



JM ECOLOGY

**CORPORATE ARCHITECTURE
HOLLY TREE FARM
OXTON
BAT SURVEY REPORT**

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1. BACKGROUND INFORMATION

- 1.1 This Preliminary Bat Roost Assessment (PBRA) has been undertaken on behalf of Alex McIntyre Architects in respect of outbuildings at Holly Tree Farm, Oxton. It has been produced to inform proposed re-development of the Site.

Site Context

- 1.2 The Site is located in rural Nottinghamshire and the outbuildings are set within the land associated with Holly Tree Farm. The surrounding land supports residential properties woodland and agricultural land with roads, hedgerows, watercourses and tree lines dissecting the landscape.

Figure 1.1: Site Context



Purpose of Report

- 1.3 The purpose of this assessment is to provide detail on the features which were assessed in term of suitability to roosting bats. Scoping for nesting bird was a secondary objective of the survey.



2. LEGISLATION AND POLICY

Bats

- 2.1 British bats are fully protected within UK Law under Wildlife and Countryside Act 1981 (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:
- Intentional or reckless killing, injury, taking;
 - Damage to or destruction of or, obstruction of access to any place of shelter, breeding or rest;
 - Disturbance of an animal occupying a structure or place;
 - Possession or control (live or dead animals);
 - Selling, bartering or exchange of these species, or parts of.
- 2.2 This law is reinforced by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These Regulations also prohibit:
- the deliberate killing, injuring or taking of bats;
 - the deliberate disturbance of any bat species in such a way as to be significantly likely to affect:
 - their ability to survive, hibernate, migrate, breed, or rear or nurture their young;
 - the local distribution or abundance of that species.
 - damage or destruction of a breeding site or resting place;
 - the possession or transport of bats or any other part of.
- 2.3 In addition, seven British bat species are listed as Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act, 2006. These are barbastelle (*Barbastellus barbastellus*), Bechstein's (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*).
- 2.4 The Wild Mammals Act 1996 (as amended) also affords protections to wild mammals.

Birds

- 2.5 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:
- Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - Take or destroy the egg of any wild bird.
- 2.6 For birds listed on Schedule 1 of the Act, it is an offence to disturb any bird while it is building a nest, is at or near a nest with young; or disturb the dependant young of such a bird.



- 2.7 Species listed in Annex 1 of the EU Birds Directive 1994 are required to have special conservation measures taken to preserve their habitats and sites to be classified as Special Protection Areas (SPAs) where appropriate.



3. METHODOLOGY

Preliminary Bat Roost Assessment

- 3.1 Site survey was undertaken in June 2023 by Joe McLaughlin BSc (hons) MCIEEM. Joe has over 10 years' experience in survey and site assessment for bat species and is appropriately qualified for the surveys based on the CIEEM competencies for carrying out species surveys (CIEEM, 2017). Joe is registered to use a level 2 personal bat licence (2016-26529-CLS-CLS), acts as the named ecologist on numerous mitigation licences and is one of a small number of consultants nationwide registered under the Bat Mitigation Class Licence (RC210); all of which further demonstrates his competence to lead this type of work.
- 3.2 The aim of the visit was to gather baseline survey data on the building and adjacent land in respect of roosting bats. In addition, the methodology was extended to include a search for incidental evidence of nesting bird. The survey and reporting were complete in accordance with best practice (Collins, 2016 & CIEEM 2017 and 2019).
- 3.3 Whilst not a primary consideration of this survey surveyors scoped for the potential presence of nesting bird presence within the surveyed structure.

Zone of Influence

- 3.4 The 'zone of influence' for a project is the area over which ecological features may be affected by changes as a result of the proposed project and associated activities.
- 3.5 For bats, the zone of influence may extend beyond the Site boundaries as far as 30km depending on the proximity of International Sites designated for bat species and if those qualifying species occur on the project Site. For this Site however, the zone of influence is unlikely to extend far beyond the ownership boundary.

Assessment of Effects

- 3.6 In order to assess the significance of effects, ecological features that could potentially be affected by the development have been identified and the potential effects quantified (e.g. extent, magnitude and duration).
- 3.7 For this assessment a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives or for biodiversity in general. Conservation objectives may be specific (for a designated site) or broad (for a national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity) (CIEEM, 2019).
- 3.8 Only where significant effects are predicted has mitigation been proposed. Additionally, precautionary measures have been included and these are detailed within this document for robustness. The potential for mitigation and enhancement measures were then considered to avoid, reduce or compensate for any significant adverse effects, where possible in accordance with the principles of the mitigation hierarchy (CIEEM, 2019).
- 3.9 The current guidelines identify various bat species/roost characteristics and their associated habitat features likely to be important to bat conservation. In the context of bat work these include:



- Bat roost size and class;
- Bat species that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
- size of bat population, particularly large populations of bat species or concentrations of species considered uncommon or threatened in a wider context;
- bat species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change;
- ecosystems and their component parts, which provide the habitats required by bat populations and/or assemblages; and
- habitat connectivity and/or synergistic associations;

Significance Criteria

- 3.10 Significance of effects is defined using geographical context. Which is adapted on a project by project basis to suit the location of the assessment to accommodate regional variation in species/habitat distribution. These include international, national, regional, county; and, local.

