

Preliminary Bat Roost Assessment (PRA) Report

Project: Bowling Bank Farm, Worthenbury, LL13 0AW

Client: Mr D Hopkins

Date: June 2018

Reference: 120618MM



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REPORT DETAILS

Reference no.	120618MM
Version	001
Status	FINAL

QUALITY ASSURANCE

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Date of review	12 th June 2018

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EXECUTIVE SUMMARY

The contents of this report detail a Preliminary Roost Assessment (PRA) and nesting bird inspection undertaken during June 2018 at Bowling Bank Farm, Worthenbury, LL13 0AW (hereafter referred to as '**the site**'). The site is centred on approximate Ordnance Survey Grid Reference (OSGR) SJ 42287 46030.

The findings of this report have been used to inform a planning application for proposed modifications/ additions to the existing property. Proposals include the conversion of currant barns into a wedding venue.

The application site, set within a rural environment, consists of an L-shaped barn and stables (**B1**) surrounded by disturbed ground and pasture within the wider landscape.

B1 is deemed to offer 'negligible' bat roosting opportunity owing to a lack of evidence suggesting use by bats (such as droppings, feeding remains, urine stains etc.) and features deemed suitable for roosting bats.

No further bat surveys are required on **B1**.

A minimum of one (1) Schwegler 2F bat box is recommended to be installed within the development footprint, either to a mature tree or existing building.

No bird nests were observed during the survey.

A minimum of one (1) Schwegler 1B bird box is recommended to be installed within the development footprint, either to a mature tree or existing building.

No concerns are evident regarding invasive species on site.

No further surveys are deemed necessary.

BAT LEGISLATION

All species of British bat are listed as a European Protected Species (EPS) on Schedule 2 of the Conservation Regulations (Annex IV (a) to the Habitats Directive). This affords them strict protection under Regulation 43 of the Conservation of Habitats and Species Regulations 2017, making it an offence to:

- i. Deliberately capture, injure or kill a bat;
- ii. Deliberately disturb bats in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young;
- iii. Deliberately damage or destroy a roost; or
- iv. Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or part thereof;

Additional protection for bats is also afforded under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place.

Furthermore, seven of the UK bat species are also listed as Priority Species on the UK BAP, highlighting them as species of conservation concern.

1. INTRODUCTION

1.1 COMMISSION AND PROPOSALS

- Pearce Environment Ltd were commissioned by Mr D Hopkins to undertake a Preliminary Roost Assessment (PRA) and nesting bird inspection at Bowling Bank Farm, Worthenbury, LL13 0AW (hereafter referred to as '**the site**'). The site is centred on approximate Ordnance Survey Grid Reference (OSGR) SJ 42287 46030.
- The findings of this report have been used to inform a planning application for proposed modifications/ additions to the existing property. Proposals include the conversion of currant barns into a wedding venue.

1.2 AIMS

- This report sets out the findings of a PRA and nesting bird inspection undertaken at the site by Pearce Environment Ltd during June of 2018.
- The aims of this report are to:
 - i. Identify potential bat roost features and/ or evidence of bat activity in/ on any building(s) on the site;
 - ii. Determine the presence/ likely absence of birds nesting in/ on any building(s) on the site;
 - iii. Ascertain the requirement for further survey(s), where necessary;
 - iv. Determine the need for licensing, Reasonable Avoidance Measures (RAM's) and mitigation and/ or compensation measures, where necessary.

1.3 BACKGROUND

- There are no known historical ecological reports relating to the application site itself.

2. METHODOLOGY

- This section summarises the methodologies used during the survey(s), in line with the aims set out in **Section 1** of this report.

2.1 DESK STUDY

- A species records search to support the findings of the Preliminary Roost Assessment (PRA), utilising freely-available online data sets, is considered sufficient for the purposes of this study (**Image 2.1**).

