



TIM MOYA ASSOCIATES

Bat Survey Report

Emergence Surveys

Canfield Moat
High Cross Lane West
Little Canfield
Essex
CM6 1TD

October 2022

220778-ED-01

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| Project | Canfield Moat |
| Report Type | Bat Survey Report |
| Author | Leigh-Ann Barran, Consultant Ecologist |
| Reviewed by | Simon Thomas MCIEEM, Director of Ecology |
| Original Report Date | 11/10/2022 |
| Updates | |

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NON-TECHNICAL SUMMARY

This report assesses bat roosting activity at the proposed development site at Canfield Moat, Little Canfield. The current proposals for the site include the extension of the existing property, demolition of outbuildings and construction of new residential properties within the site.

The site bat survey included the following:

- Two Bat Emergence Surveys of outbuilding B4, assessed as having moderate bat roosting potential

Key Findings:

- No bats were seen emerging from the building during the bat emergence surveys.
- Roosting bats are considered unlikely to be present and no further surveys are recommended.

1 INTRODUCTION

Background

- 1.1 This report has been instructed by Andrew Smith.
- 1.2 The current proposals for the site are for the extension on the existing property, demolition of outbuildings and construction of new residential properties within the site.

Site Description

- 1.3 The site comprises a residential property set within manicured grounds bounded on all sides by tree lines and hedgerows. A small woodland copse makes up the north-east corner of the site.
- 1.4 The site is 3.8 ha and the central grid reference is TL 59439 20932.

Previous Ecological Surveys

- 1.5 A Preliminary Ecological Appraisal had been prepared by Samsara Ecology (September 2020) which included a bat scoping assessment. The assessment identified the outbuilding B4 (garage) on site as having moderate potential for roosting bats due to the presence of a number of potential roosting features such as gaps at the eaves and under roof tiles.
- 1.6 To ascertain whether the buildings are used by roosting bats, in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), it was recommended that two further echolocation surveys (dusk and dawn) are carried out during the active bat survey season (May to August inclusive) to determine likely absence or confirmed presence of roosting bats in outbuilding B4.

Aims of Surveys

- 1.7 The bat emergence surveys aim to collect sufficient data to draw conclusions about the use of the buildings by roosting bats, primarily by observation of bats leaving or returning to the building at dusk and/or dawn.
- 1.8 This report contains the details of the survey methodologies and results of the surveys.

- 1.9 Survey findings will be used to assess the conservation value of the site for the bat species present and determine likely impacts of the proposed development and which type of mitigation measures (if any) would need to be employed.

Information supplied

- 1.10 This report has been prepared with reference to the following supplied reports and plans, showing the extent of the site boundary and the proposed development:
- Preliminary Ecological Appraisal (Canfield Moat House), Samsara Ecology, September 2020
 - Existing Site Location Plan, Anthony Jane Architecture and Interiors, May 2022 (10949/A1/26).
 - Existing Site Plan, Anthony Jane Architecture and Interiors, May 2022 (10949/A1/01).
 - Existing Site Plan Areas of Development, Anthony Jane Architecture and Interiors, May 2022 (10949/A1/02).
 - Proposed Site Plan, Anthony Jane Architecture and Interiors, March 2022 (10949/A1/06).
- 1.11 The above-named plans may be superseded or updated without warranting an update of this report, if the changes are insignificant to the impact of the development on biodiversity.