Limitations

- 3.11 Despite extensive efforts made during the field survey to provide a comprehensive account of the site, it is important to acknowledge that no investigation can guarantee complete characterisation and accurate prediction of the natural environment. Moreover, it is crucial to recognise that natural and semi-natural habitats are prone to changes, including the potential colonisation of species subsequent to the conducted surveys.
- 3.12 In line with standard guidance, the results and recommendations within this report are valid for one year from the date of survey, assuming there are no significant changes to the survey Site or its immediate surroundings. Updated survey work may be required to support any future planning applications outside of this time period.
- 3.13 Specific guidance on the valid period of ecological survey data can be found at:

<https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>



4. BASELINE DATA

Bats

4.1 A Summary of the survey results are provided below under Table 4.1

Table 4.1: PBRA Summary

Building	Description	Potential Roosting Features	Bat Roosting Potential	Further Survey Required
B1	<p>Single storey red brick outbuilding with wooden doors (several open) and a deteriorated pantile roof with a small corrugated material lean to extension.</p> <p>Internally the building did not have a loft void and the roof, including timbers and tiles were exposed with extensive signs of weather damage and light ingress.</p> <p>One part of the structure supported hessian bags affixed to the roof timbers which provided potential roosting opportunities for bats,</p> <p>Gaps were noted at the wall top internally which bats could utilise for roosting; particularly the gable walls.</p>	<p>Open doors and gaps in the roof allowing ingress/egress;</p> <p>Gaps at the wall top internally;</p> <p>Hessian bags affixed to roof timbers provide roosting opportunities</p>	Low Potential	Yes
B2	<p>Open fronted and partially collapsed wood framed structure with corrugated sheet panel walls and roof.</p> <p>No potential roosting features identified or evidence of bats.</p>	None	Negligible	No

Foraging

4.2 A significant assemblage of foraging bats was considered unlikely on-Site. However, impacts to those individuals that do likely utilise the Site or the adjacent habitats cannot be ruled out as a result of any new artificial lighting installed as part of the development. Where new lighting is installed, in the absence of mitigation, a minor adverse effect on local foraging bats is likely.

Nesting Bird

4.3 No active nests or nesting birds were seen during the survey; however, due to the accessible nature of the buildings in their current state the risk of nesting bird occupying the structures is considered to be high.

4.4 In the absence of mitigation bird nests could be destroyed and individual birds could be killed or injured (or disturbed when nesting) during demolition. This would be a potentially minor adverse effect at a local level.



5. DISCUSSION AND RECOMMENDATIONS

Roosting Bats

- 5.1 B1 was assessed as providing 'Low' potential to support roosting bats and as such a single nocturnal is recommended between May and August. If roosting bats are found an additional two nocturnal surveys would need to be complete to inform an application to Natural England for a bat mitigation licence which would be required to legitimise the proposed demolition and re-development of the Site.

Foraging Bats

- 5.2 Any new lighting associated with the development should follow best practice guidelines outlined in Bats and Artificial Lighting in the UK (2018) to maintain suitable foraging habitats. No artificial light spill should occur towards any other buildings, trees or hedgerows (both on and off-Site).
- 5.3 Where no new lighting is installed or a bat friendly lighting strategy is implemented effectively potential adverse effects are reduced to negligible levels.

Nesting Bird

- 5.4 As all species receive legal protection during nesting, it is advised to conduct demolition works outside of the breeding bird season of March to August (inclusive). If it is necessary to conduct work within this period, it should be preceded by a nesting bird check conducted by an ecologist. Active nests found at any time will remain unaffected until all chicks have fledged.
- 5.5 With the mitigation proposed above risk of potential minor adverse effects on nesting bird are reduced to negligible levels.



Enhancement OpportunitiesBats

- 5.6 Opportunities for roosting bats should be incorporated into the final plan. These should be wall mounted or installed on mature trees within the land ownership boundary.
- 5.7 These should be positioned as close to the eaves as possible incorporated into the buildings brickwork or affixed to building or mature trees within the same landownership 3-5 metres high. They should be positioned in locations sheltered from strong winds and away from direct sunlight for a significant proportion of the day, usually south to south-west.
- 5.8 A total of two bat box features is recommended for the Site to provide an attractive addition to the Site for local bat assemblages.

Birds

- 5.9 Opportunities for nesting birds should be incorporated into the final masterplan. These could be mounted on existing mature trees within the land ownership boundary or mounted on the building. Bird boxes should be installed two to four metres above ground on the buildings and should offer unobstructed fly-in access. The boxes should face between north and east, thus avoiding full sun and prevailing wind.
- 5.10 A minimum of two nest box features should also be installed on-Site as part of re-development.



6. REFERENCES

- Bat Conservation Trust (2018) Bats and Artificial Lighting in the UK – Guidance Note 08/18.
- British Standards Institution (2013) BS42020:2013 Biodiversity – code of practice for planning and development. BSI Standards Ltd, London.
- Chartered Institute of Ecology and Environmental Management (2019) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017) Guidelines for Ecological Report Writing. CIEEM, Winchester.
- Collins J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust, London.
- Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework.
- Multi-Agency Geographic Information for the Countryside Website <http://www.magic.gov.uk/>



APPENDIX 1: SITE PHOTOS

Building 1









Building 2







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