

Midland Ecology

Working with you

Bersham Hall, Wrexham, LL14 4HS

Prepared for QEwC Ltd

Bat Surveys - Presence/Likely-Absence

September 2020

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Executive Summary

Background

The survey follows Collins (2016) Good Practice Guidelines allowing for Preliminary Roost Assessment, and dusk/dawn surveys. It provides recommendations for mitigation/compensation, if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section. The following report (which has been prepared with due consideration for various best-practice guidance and methodologies, including those of the Chartered Institute of Ecology and Environmental Management (CIEEM 2016) and BS 42020, details the findings and recommendations for the site at Bersham Hall, Wrexham, LL14 4HS.

The client commissioned Midland Ecology Ltd. to undertake surveys to confirm bat presence/likely-absence¹, and roost characterisation if bats are present, as the proposals include converting the garage into a dining room, requiring the felling of the four trees behind the building as well.

Results and Findings

On the first (dawn) survey, no bats were observed emerging from the building. Only light pipistrelle foraging activity was observed in the area.

On the final (dusk) survey, no roosting activity associated with B1 was observed. Light-moderate bat activity was detected on and around the site during the survey.

No bat activity was observed associated with the building on either survey visit; although commuting and foraging bats were observed both on and adjacent to site.

The findings suggest the likely-absence of roosting bats within the building.

Bat activity levels on site were found to be low, with no heavy use of any specific features identified.

Impact Assessment and Recommendations

As the likely-absence of roosting bats within the building has been established, and no significant commuting or foraging routes observed; no impacts on bats are anticipated from the proposed works.

This survey result is valid for a period of 24 months from the final survey date. Should works not take place within that time period, then an update survey may be required.

¹ It is not currently scientifically possible to prove an absence, so an assessed absence is usually referred to as a "likely-absence".

1.0 Introduction

The client, QEwC Ltd, has commissioned Midland Ecology Ltd. to undertake Bat Presence/Likely-Absence Surveys for the site at Bersham Hall, Wrexham, LL14 4HS. Planning permission is being sought for converting the garage into a dining room, requiring the felling of the four trees behind the building as well..

A previous Preliminary Roost Assessment, conducted by Midland Ecology Ltd. on the 1st August 2020 found moderate potential for roosting bats within the garage. This assessment recommended two surveys to confirm the entrance/egress points into the building and to identify species and levels of use. It was specified that these should consist of one dusk emergence survey and a separate dawn re-entry survey undertaken within the bat activity period (May to September), to be spaced a minimum of two weeks apart.

The survey can be conducted between May and September with the optimal season for surveying maternity colonies limited to mid-May to August inclusive, however it can also be limited due to bad weather, when bats are less active.

The aims of the survey were:

- To find or record the emergence of bats from a building or built structure.
- To find roosts by tracking back bat flight paths or observing dawn flight activity at roosts.
- To determine presence/likely-absence of species i.e. the species present in a given area.
- To determine the intensity of bat activity both spatially and temporally i.e. to help estimate bat populations.
- To determine the type of activity, most usually foraging (e.g. by feeding buzzes), commuting (e.g. by high directional pass rates) and mating (e.g. by mating social calls).

If bats, evidence of their recent activity or the emergence of bats from a roost are found during our survey, this report will make recommendations for further survey work and/or design mitigation, where this is consistent with national guidelines, and assessed appropriate by the surveyor in the context of the proposal. These recommendations will be based on an evaluation of which of the following roost categories may be present onsite (if any):

Table 1: Bat roost status definitions

Status	Description
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Hibernation Site	Where bats may be found during the winter. (This is assessed within the context of this report).
Daytime Summer Roost	Used by males and/or non-breeding females (Seasonal limitations prevent robust analysis of this).
Night Roost	Where bats rest between feeding bouts during the night but are rarely present during the day.
Feeding Roost	Where bats temporarily utilize feeding perches and stations to eat an item of prey.
Transitional (or Swarming) Site	Where bats may be present during the spring or autumn (This cannot be assessed within the context of this report).

Summary of legislation and National Planning Policy that protects bats:

- Conservation of Habitats and Species Regulations 2017.
- Wildlife and Countryside Act 1981 as amended.
- Countryside and Rights of Way Act 2000.
- Natural Environment and Rural Communities Act 2006.
- National Planning Policy Framework (“NPPF”).
- Circular 06/05.

This legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport a bat or any part of a bat, unless acquired legally.
- Sell, barter or exchange bats, or any part of a bat.

A bat roost is well-defined by the legislation as the ‘resting place’ of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat (or bats) rest, feed or sleep.

2.0 Method

The survey follows Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).

Surveyors are positioned around the building(s), tree or structure in order to cover all elevations. The survey then observes for emerging or re-entering bats from suitable features such as holes, cracks and crevices. Notes on commuting and foraging bats are also made in the surroundings.

