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ECOLOGY

**BAT SURVEY AND
PRECAUTIONARY WORKING
METHOD STATEMENT**

WOODLANDS FARM, WREXHAM

SEPTEMBER 2024

**Commissioned By
Hugo Chester & Jenna Burns**

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The flora and fauna detailed within this report are those noted during the field survey and from anecdotal evidence. It should not be viewed as a complete list of flora and fauna species that may frequent or exist on site at other times of the year.

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1. NON-TECHNICAL SUMMARY

Eyebright Ecology Ltd. was commissioned by Hugo Chester and Jenna Burns via Form A Studio Limited to undertake a bat survey and Precautionary Working Method Statement (PWMS) for Woodlands Farm, Borrass Road, Gresford, Wrexham, LL13 9TL (Grid Ref. SJ364532).

A planning application has been submitted to Wrexham County Borough Council for dormer extensions to the property, and a 'Construction Method Statement' (also known as PWMS) for bats was requested by the planning department.

To inform the Method Statement, a preliminary bat roost assessment was undertaken on 25 August 2024 and no evidence of bats was found. As there were some potential roost features in the area of works, a dusk emergence survey was also undertaken on 25 August 2024.

No bats emerged during the dusk emergence survey, and given the limited features and lack of evidence, it was concluded that there is a low risk of bats regularly roosting within the area of works.

Nevertheless, bats can use roosts on an occasional basis, and as surveys are a 'snap-shot' it can never be guaranteed that individual roosting bats are not present at any time. A Precautionary Working Method Statement is included in Chapter 5 which must be followed during roof work. The roof strip should ideally commence before mid November to avoid the bat hibernation period, and careful working methods include slate removal by hand and checks for bats. In the unlikely event that any bats or evidence of bats is found during work, works must stop immediately, and further advice sought.

There was evidence of nesting birds under the eaves (droppings on wall) which are most likely to be house sparrows. The roof strip should commence outside of bird nesting season, which runs from March to August inclusive. If this is not possible, a pre-works nesting bird check must be undertaken by an ecologist, and work must avoid any areas with active nests until fledglings have left.

Ideally, access to nest sites for house sparrows will be retained or recreated in the eaves to allow for this species to continue to nest on site in future. If this is not possible, at least three woodcrete sparrow boxes will be installed under eaves following the works.

2. INTRODUCTION

2.1 Background & Objectives

Eyebright Ecology Ltd. was commissioned by Hugo Chester and Jenna Burns via Form A Studio Limited to undertake a bat survey and Precautionary Working Method Statement (PWMS) for Woodlands Farm, Borrass Road, Gresford, Wrexham, LL13 9TL (Grid Ref. SJ364532).

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This report details the methods and results of the bat survey along with evidence of nesting birds, and a PWMS for contractors to follow to avoid any risks of disturbing or harming roosting bats and nesting birds.

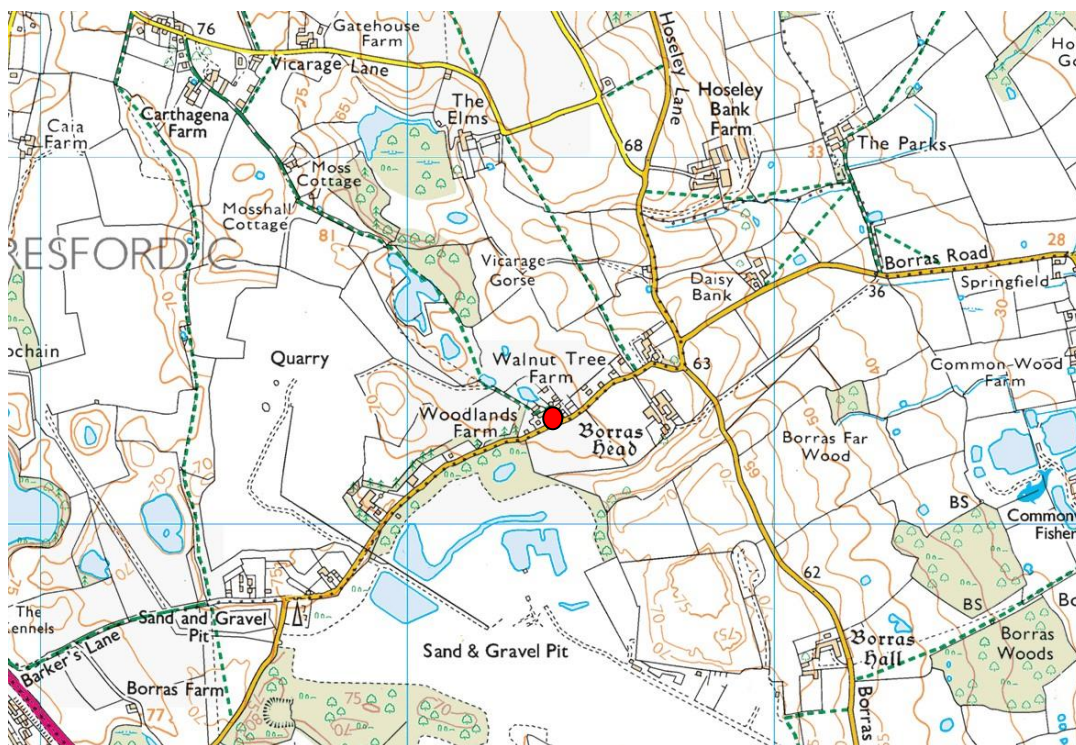
The surveys were led by an experienced ecologist who is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Unless the client indicates to the contrary, information on any species found present on the site will be passed to the county biological records centre to update records held for the area.

