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Althrey Woodhouse
Overton Road
Bangor-on-Dee
LL13 0DA

Bat Survey Report; 2022

Moss Company

VERSION 3

Final

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1. Introduction

BiOME Consulting Ltd was commissioned by Moss Company LLP (on behalf of the site owner) in March 2022 to undertake an update Preliminary Roost Assessment (PRA) in relation to the proposed demolition of a dwelling located at Althrey Woodhouse, Overton Road, Bangor-on-Dee, LL13 0DA ('the site'). This PRA identified the requirement for emergence/re-entry surveys, which have been completed.

This survey was completed to update the findings of a survey undertaken in 2019¹.

Due to the nature of the redevelopment project, this appraisal focused on assessing the potential presence/likely absence of roosting bats and/or nesting birds.

Figure 1. Site Location¹



¹ Arbor Vitae (2019). Preliminary Bat Roost Assessment Addendum. Althrey Woodhouse

1.1. Site Description

Althrey Woodhouse is a detached dwelling (**Photograph 1**) with lawns and shrub beds to the west and south and an area of tarmac forming a parking area to the east of the house.

The existing house was brick built with all external walls rendered and painted. Each corner of the house featured stone quoins. The house is rectangular in outline with two pavilions extending from the eastern elevation (**Photograph 1**).

Photograph 1. Althrey Woodhouse



1.2. Development Proposal

It is proposed to demolish and replace the dwelling.

2. Legislative Context

All native bat species and the sites that they use for breeding or resting are afforded protection through the provisions within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Species and Habitat Regulations 2018. It is therefore an offence, without a licence from the relevant Statutory Nature Conservation Organisation (SNCO), to intentionally or recklessly kill or injure bats; to disturb, obstruct, damage or destroy their active roosts (including when those roosts are unoccupied) or to take, possess or trade in bats and their parts (alive or dead).

Disturbance in the context of the offences above is disturbance which is likely to impair the ability of animals to survive, to breed or reproduce, to nurture their young, to hibernate, to migrate; or to affect significantly the local distribution of the species.

Four species of bat, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe Bat *R. hipposideros*, Bechstein's Bat *Myotis bechsteinii* and Western Barbastelle *Barbastella barbastellus*, are included on Annex II of the Habitats Directive, which requires the designation of Special Areas of Conservation to ensure the maintenance of favourable conservation status (and these are therefore generally considered as perhaps the most important UK species).

The Environment (Wales) Act 2016 places the duties on public bodies in Wales to conserve and enhance biodiversity in the exercise of their functions. This duty includes consideration of the resilience of ecosystems in terms of their diversity, connectivity, adaptability, scale and condition. The Act also reinforces the duties in relation to the lists of species and habitats of importance and duties to conserve and enhance those species and habitats. These are referred to as Section 7 (S7) Habitats and Species. Eight species of bat are included on S7; Barbastelle, Bechstein's Bat, Noctule *Nyctalus noctula*, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat and Lesser Horseshoe Bat.

A licence can be granted by Natural Resources Wales (NRW) for developments (sometimes referred to as European Protected Species (EPS) Licences or

Derogation Licences) providing the purposes of the licence is for “*preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*”.

3. Methodologies

Due to the limited extent of the re-development proposal, the surveys focussed on determining the potential presence/likely absence of roosting bats and nesting birds.

3.1. Field Survey

3.1.1. Suitably Qualified Ecologist

The site surveys were managed by Richard Moores BSc (Hons) MCIEEM (NE bat licence no. 2015-12259-CLS-CLS, NRW Bat Licence no. S087731/1).

Fieldwork was completed by Martyn Owen BSc (Hons) MCIEEM, Samuel Dreux ACIEEM and Stephen Forrester. Martyn holds survey licences in relation to GCN, bats (NE: 2016-1974-CLS-CLS, NRW: SO89604/1), a variety of Schedule 1 birds (including Barn Owl *Tyto alba*) and has completed many similar surveys over the past 15 years.

Samuel Dreux has worked as a bat ecologist for 12 months and has completed around 100 emergence/re-entry surveys during this period.

Stephen Forrester is a highly experienced bat surveyor, having completed many similar surveys over the preceding five years.

3.1.2. Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) survey was completed on 25 March 2022, in line with appropriate survey guidance².

