



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PHASE 2 BAT ACTIVITY SURVEY

WOLVESACRE HALL

Project name: Wolvesacre Hall, Iscoyd, Whitchurch SY13 3AS

Grid Reference: SJ50694245

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

The farmstead has recently undergone significant modification to buildings. The original farmhouse has been demolished and re-built. One barn has been converted to a house and other farm buildings restored. The current application involves the conversion a traditional building for residential purposes.

Activity surveys were previously carried out in 2017 which concluded that no bats appeared to be using the building as a roost.

1.2 SCOPE OF SURVEY

Arbor Vitae were commissioned to undertake one bat activity survey to update previous surveys and to confirm whether or not the building is in use by roosting bats.

The survey was also designed to assess the presence of any 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 site under consideration is Wolvesacre Hall which is located approximately 2.5km west of the north Shropshire market town of Whitchurch. The site is 230 metres west of the Welsh border. The site is surrounded by agricultural grassland, arable land and broadleaved woodland.

Extensive redevelopment and renovation has taken place at the site over the past 12 months, including the demolition of the original farmhouse and construction of a replacement dwelling.

2.2 BUILDING DESCRIPTION

The building under consideration is a two storey brick building clad with a concrete tile roof and clay ridge tiles. The verges of the roof are mortared and there are timber barge boards in place at the south west facing gable end. Internally the roof is not lined and the first floor is open to the rafters. There is no enclosed loft space and there are several window and door apertures which are permanently open. The timbers within the roof are mostly original with some newer replacements present.

3 SURVEY METHODOLOGY

3.1 VISUAL INSPECTION

One visit was made to carry out a preliminary visual assessment of the property in July 2020.

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

One dusk emergence activity survey was carried out as per the details below. Bat activity was registered and recorded using Anabat Express detectors and Echometer 2 Pro with iPad Air.

DATE	SURVEY TIME	SUNSET	WEATHER	OBSERVERS (see Figure 2 for locations)	STATIC RECORDERS
30.07.2020	20:52-23:37	21:07	Cloud: 5% Rain: 0 Wind: 1 (BFT) Temp: 16°C	Will Prestwood Phillipa Stirling	Anabat Express internally x2

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

Two surveyors were used: William Prestwood BSc 2017-31632-CLS-CLS, an experienced ecologist, and Phillipa Stirling MSc GradCIEEM, assistant ecologist.

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

An internal inspection of the building revealed no evidence of feeding or roosting and the building has deteriorated in condition since 2017.

The building holds 'low' potential as a bat roost, given the open and light conditions. Some small crevices are available on the exteriors of the building e.g. beneath loose tiles.

4.2 ACTIVITY SURVEYS

Dusk emergence survey 30/07/2020

The first bat recorded was a noctule, at 21:17, flying overhead from north to south. A soprano pipistrelle was recorded at 21:20, commuting through the yard

between buildings. The bat arrived at the site from the north and continued to fly around the area throughout the survey.

At 21:48 a Brown long-eared bat was observed commuting/foraging from west to east, to the south of the building. At 22:24 a Natterer's bat was recorded briefly but was not seen.

Internal detectors within the building did not record any echolocation calls during the survey and no bats were observed emerging from the building.

4.3 BREEDING BIRDS

There is at least one disused swallow nest in the building on the ground floor. No other nesting was observed but the building provides good opportunities for a range of bird species.

The 2017 survey recorded evidence of an owl (probably a tawny owl) roosting in the loft of the building but no evidence was found during this survey.

5 EVALUATION OF RESULTS AND IMPACT

5.1 BATS

Three bat species were recorded at the site during the dusk emergence survey: Soprano pipistrelle, Natterer's and Noctule. None of the bats were observed emerging from the building during the survey.

There are a range of other buildings on site which provide roosting opportunities for bat species, including traditional outbuildings.

The building is not in use by roosting bats and its conversion will have no impact on bat species. Therefore, a European Protected Species Mitigation Licence will **not** be required for the work to proceed.

A wildlife sensitive lighting plan will be adopted to minimise the effect of any additional external lighting as a result of the development.

5.2 BREEDING BIRDS

The conversion of the building will lead to the loss of nesting sites for at least three pairs of breeding swallows.