2.2 Site Description

The site comprised a semi-detached, two-storey traditional farmhouse which was neighboured by a complex of converted barns in use as dwellings. The site had a small front and rear garden with lawn and shrubs. The farm complex was surrounded by mostly arable farmland, and a large aggregates quarry formed a large part of the landscape around 200m away to the west and south. The site was around 3.5km north-east of Wrexham.

Figure 1: Site Location Map (OS Licence AC0000826185)



2.3 Relevant Legislation

Bats

All 18 British bat species and their roost sites are protected under the Wildlife and Countryside Act (W&CA) 1981 as amended and are included in the England and Wales Habitat Regulations (Regulation 43). Combined, this legislation means that it is illegal to:

- Deliberately or intentionally kill, injure or take a bat;
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not);
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

Birds

Nesting birds are protected under the W&CA 1981 as amended, meaning it is illegal to;

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions);

-
- Disturb any bird species listed under Schedule 1 of the Act, or its dependent young while it is nesting; barn owl is a Schedule 1 species.

3. METHODS

3.1 Preliminary Roost Assessment

An inspection of the building was undertaken on 25 August 2024. The weather was dry, cloudy, a light breeze and temperature of 16°C.

An inspection inside the roof space was undertaken to check for any bat droppings that could indicate a roost. Although the proposed works are not affecting the higher part of the roof or roof space, it is near to the area of works and could be subject to disturbance. An inspection of the outside of the building was also undertaken using torch and binoculars, particularly on the rear side of the roof where works are proposed, to check for any potential access points and to search for any bat droppings or other evidence to indicate active roost sites.

An assessment of potential suitability for roosting bats was made for the building, taking into account surrounding habitat and other factors such as artificial lighting, noise, disturbance etc. The assessment was based on the criteria in Table 1 below, which is taken from current Good Practice Survey Guidelines (Collins, 2023).

Table 1: Assessment of Roosting Potential

Potential Suitability for Roosting Bats	Roosting Habitat	Potential Flight Paths and Foraging Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices / suitable shelter above or below ground).	No habitat features on site likely to be used by commuting or foraging bats at any time of year.
Negligible	No obvious habitat features on site likely to be used by roosting bats, but a small element of uncertainty remains as bats can use apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight paths or by foraging bats, however a small element of uncertainty remains to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year.	Habitat that could be used by small numbers of bats, e.g. gappy hedgerow, unvegetated stream, isolated habitat patches such as lone trees.
Moderate	A structure with one or more potential roost sites which could be used by bats due to suitable characteristics, but unlikely to support a roost of high conservation status (i.e. maternity or classic hibernation).	Continuous habitat connected to wider landscape that could be used by bats for flight paths, e.g. lines of trees, linked back gardens etc, or foraging e.g. trees, grassland, water etc.

High	A structure with one or more potential roost sites which is obviously suitable for larger numbers of bats on a regular basis due to suitable characteristics, and has potential to support high conservation status roosts, i.e. maternity or classic hibernation roosts.	Continuous, high quality habitat that is well connected to the wider landscape, likely to be used regularly by commuting and foraging bats e.g. river valleys, streams, lines
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3.2 Dusk Emergence Bat Survey

The lower part of the roof proposed for works was assessed to be of 'low' potential for roosting bats. A single dusk emergence survey was undertaken on 25 August 2024.