The survey involved a systematic search of the exterior of the building to identify potential or actual bat access points and roosting sites, and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises. It should be noted that sometimes bats leave

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

no visible sign of their presence on the outside of a building (and even when they do wet weather can wash away evidence).

The external inspection also included the examination of the ground, particularly beneath any potential bat access points, for example any windowsills, window panes, walls, hanging tiles, weatherboarding, eaves, soffit boxes, fascias, lead flashing, gaps under felt, and under tiles/slates.

A systematic search of the interior of the building was completed, searching for actual/potential bat access points, roosting sites and to locate any evidence of bats (e.g. live/dead specimens, droppings, urine splashes, fur-oil staining, feeding remains (such as moth wings), squeaking noises, bat-fly *Nycteribiidae* or odour). Again, it should be noted that occasionally bats leave no visible sign of their presence in a building's interior, particularly when there are hidden cracks, crevices and/or voids.

The inspection of buildings and built structures for evidence of bats², which can be conducted at all times of year, was facilitated by the use of ladders, a high-powered torch, endoscope and small dental mirrors to inspect accessible crevices considered likely to support bats. Weather conditions on the day of the survey were appropriate for undertaking ecological fieldwork (sunny and dry).

The potential suitability of the building for roosting bats was assessed in line with relevant guidelines² and allocated to one of the categories detailed within **Table 1**.

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure/tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure/tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure/tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Confirmed Roost	Definitive evidence of roosting bats, i.e. live animals or accumulation of droppings associated with Potential Roost Features (PRF).

3.1.1. Emergence/Re-entry Surveys

Following the identification of bat evidence/Potential Roost Features (PRFs) within the house during the PRA, three nocturnal bat surveys were completed to assess the presence/likely absence of roosting bats within the building.

To ensure coverage of all potential bat access points/roost features, surveys were completed by three surveyors (Figure 3). Surveyors were equipped with electronic bat detectors (EM Touch Pro 2 and Peersonic) and sound files were analysed with appropriate bat analysis software (Kaleidoscope) once the surveys were completed, if required. InfraRed cameras (Saance) were also used during each survey, to focus on PRFs.

Figure 2. Surveyor locations



The nocturnal bat surveys were undertaken in weather conditions considered appropriate for surveys of this kind (Table 2).

Table 2. Nocturnal bat activity survey information

Date	Surveyors	Sunrise/ Sunset	Time		Cloud	Wind (Beaufort/ Direction)	Temp (°C)	Precip.
			Start	Finish				
18/05/2022	MO, SD, SF	21:08	20:53	23:05	8/8	1 SSE	16- 14	Nil
14/06/2022	MO, SD, SF	21:39	21:24	23:30	0/8 - 1/8	0-1 N	13- 11	Nil
13/07/2022	MO, SD, SF	05:00	03:15	05:15	4/8 - 5/8	nil	14- 15	Nil

3.2. Limitations

The findings presented in this study represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of plants and animals, such as the time of year, migration patterns and behaviour.

Assessment to the entirety of the interior of the roof void during the PRA was not possible due to access difficulties. However, the sections inspected demonstrated the construction of the roof and provided enough information to enable the accurate categorisation of the building.

4. Results

4.1. Bats

4.1.1. PRA Survey

The house was brick built with all external walls rendered. The roof was slated with clay ridge tiles on the main ridge with lead flashing over hipped ridges and around chimney stacks. Wooden soffit boxes were present on all elevations with wooden framed windows present.

There was no evidence of bats present around the building exterior, however, a number of Potential Roost Features (PRFs)/roost access points were noted, comprising:

- Gaps beneath slates (**Photograph 2**).
- Gaps at ridge tiles (**Photograph 2**).
- Gaps around lead flashing (**Photograph 2**).
- Damage to soffit boxes (**Photograph 3**).

The roof void was inspected. The accessible areas were either lined with bitumen felt or 1F lining over a wooden frame and loft floors were insulated with rock wool.

Within the accessible area of the void ten relatively old, unidentified (to species) scattered bat droppings were present (**Photograph 3**), not obviously associated with any PRFs.

Given the presence of PRFs and old bat droppings, the house was assessed to be of **MODERATE POTENTIAL** for roosting bats (**Table 1**).