6 MITIGATION

6.1 BATS

Although no bats use the building for roosting, it is recommended as always that a precautionary approach is adopted to carrying out the work and that the opportunity is taken to incorporate features in the building which could be exploited by bats in the future. It is recommended that an ecologist is on site when the roof is removed in order to ensure that contractors understand their duty to safeguard bats if any are discovered. Any roof works will be carried out between November and May with supervision from an ecologist. If any bats are found during these works, activity will cease and NRW contacted for advice.

It is suggested that four raised tiles will be installed on the building, along with at least one raised ridge tile, in order to allow access to spaces beneath tiles and above bitumen lining.

LIGHTING PLAN

Any additional external lighting should be sensitive to nocturnal wildlife. The following recommendations should be considered when designing external lighting:

- Hedgerows and key habitat features including mature trees on the site should not be illuminated in order to retain dark movement corridors for nocturnal wildlife. Illuminance along these features should 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 shall 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 should be set on motion sensors with short timers (<1 minute) and should 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 should be hooded and directed toward the ground to reduce upward light spill.
- A warm white spectrum should be adopted throughout the scheme to reduce blue light component (<2700Kelvin).

- Internal luminaires should be recessed where installed in proximity to windows to reduce glare and light spill. LED luminaires should be used internally where possible due to their sharp cut-off, lower intensity, and dimming capability.
- Luminaires should always be mounted horizontally with an upward light ratio of 0%.

6.2 BREEDING BIRDS

The proposed development will have to be carefully timed so as to avoid disturbing nesting swallows or other species of nesting birds.

The building should be sealed entirely during the winter months between October and March to prevent returning birds from nesting within. The nesting season can sometimes fluctuate and therefore the building should be sealed once it has been confirmed that swallows or other nesting birds have left/are not present.

Replacement nesting sites should be constructed/installed before the return of any swallows. We recommend that the nesting sites are in place before March of any given year when the building has previously been sealed. E.g. Building sealed in November 2020, replacement nesting sites must be in place before March 2021.

Swallows usually nest within outbuildings and can enter through very small holes. Several other buildings on the farm provide suitable alternative nest sites for swallows and nesting can be encouraged in these other sites by installation of Woodcrete nest cups.

7 ENHANCEMENT

In order to provide opportunities for bats and breeding birds on site, post-development, the following is recommended:

- 2x general purpose bird boxes should be installed onto the exterior of the building upon completion of the conversion works. Suitable products include the Schwegler 1B or similar. The boxes should be installed on a south east or south west facing elevation and should not be illuminated.
- Any new boundary lines to be created should be planted with native species hedges in order to provide valuable food sources and habitats for a range of wildlife, including breeding birds.

8 SUMMARY

A traditional outbuilding at Wolvesacre Hall will be converted for residential Extensive redevelopment and renovation has taken place at the site over the past 12 months, including the demolition of the original farmhouse and construction of a replacement dwelling.

An internal inspection of the building revealed no evidence of feeding or roosting and the building has deteriorated in condition since 2017 when a previous series of activity surveys were carried out. The building is now assessed as having 'low' potential as a bat roost. Arbor Vitae were commissioned to carry out one dusk emergence survey to update the data from previous surveys.

Three bat species were recorded at the site during the dusk emergence survey: Soprano pipistrelle, Natterer's and Noctule. None of the bats were observed emerging from the building during the survey. No evidence of roosting bats was recorded in the form of droppings or feeding signs.

The survey concluded that the building is now not in use by roosting bats and their conversion will have no impact on bat species. Therefore, a European Protected Species Mitigation Licence will not be required for the work to proceed. It is recommended that appropriate mitigation is put in place to ensure that the buildings retain opportunities for bats in the future.

External bat boxes will be affixed to the building and raised tiles and ridge tiles installed. Any roofing work will be carried out between the months of November and May under supervision by an Ecological Clerk of Works. If any bat is discovered during roof removal, work will cease and NRW will be contacted for advice.

A wildlife sensitive lighting plan will be adopted to minimise the effect of any additional external lighting as a result of the development.

The conversion of the building will lead to the loss of nesting sites for at least three pairs of breeding swallows. Replacement nesting sites should be constructed/installed before the return of any swallows. We recommend that the nesting sites are in place before March of any given year when the building has previously been sealed.

