprano pipistrelle was recorded again at 22:42 and continued to forage within the gardens of the property. Noctule was recorded flying overhead at 21:48.

The internal detectors did not record any echolocation calls during the survey.

Dawn re-entry survey: 29/07/2021

A brown long-eared bat was recorded flying around the gardens of the property upon arrival. Foraging and commuting stopped at 05:00 when the bat was observed flying north toward the main yard.

At 04:55 a soprano pipistrelle was observed flying around the north gable end of the property. The bat seemingly landed on the wall of the extension briefly at 04:57 before flying north toward the main farmyard.

The internal detectors did not record any echolocation calls during the survey.

4.3 BREEDING BIRDS

There was no evidence of breeding birds using the building including past nest sites.

5 EVALUATION OF RESULTS AND IMPACT

5.1 BATS

Four bat species were recorded during the activity surveys: common pipistrelle, soprano pipistrelle, brown long-eared and noctule. The first three species were observed foraging and commuting within the gardens and access track associated with the house. Noctule was only recorded briefly, passing overhead.

The results of the activity surveys do not suggest that the house on site is in use as a roosting site. There is no evidence within the loft space or on exterior features of the building to suggest that it is in use as a roosting site. Therefore, a European Protected Species Development Licence will **not** be required for the demolition work to proceed.

The house has been unoccupied for a number of years and therefore external lighting on site has been limited to occasional task lighting within the farm yard. A small number of commoner species are present within the surrounding landscape and therefore any planned lighting on site will need to be sensitive to nocturnal wildlife.

5.2 BREEDING BIRDS

The survey showed no evidence of breeding birds on site during the survey and the proposals will not have any impact on potential or current nest sites.

6 MITIGATION & ENHANCEMENT

6.1 BATS

A Wildlife Sensitive Lighting Plan will be adopted on site following construction of the replacement dwelling. The Bat Conservation Trust Guidance Note 08/18 will be used as a reference point with the following key points included as a minimum:

- Hedgerows and key habitat features including mature trees on the site will not be illuminated in order to retain dark movement corridors for nocturnal wildlife. Illuminance along these features will be below 0.2 lux on the horizontal plane, and 0.4 lux on the vertical plane.
- Any exterior security or decorative lights to be installed on the development site will be less than 3 m from the ground and fitted with hoods to direct the light below the horizontal plane, at an angle of less than seventy degrees from vertical, and shall not be fixed to, or directed at, bat boxes or gables or eaves.
- Security lighting will be set on motion sensors with short timers (<1 minute) and will be LED with a passive infrared trigger.
- Lighting must be less than 3 lux at ground level and there shall be no light splay exceeding 1 lux along buildings, eaves or roof or adjacent hedgerows or trees.
- External lights will be hooded and directed toward the ground to reduce upward light spill.
- A warm white spectrum will be adopted throughout the scheme to reduce blue light component (<2700Kelvin).
- Internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill. LED luminaires will be used internally where possible due to their sharp cut-off, lower intensity, and dimming capability.
- Luminaires will always be mounted horizontally with an upward light ratio of 0%.

6.2 BREEDING BIRDS

The proposals will have no impact on breeding birds and therefore mitigation will not be required.

6.3 ENHANCEMENT

In order to provide opportunities on site for protected species one Woodcrete bat box and one Woodcrete bird box will be installed into nearby mature trees following completion of works on site. The boxes will be at least 3m from the ground with no lighting installed within 5m of either box.

7 SUMMARY

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8 REFERENCES

Bat Conservation Trust (2018) Bats and artificial lighting in the UK. *Bats and the Built Environment series*, Guidance Note 08/18. Institution of Lighting Professionals.

Collins, J (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust.

Mitchell-Jones, A.J. (2004) Bat mitigation guidelines. English Nature.