Table 2.1 Summary of resources used and information utilised during the desk study (2018)

Organisation/ Resource	Information Assessed (search distance from site boundary)
Cofnod ¹	• Protected/ UK BAP species records (1km) • Statutory designations (1km) • Non-statutory designations (1km)

2.2 SPECIES SURVEYS

- The site visit was undertaken during a daytime visit on 4th June 2018. This visit was carried out at a temperature of 21°C and in dry, clear conditions. This time of year is considered to be within the optimum season for undertaking a PRA survey.
- The survey was performed by Mark Morgan BSc (hons), an experienced ecologist and holder of Natural England (NE) licence for great crested newts (licence number 2017-32019-CLS-CLS). Mark possesses a 1st class degree in Plant Biology from the University of Aberystwyth, with expertise in bats, great crested newts and badgers.

Bats

Preliminary Bat Roost Assessment: Built Structures

- A daytime assessment of all built structure(s) on site was undertaken to determine their potential to support roosting bats. All external features considered potentially suitable for bats were identified and assessed. Signs of bat activity such as droppings, feeding remains and urine stains were also searched for around all accessible areas. The potential suitability of the structures investigated was assigned a rating of low-to-high in accordance with section 5.2 of the '*Bat Conservation Trust's Good Practice Guidelines*'² (**Appendix 1**). An internal assessment of all accessible areas was undertaken for evidence of roosting bats such as droppings, feeding remains and urine staining.
- Recommendations for further survey requirements are based on guidelines summarised in Table 7.3 of '*Bat Conservation Trust's Good Practice Guidelines*' (**Appendix 1**).

¹ Cofnod – Local Environmental Records Centre for North Wales website (www.cofnod.org.uk)

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

Nesting Birds

- An internal and external assessment of any built structure(s) on site was undertaken by an experienced ecologist, to identify the presence of habitat/ features suitable for nesting birds.
- A search for active/ disused birds' nests was undertaken, where appropriate.

2.3 LIMITATIONS

- The entirety of the building was fully accessible during the survey.
- Whilst we make every effort to meet the client brief, no site visit can ensure prediction of the natural environment such as movement of species in response to variables such as weather and seasonality.
- As with any survey, it is a documentation of what the surveyor observes on the specific survey day and their interpretation of those observations.

3. RESULTS AND RECOMMENDATIONS

3.1 SITE DESCRIPTION

- The site is set on the edge of the rural village of Worthenbury, approximately 11 km southeast of Wrexham town (**Figure 3.1**).
- Pasture is located to the immediate north, south and east of the site. Scattered property lies to the west. The site itself constitutes disturbed ground and scattered trees (**Figure 3.2**).

Figure 3.1 Site location & application boundary (outlined in red) reproduced using freely-available online mapping resources (2018)



Figure 3.2 Aerial view of the site (outlined) and near surrounds, reproduced using freely-available online mapping resources (2018)



3.2 BROAD HABITATS

Built Structures

- The site consists of one (1) built structure, summarised below (**Figure 3.2**):
 - **B1** – adjoining barn and stables (**Image 3.3**).

Hardstanding/ Disturbed Ground

- **B1** is set upon concrete hardstanding, with a compacted earth track surrounding the building (**Image 3.4**).

Image 3.3 South-eastern aspect of **B1**



Image 3.4 Hard earth track leading on site and surrounding **B1**



3.3 SPECIES RECORDS

- A database search of a 1km radius surrounding the site during the course of the desk study was undertaken (**Appendix 2**).
- Protected species of mammal include:

Common pipistrelle
Soprano pipistrelle
Noctule
Badger
Water Vole
Otter

Pipistrellus pipistrellus
P. pygmaeus
Nyctalus noctula
Meles meles
Arvicola amphibius
Lutra lutra

- A moderate array of birds has been recorded in the wider area. Bird species recorded and listed under Schedule 1 and Schedule 2 of the Wildlife and Countryside Act 1981, include:

Kingfisher
Barn owl
Red Kite
Canada goose
Mallard

Alcedo atthis
Tyto alba
Milvus milvus
Branta canadensis
Anas platyrhynchos

3.4 PRELIMINARY ROOST ASSESSMENT (PRA)

- A daytime inspection was undertaken on the 4th June 2018 to assess the potential of built structure(s) on the site to support roosting bats. A full description of those features considered suitable for roosting bats are described and illustrated using site photographs provided below.