Legislation

- 1.12 All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

2 METHODS

Bat Emergence Survey Methods

- 2.1 Two bat emergence surveys were undertaken on 3rd August and 7th September 2022. These fall within the optimal period for bat emergence surveys. Survey methodology followed the Bat Conservation Trust's *Bat Surveys for Professional Ecologists* (Collins, 2016). Two dusk surveys were carried out according to recent guidance from the Bat Conservation Trust (BCT, 2022) which recommends a transition away from the previous standard use of dawn surveys, particularly as a method for presence/absence surveys, in favour of dusk surveys supported by night vision aids.
- 2.2 In order to provide coverage of all potential bat roosting features and access points, two surveyor positions were identified. See Appendix 1 for surveyor and building locations. The western side of the building was not covered by a surveyor as dense vegetation obstructed the building, preventing potential bat access. Where vegetation wasn't obstructive, no suitable bat roosting features were present.
- 2.3 Elekon Batlogger M and Elekon Batlogger M2 bat detectors were used to detect and record bat calls. Surveyor details are given in Appendix 2.
- 2.4 Infra-red cameras were used to supplement human surveyors by covering the darkest locations around the building. The camera models used were Canon XA11 and Sony Handycam NightShot, each with an additional infra-red torch. The camera positioned in the north was present on both surveys and was paired with an Echo Meter Touch 2 Pro bat detector to record bat activity (Appendix 1). The camera positioned to the south accompanied one of the surveyors on the first survey only. It was not considered necessary to deploy on the second survey as covering the building from three angles (two surveyors and one camera) was considered sufficient to observe all potential bat roost features.
- 2.5 Following the surveys, all infra-red footage was reviewed. The time and the nature of activity (e.g., emergence, re-entry, commuting/foraging) were noted and compared with recordings from the associated bat detectors.
- 2.6 Dusk surveys were commenced at least 15 minutes before sunset and continued for 90 minutes after sunset.
- 2.7 The weather conditions during the bat emergence surveys were as follows:

Table 1. Dates and weather conditions

| Date | Survey type | Sunset/sunrise time | Survey start | Survey end | Cloud cover (%) | Precipitation | Wind (Beaufort) | Minimum temperature (°C) |
|-------------|--------------------|----------------------------|---------------------|-------------------|------------------------|----------------------|------------------------|---------------------------------|
| 03/08/2022 | Dusk | 20:45 | 20:30 | 22:15 | 30 | None | 1 | 21 |
| 07/09/2022 | Dusk | 19:32 | 19:17 | 21:02 | 20 | None | 1 | 17 |

Limitations

- 2.8 As the attributes of the site and its potential for protected species, including bats, may change over time, this report is broadly considered valid for a duration of two years, after which time it is recommended that an update site assessment is undertaken.
- 2.9 Bat emergence surveys, even when undertaken during the optimal season and over the recommended number of occasions, can only take a snapshot of bat roosting patterns. Bats are often nomadic in their roosting habits and may use some roosting features only sporadically and in low numbers. In sites where a high number of potential roost features exist, there remains some possibility of bats roosting within features not identified as roosts during the surveys. As such, mitigation measures should include a precautionary approach to features with high potential to be used by bats, even where their presence was not recorded during surveys.
- 2.10 The lower amplitude of calls of species such as brown long-eared or barbastelle are more difficult to detect. Therefore, passes by these species may be under-recorded.

3 RESULTS OF BAT EMERGENCE SURVEYS

Roosting Bats

- 3.1 During the dusk emergence surveys no bats were seen to emerge from any part of the building.

Non-Roosting Bat Activity

- 3.2 During the dusk surveys, levels of bat activity were considered to be moderate. Frequent pipistrelle passes were recorded. Of the bats seen, activity was not concentrated in one place, but occurred over, between, and alongside the building surveyed and the other buildings in the nearby vicinity. The earliest bat pass was at 19:49 (17 minutes after sunset) indicative of nearby roosting. The majority of passes were by commuting and foraging bats, with some social calls heard.




4 REFERENCES

- Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.
- Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (2022). Bat Conservation Trust.

Appendix 1 - Surveyor Locations



Legend

-  Surveyor
-  Infrared Camera
-  Building

Drawing title:
Bat Surveyor Locations

Project name:
220778 Canfield Moat

| | | |
|----------------------------|----------------|----------------|
| D a t e : 07/10/2022 | Drawn by LB | Check by - |
| Drawing No 220778-EC-01 | Rev - | Scale 1:370 |

The original of this drawing was produced in colour - a monochrome copy should not be relied upon



TIM MOYA ASSOCIATES

Appendix 2 - Surveyor Details

| Surveyor | Bat Survey Licence Holder | Experience Levels |
|--|----------------------------------|---|
| Brooke Waites Senior Ecologist | Yes | Over 5 years of experience undertaking bat surveys. |
| Lynden Reed Ecologist | Yes | Over 5 years of experience undertaking bat surveys |
| Leigh-Ann Barran Consultant Ecologist | No | Over 3 years of experience undertaking bat surveys. |