The dusk emergence survey commenced fifteen minutes before sunset and continued for one and a half hours after sunset.

Two surveyors were present to cover both sides of the building. Surveyors used the following full-spectrum bat detectors to record and identify any bats heard: Elekon Batlogger M and Anabat Scout.

Night Vision Aids (Canon XA50) and infrared floodlights were set up to record during the survey to reinforce the surveyor's observations when light levels were low and to allow for detailed analysis of any emergence and bat activity if necessary.

Surveyors primarily focused on identifying any bats emerging from roosts in the building, however general bat activity (i.e. foraging) on the site was also recorded.

Weather conditions for the survey are shown in Table 2 below.

Table 2: Weather conditions recorded during dusk emergence survey.

Date	Survey Timing	Sunset Time	Start/End of Survey	Temp °C	Wind (Beaufort Scale)	Cloud Cover	Rain
25.08.24	Dusk	20:16	Start: 20:01	16	2-3	100	Dry
			End: 21:45	15	3	50	Dry

3.3 Personnel

The surveys were led by Eleanor Weir, an experienced ecologist who has worked as a professional ecological consultant for 22 years. Eleanor holds a current Natural England bat licence (Level 2: 2015-12689-CLS-CLS) and is a full member of CIEEM. Eleanor has held a Natural Resources Wales bat licence for many years which has recently elapsed and is currently being re-applied for. No bats were disturbed during the survey.

Eleanor was assisted on the preliminary roost assessment and emergence survey by Sam Cheshire who is an assistant ecologist with two seasons of bat survey experience and is working towards his bat licence.

3.4 Survey Constraints

Bats

Bats can use several roost sites throughout the season, May to August, and dusk surveys during this time are likely to be a 'snap-shot' of the overall use of the site. Surveys between May and mid-August should determine if a maternity roost is present, as well as any regularly used, non-breeding, summer roosts. Surveys in late August to September may miss the presence of maternity roosts which can disperse throughout August, but these later surveys can show the presence of transitional and mating roosts.

4. RESULTS

4.1 Preliminary Roost Assessment

The site comprised a semi-detached two-storey traditional farmhouse, with a double-pitched slate roof and rendered brick walls. On the rear (north) side of the roof, the lower half of the roof was a shallower pitch and had a vaulted ceiling inside. The front (south) side of the roof had solar panels.

The upper half of the roof had a roof space which was around 1.5m high and the inspection noted the presence of bitumen underfelt lining the slates, and fibreglass insulation on the floor. No evidence of bats was found in the roof space. The owner mentioned the presence of wasp nests in the roof.

Externally in the proposed area of works the slates were generally well fitting with no missing or slipped slates. There were occasional gaps under the eaves which allowed potential access to the wall plate. No evidence of bats was found in this area and given the limited areas for bats to roost it was assessed to be of 'low' potential for roosting bats.

The rest of the roof was likely to be of moderate potential for roosting bats due to occasional gaps under slates and ridge tiles.

4.2 Dusk emergence bat survey

A dusk emergence survey undertaken on 25 August 2024 found no bats emerged from the building. The first pass was of soprano pipistrelle *Pipistrellus pygmaeus* at 31 minutes after sunset, which was seen commuting through the site from east to west. Following this, occasional passes of common pipistrelle *Pipistrellus pipistrellus* and noctule *Nyctalus noctula* were recorded, but these bats were commuting through or over the site. There was no sustained foraging recorded on the site.

4.3 Nesting Birds

There were several areas with bird droppings stuck to the wall under gaps in the eaves, indicating the likely presence of nesting house sparrows *Passer domesticus* during the breeding season.

4.4 Photographs

Plate 1: Woodlands Farm showing north (rear) elevation where work is planned



Plate 2: Bird droppings under eaves indicating likely house sparrow nest site



5. PRECAUTIONARY WORKING METHOD STATEMENT

5.1 Overview

No roosting bats were found during the inspection or the emergence survey.

Although it is considered to be low risk for bats to be roosting in the area of works, there are some features (notably gaps under the eaves) in the area of works which are potentially suitable for small numbers of roosting bats at any time, and by nesting birds during the breeding season (March to August inclusive).

The following Method Statement sets out precautionary measures for contractors to follow during works to ensure that bats and nesting birds are protected.