Ecological enhancement can be achieved on site through the installation of two bird boxes for hole nesting species following completion of works on site. Any new boundaries

should be planted with native species hedgerow in order to provide opportunities for a range of wildlife including breeding birds.

9 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

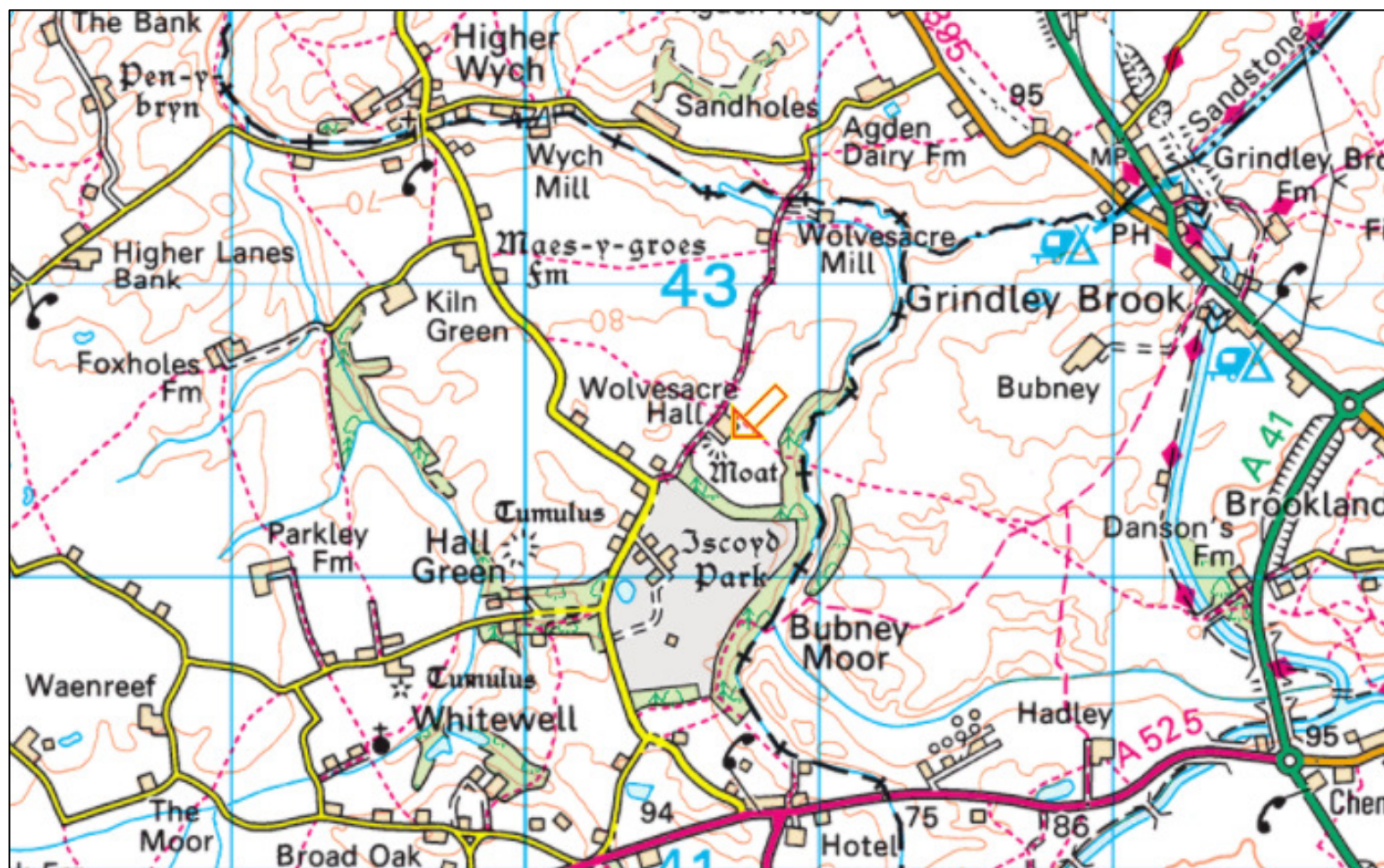


FIGURE 2 AERIAL PHOTOGRAPH



APPENDIX 1 PHOTOGRAPHS

	Building
	First floor interior