If a deviation from the guidelines has been made the reason and justification will be explained below: -

No deviation from the standard guidelines has been made for this survey.

Table 2: Habitat value (likelihood) of bat presence assessed against Collins (2016) guidelines Source: Adapted from Collins (2016) pp 35, Table 4.1.

Likelihood of bat presence (Habitat Value)	Features that bats can and will use, regardless of evidence being present.
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces. Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.
Lower likelihood of bat presence.	Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. Small, cluttered roof space. Buildings and built structures comprised primarily of prefabricated steel and sheet materials. Cool, shaded, light or draughty roof voids.

	Roof voids with a dense cover of cobwebs and no sections of clean ridge board. High level of regular disturbance. Highly urbanised location with few or no mature trees, parkland, woodland or wetland. High levels of external lighting.
Negligible likelihood of bat presence.	No features suitable for roosting, minor foraging or commuting.

Notes on using this table

1 The features listed here may not be indicative of use of the site by bats during winter or spring.

2 Pre-1914 buildings may present the greatest likelihood of providing roost space for bats due to their design, materials used and age. Pre-1990 buildings, especially when close to good foraging habitat, and with favoured features such as cavity walls and soffits, also have a high likelihood of providing roost sites for some bat species.

3 Post-1990 buildings are generally less likely than older buildings to house roosts; however, some modern designs provide access to suitable roosting spaces for bats. Pipistrelles in particular occupy modern buildings and built structures providing that there are suitable access gaps (> 8mm) and provided the structure has appropriate characteristics for roosting.

3.0 Results

The following section details the results of the desk study, inspection and survey. The desk-study includes information from the magic.degfra.gov.uk database, other online information sources, and map/aerial photo information. The field surveys section details the building, structure or tree (numbered for reference), description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

3.1.1 Designated sites

There are three statutory designated sites within the 2km study area:

- Gatewen Marsh SSSI (4.5Ha of woodland and meadow) located 1.95km north east to the site.
- Stryt Las A'R Hafod SSSI (69Ha of grassland/ meadow with several ponds) located 2km south to the site.
- Johnstown Newt Sites SAC (an important wildlife site containing ponds made specifically for Great Crested Newts and amphibian conservation) located 2km south to the site.

The site falls within the Impact Risk Zone of one Site of Special Scientific Interest (SSSI) further afield; Afon Dyfrdwy (River Dee) SSSI approx. 7km running east to south-west to the site.

The site does not share similar habitats or strong connectivity with either of these SSSI however.

3.1.2 Landscape

A review of aerial photographs and OS maps shows the site is in close proximity to some fields so the gardens and trees could feature within some commuting routes for bats. The site is unlikely to play an important role within the wider landscape context however, as it does not appear to link nearby woodlands or other patches of habitat.

3.2 Field Surveys

The following section details the structures reference, bats located, evidence located and observed emergence/re-entry.

Table 3: Survey conditions

Date	Timings Start/end sunset/ sunrise	Structure reference/ location	Equipment Used	Weather: Start	Weather: Finish
24/08/2020	04:05 - 06:35 Sunrise: 06:05	B1 - Garage	3x Magenta 4 3x EMT2P	Temp: 13°C Dry Cloudy: 50% Wind: 1/8 Rain: None	Temp: 13°C Dry Cloudy: 25% Wind: 1/8 Rain: None
Comments (to include # of surveyors used for each visit): Three surveyors were positioned around the building (figure 1).					
07/09/2020	19:15 - 21:45 Sunrise: 19:45	B1 - House	1x Batbox Duet 2x Magenta 2x Echo meter touch	Temp: 17°C Dry Cloudy: 80% Wind: 1/8 Rain: None	Temp: 16°C Dry Cloudy: 50% Wind: 1/8 Rain: None
Comments (to include # of surveyors used for each visit): Three surveyors were positioned around the building (figure 1).					

Table 4: Results and observations of the surveyors located around B1. Surveyor locations, bat activity and emergence/re-entry points are shown on maps in appendix 1 of this report.

Surveyor Location	Dates and Times	Bat Activity Observed
A	24/08/2020 04:05 - 06:35	05:04 - Common pipistrelle (CP) <i>Pipistrellus pipistrellus</i> seen foraging around an ash tree behind B1, from the east. 05:12, 05:23, 05:26, 05:40, 06:03 - CP heard (not seen).
B	As above	05:04, 05:12, 05:21, 05:41 - CP heard (not seen)