B1 (L-shaped barn and stables)

- **B1** (SJ 42289 46033; **Image 3.3**) is a single-storey L-shaped barn constructed with a breezeblock base, timber cladding and corrugated metal roofing (**Image 3.5**). The western portion of **B1** constitutes stables (**Image 3.6**), the central and eastern portions consist of storage.
- Externally and internally, **B1** is in good condition. Potential bat ingress/ egress opportunity is present around the entirety of the building between the timber cladding (**Image 3.7**).
- The stables contain little light infiltration and the roof contains a single skin of corrugated metal (**Image 3.8**).
- The adjoining storage barn towards the central and eastern portions of the building contain a single-skin roof of corrugated metal with steel roof supports (**Image 3.9**). Much light infiltration was noted in the eastern portion of the building, deeming it unsuitable for roosting bats.

- Owing to the absence of evidence indicative of the use of **B1** by bats, and given the absence of several potential roosting features, this building is considered to offer 'negligible' bat roosting potential.

Image 3.5 The eastern portion of **B1** with timber cladding, corrugated metal roof and breezeblock base



Image 3.6 The western portion of **B1** constituting as stables



Image 3.7 Potential bat ingress/ egress opportunity between cladding around building



Image 3.8 The stables containing little light infiltration



Image 3.9 Eastern portion of **B1** with steel roof supports and light infiltration, unsuitable for bats



Bat Foraging/ Commuting Habitat

- The near surrounds constitute good foraging and commuting habitat for bats with mature hedgerows, water bodies and scattered tree growth.

Nesting Birds (B1)

- No bird nests or signs of previous nesting were observed during the survey.
- **B1** is considered to offer 'negligible' bird nesting potential.

CONCLUSIONS

4.1 STATUS OF BATS ON THE SITE

- **B1** is deemed to offer 'negligible' bat roosting potential given the lack of evidence or features to suggest use of this building by bats.
- The near surrounds to the site offer good foraging and commuting habitat for bats.
- Common pipistrelle, soprano pipistrelle and noctule have been recorded within 1km of the site.

4.2 SIGNIFICANCE TO DEVELOPMENT

- The proposals involve alterations to **B1**.
- Works to **B1** are not anticipated to negatively impact upon bats, given the likely absence of bats roosting within this building, based on the results of the PRA.

4.3 RECOMMENDATIONS

- No further survey with regards to **B1** is considered necessary.
- To enhance the ecological value of the site it is recommended that a minimum of one (1) Schwegler 2F bat box (**Image 3.10**) is incorporated on site.
- Bat boxes should be installed onto an existing building or mature tree at a height no less than 4m and preferably orientated in a south or southwestern aspect.

Image 3.10 Example of Schwegler 2F bat box



4.4 STATUS OF NESTING BIRDS ON THE SITE

- **B1** is deemed to offer 'negligible' bird nesting potential.
- A moderate array of bird species has been recorded within the local area.

4.5 SIGNIFICANCE TO DEVELOPMENT

- Works to **B1** are not anticipated to negatively impact upon nesting birds.

4.6 RECOMMENDATIONS

- A minimum of one (1) Schwegler Woodcrete (1B) box, or equivalent, is recommended as an enhancement for common passerine bird species on the site (**Image 3.11**). This is to be installed onto any suitably mature tree or fencing on or near to the application site, at a height of no less than 2m and orientated in a southerly or westerly direction. Nest boxes are to be maintained for the lifetime of the development.

Image 3.11 An example of Schwegler 1B Woodcrete boxes



4. BIBLIOGRAPHY

Cofnod – North Wales Environmental Information Service website (www.cofnod.org.uk)

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

Appendix 1 Tables 4.1 and 7.3 from *Bat Surveys for Professional Ecologist: Good Practice Guidelines*³

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure 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^a 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^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a 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).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or 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 ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.^b

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