All contractors working on the roof should be asked to read and follow this Method Statement.

5.2 Potential Impacts

Proposed Works

Re-roofing of lower part of roof and removal of chimney and construction of dormer extensions on north (rear) side of roof. Changes to some of the windows on north elevation.

Potential Impacts on Roosting Bats

If bats were present, they would most likely be roosting under the eaves on the wall plate, as the majority of slates were tight and well fitting. However, they only need a very small gap (1cm) to access a roost and can crawl for some way to their roosting spot. Removal of slates particularly along the eaves and around chimney could disturb or injure roosting bats if present.

Potential Impacts on Nesting Birds

Re-roofing and dormer extensions could disturb or damage house sparrow nests if undertaken during their active breeding time (March to August inclusive).

Re-roofing and dormer extensions could block house sparrow access points and reduce or remove nesting habitat in future.

5.3 Timing

No evidence of roosting bats was found during the surveys but there is a small risk of individual bats roosting in the roof at any time. The roof strip should ideally **commence** before the main bat hibernation period (mid - late November to February inclusive), to avoid the small risk of disturbing hibernating bats. If this is not possible, the roof strip should be undertaken in a period of milder weather (above 8°C) when any bats are likely to be occasionally active.

Nesting birds may be present under the eaves between March and August inclusive. It is therefore recommended that the roof strip commences outside of this period, to avoid disturbing or damaging active nests. If this is not possible, a nesting bird survey would be required within 24 hours prior to

works commencing, to confirm whether active nests are present or not. If present, work would have to be delayed until fledglings have left the nest.

5.4 Removal of slates

Slates should be removed carefully by hand, avoiding hammering where possible. The slate should be carefully lifted upwards, bearing in mind that bats can cling to the back of the slate, so being very careful using any tools for prising up. A check must be undertaken for bats both underneath the slate (as they can cling to the back of the slate or tile) and in the area where the slate was removed. It is important not to slide slates off the roof without a check underneath the slate first.

Whilst removing slates, keep checking for any signs of bat droppings, which are small, black and crumbly. Droppings indicate that a roost is present and if found or suspected, work must stop immediately and further advice sought from a licensed bat ecologist.

The roof lining should be carefully peeled back and a check for bats which often roost on the wall plate at the eaves, on wall tops along the verges and under chimney flashing. If a bat or any droppings are found, work must stop immediately, and if safe to do so without injuring or squashing the bat, the slate carefully replaced over the bat.

Bats must not be handled or moved unless in obvious danger (e.g. exposed or on the ground) or with an obvious injury. In this case, gloves must be worn, and the bat carefully moved into a box with air holes and a tea towel or rag for it to hide under. A licensed bat ecologist must be contacted immediately and if injured, the bat taken to a specialist bat carer or wildlife hospital. In this case, works must stop until further advice has been sought. A Natural Resources Wales licensed bat ecologist will be required to assess the roost and potentially a licence may be required.

5.5 Re-instatement of Features

House sparrows are a 'Red List' species (Stanbury et al, 2021), and one of the reasons for significant population declines of this species is the loss of nesting habitat in buildings. It is therefore recommended that provision is made for this species to continue nesting under the eaves.

It is understood that the gaps at the eaves are due to be retained during re-roofing for ventilation. Old nesting material can be removed as long as it is not an active nest, i.e. with eggs, chicks or fledglings (N.B. if works are being undertaken outside of the nesting season i.e. September to February, sparrow nests are unlikely to be active).

Access gaps need to be 32mm wide and at least 28mm high for house sparrows, and ideally would recreate the existing gap sizes and locations being used by birds.

Bats require access points of only 10mm high x 20mm wide and creating several additional gaps of this size under the eaves will provide potential bat roost access points for future.

If recreating bird access into the eaves is not possible, at least three woodcrete house sparrow boxes should be mounted 1 – 2m apart under the eaves on the wall of the property (north facing is ideal so that they do not receive too much heat in the summer). However, it is preferable and cheaper to recreate access to permanent nesting locations in the eaves.

Example suppliers of woodcrete sparrow boxes:

Unitura woodcrete box <https://www.nhbs.com/unitura-external-sparrow-box>

Woodcrete single box <https://www.wildcare.co.uk/woodstone-single-chamber.html>

6. REFERENCES & RESOURCES

Collins, J. (ed) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. *British Birds* 114: 723-747

APPENDIX 1

FIGURE 2: Bat Survey and Nesting Bird Mitigation