FIGURE 1 LOCATION. 1:50,000

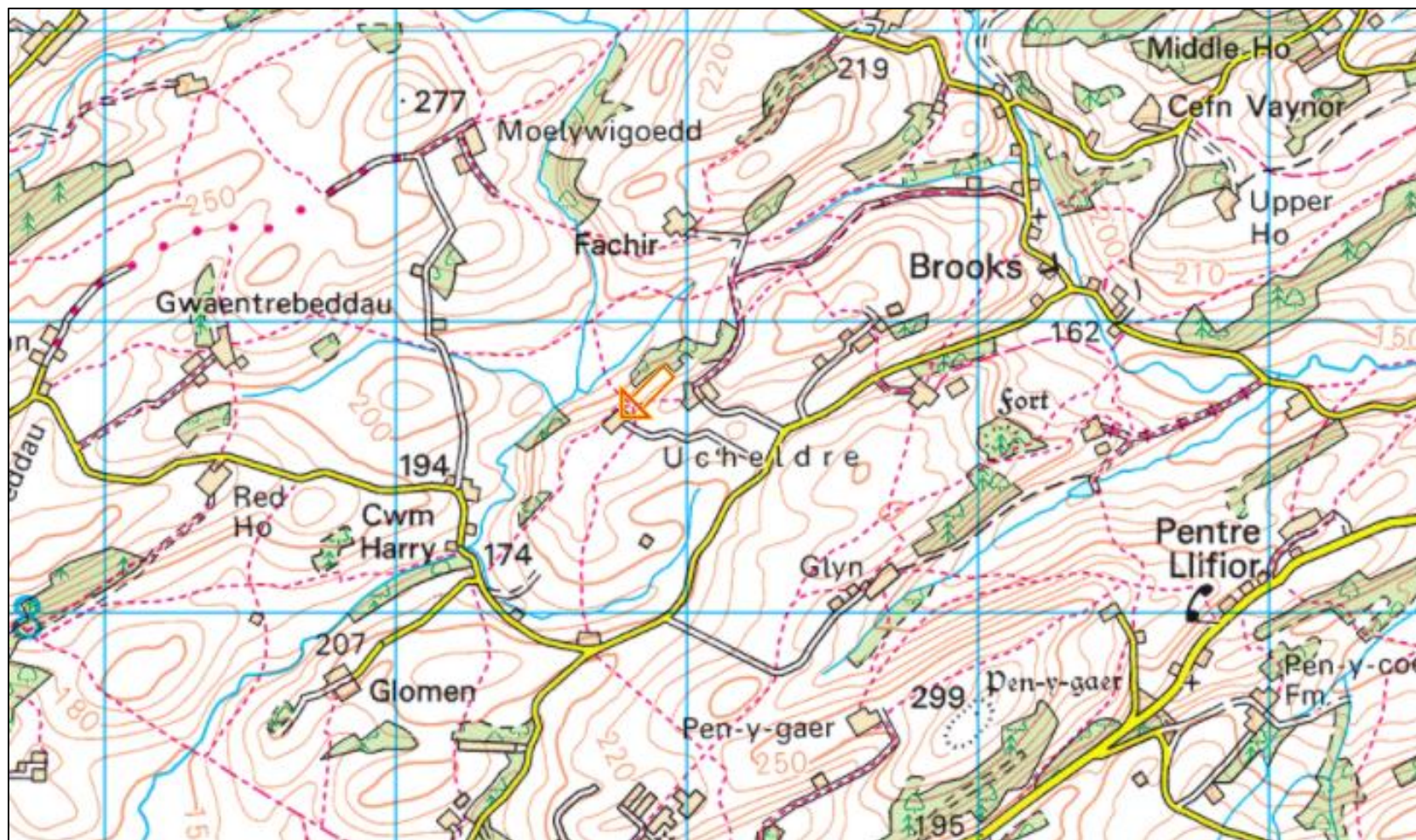


FIGURE 2 AERIAL PHOTOGRAPH AND SURVEYOR LOCATION



APPENDIX 1 PHOTOGRAPHS



South west facing gable end.



North east facing gable end.



Small loft space above the house.





Eaves of the property are partially boxed in.



First floor of side extension. Ceiling failing in places.