Photograph 2. Gaps at ridge tiles



Photograph 3. Example damage to soffit boxes



Photograph 4. Bat dropping within roof void



4.1.2. Emergence/Re-entry Surveys

18 May 2022 (Dusk)

One Common Pipistrelle exited a day roost at the verge of the ridge on the northern side of the building (Roost Access Point (RAP) 1), **Photograph 5**) at 21:28. The roost location of this bat is not known, although it is likely between the slates and roof lining near the location of the RAP.

One Soprano Pipistrelle exited a day roost near the eaves on the eastern side of the house, adjacent to the north-eastern gable (RAP2, **Photograph 6**) at 21:32.

Foraging Common Pipistrelle and Soprano Pipistrelle were occasionally logged, predominately within the garden to the south. Two Noctule *Nyctalus noctula* passes (20:58 and at 21:26) were logged high/distantly over the survey area.

Photograph 5. Roost Access Point 1



Photograph 6. Roost Access Point 2



14 June 2022 (Dusk)

One Common Pipistrelle exited a day roost via RAP 1 (**Photograph 5**) at 22:19.

Foraging Common Pipistrelle and Soprano Pipistrelle were frequently logged by all surveyors, predominately within the garden to the south. Noctules were infrequently logged high/distantly over the survey area. A single Nathusius's Pipistrelle *Pipistrellus nathusii* was logged (by the north-western surveyor) at 22:09.

13 July 2022 (Dawn)

Three Soprano Pipistrelles entered a day roost via RAP2 (**Photograph 6**) at 04:26, 04:31 and 04:45.

Foraging Common Pipistrelle and Soprano Pipistrelle were occasionally logged by all surveyors. Noctule were infrequently logged high/distantly over the survey area (maximum of seven passes logged by a single surveyor).

4.2. Other Species

It was considered possible that nests could be present in areas that could not be accessed/viewed (e.g. within soffit boxes).

5. Conclusions and Required Actions

5.1. Bats

5.1.1. Results Summary

A maximum of one Common Pipistrelle and three Soprano Pipistrelles were recorded day-roosting within the house during the three emergence/re-entry surveys.

The results of the nocturnal bat surveys are consistent with the findings of the PRA and are considered to be an accurate reflection of the status of roosting bats within the building.

General bat activity in the area was moderately low, with low species diversity.

5.1.2. Natural Resources Wales Licencing

The confirmation of roosting bats within the house means that a licence from Natural Resources Wales will be required to enable the proposed works to proceed lawfully.

5.1.3. Timing of Works

There are no restrictions with regards to when (e.g. certain months of the year) works can take place, although it would be best practice to avoid low winter temperatures when bats may be in torpor (pipistrelles can use the same roosts year-round).

5.1.4. Supervision of Works

Works in the area of the roosts will need to be supervised by a licenced bat worker. Prior to works commencing, the ecologist would provide a 'toolbox talk' to those contractors on site in which details of e.g. best working practices and what to do in the event of discovering a bat will be discussed.

During supervised works to the area of the roost the licenced bat worker would capture any bats that do not fly away and move them to a temporary bat box (erected on a nearby tree prior to works commencing).

These works (when capture/handling and exclusion of bats is possible) should ideally take place in conditions suitable for bats to be active (spring-autumn inclusive). However, works can also be undertaken in the winter as long as weather conditions allow (sunset temperature of at least 8°C on preceding 2+ days).

5.1.5. Compensation

It is recommended that three Schwegler 2F bat boxes (or similar, depending upon availability) with double front panels are installed on trees around the periphery of the site.

5.2. Nesting Birds

The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Therefore, if works/vegetation clearance are proposed for the bird nesting season (March-August inclusive), it will be necessary to appoint a Suitably Qualified Ecologist (SQE) to complete a check for active birds' nests in areas to be impacted. Should any active nests be found then it would be necessary to delay works until the nesting attempt has reached a natural conclusion. If works are planned for outside of the bird nesting period then no such check is necessary.

5.3. Report Validity

The findings of these surveys are considered valid for up to 12 months from the date of this report³. However, to inform a NRW licence application bat surveys must have been completed during the most recent bat survey period (May-September). Consequently, if the licence application is delayed beyond May 2023 and least one update emergence-entry survey will be required.

³ CIEEM (2019). *Advice Note on The Lifespan of Ecological Reports and Surveys* [online] available at: <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>