		05:26 - CP seen commuting southwards, across the front of B1.
C	As above	05:04, 05:11, 05:20, 05:26 - CP heard (not seen)
Conclusion: 24/08/2020 - no bats were observed emerging from the building. Only light pipistrelle foraging activity was observed in the area.		
A	07/09/2020 19:15 - 21:45	20:04, 20:11, 20:16, 20:40, 20:42, 20:54, 21:04, 21:07, 21:17, 21:21 - CP heard (not seen) 20:24, 20:27, 21:05 - Noctule (N) <i>Nyctalus noctula</i> heard (not seen) 20:29 - CP seen flying east, towards B1 21:19 - Soprano pipistrelle (SP) <i>Pipistrellus pygmaeus</i> heard (not seen)
B	As above	20:11 - CP seen commuting eastwards, towards B1, from behind the surveyor's position. 20:12, 20:16 - CP seen commuting south-west, from north of B1. 20:25, 21:05, 21:32 - N seen (not heard) 20:29, 20:42, 20:53, 21:36 - Pipistrelle spp. heard (not seen) 21:17 - Brown long-eared bat (BLE) <i>Plecotus auritus</i> heard (not seen)
C	As above	20:06, 20:11, 20:12, 20:16, 20:30, 20:42, 21:04, 21:18, 21:29 - CP heard (not seen) 20:23, 20:28 - N heard (not seen)
Conclusion: 07/09/2020 - No roosting activity associated with B1 was observed. Light-moderate activity was detected on and around the site during the survey.		

4.0 Conclusions, Discussion and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

Conclusion and Discussion

No bat activity was observed associated with the building on either survey visit; although commuting and foraging bats were observed both on and adjacent to site.

The findings suggest the likely-absence of roosting bats within the building.

Bat activity levels on site were found to be low, with no heavy use of any specific features identified.

Potential Impact

As the likely-absence of roosting bats within the building has been established, and no significant commuting or foraging routes observed; no impacts on bats are anticipated from the proposed works.

Recommendations

No further surveys recommended.

This survey result is valid for a period of 24 months from the final survey date. Should works not take place within that time period, then an update survey may be required.

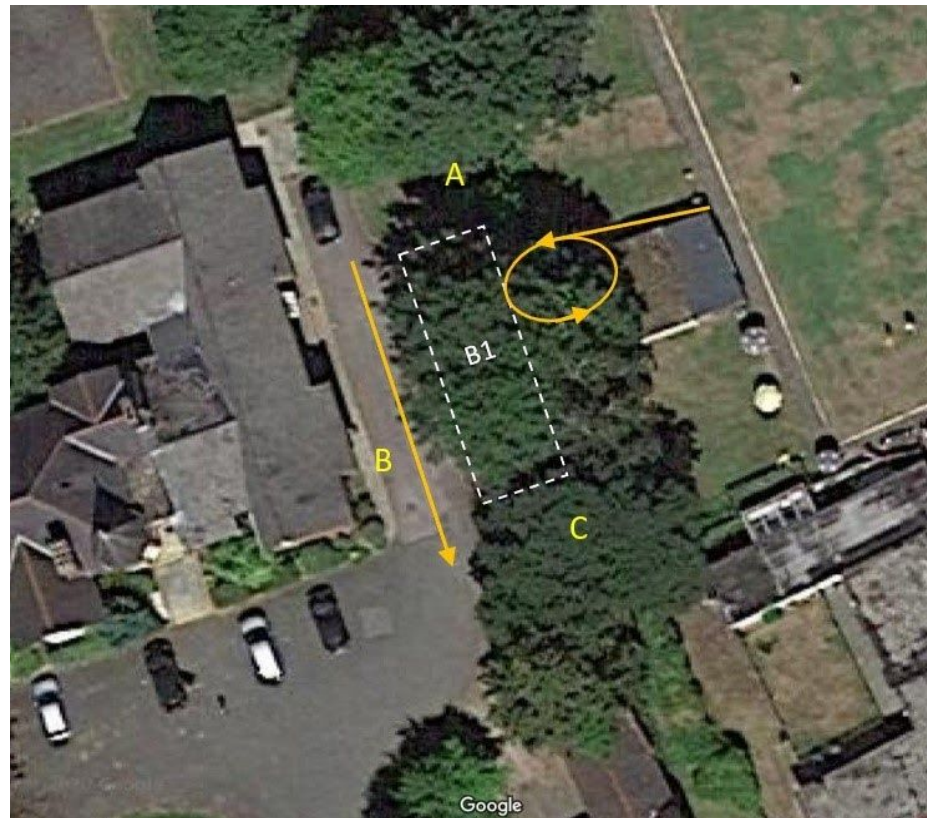
5.0 References

- Collins, J. (ed), (2016), Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition, BCT.
- Mitchell-Jones, A.J. (2004), Bat Mitigation Guidelines, English Nature, Peterborough
- National Planning Policy Framework, 2012
<http://www.communities.gov.uk/publications/planningandbuilding/nppf>
- Office of the Deputy Prime Minister (2005). Circular 06/2005: Biodiversity and Geological Conservation. Para.99
<http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf>

Appendix 1: Activity Maps

24/08/2020 - Dawn Activity

- A** Surveyor Location
-  Bat Activity



07/09/2020 - Dusk Survey

- A Surveyor Location
- Bat Activity

