



Glossop Wren's Nest (8325)

Bat Survey Report

On Behalf of McDonalds Restaurants

Version 2 | May 2023

Document Control

Version	Date	Produced by	Reviewed by	Notes
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2	18 th May 2023	Cyrise Weaire BSc (Hons) MCIEEM Principal Ecologist and Director	Charlie Reynolds Office Manager	Update survey May 2023 added

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This report does not purport to provide legal advice. This report provides ecological conditions (specific to bats) for the aforementioned site and is considered relevant for a period of no more than 12 months from the date of survey (May 2023).



The Site

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Executive Summary

In June 2021 Practical Ecology Ltd undertook a Preliminary Ecological Appraisal (PEA) report of Wrens Nest, Glossop, Derbyshire. The PEA survey adjudged the building to have moderate suitability for roosting bats, with external roosting features including weep holes, slipped, and broken tiles. It was therefore recommended that two bat activity surveys were undertaken to confirm the status of bats in the building.

Dusk surveys were carried out on 3rd August 2021 and the 19th August 2021. No bats were recorded emerging or re-entering the building. During both surveys, low numbers of common pipistrelle (*Pipistrellus pipistrellus*) were recorded foraging along woodland on the eastern boundary of the Site.

An update dusk survey was undertaken on 17th May 2023 as required to discharge Condition 6 of the demolition consent (DET/2023/0006):

“No demolition works shall take place between the 1st May – 31st September, unless a bat survey has been undertaken by a qualified ecologist and the results have been submitted to and approved in writing by the Local Planning Authority. Should bats be present in the building, details of any mitigation shall be submitted to and approved in writing by the Local Planning Authority or a copy of a Natural England license shall be submitted to the Local Planning Authority.”

No bats were confirmed emerging from the building during this survey. And, again, low numbers of common pipistrelle were recorded foraging along the eastern Site boundary.

As per recommendations within the PEA, compensation for the loss of potential roosting habitat should be included within the landscape design; this should take the form of three Kent-style bat boxes, or one “Bat Rocket”-style box mounted at least 4m high on a pole placed in the southeast corner of the Site away from any artificial lighting. Alternatively, these boxes could be mounted on retained trees.

1. Introduction and Background

Practical Ecology Ltd was commissioned by McDonalds Restaurants to undertake bat surveys of the proposed development at Wrens Nest, Glossop, Derbyshire, herein referred to as the "Site".

The building was considered to have *Moderate Suitability*¹ during the Preliminary Ecological Appraisal (PEA)² undertaken in June 2021. Potential roost features present included weep holes and slipped/ broken tiles allowing access onto the top of the sarking.

An internal inspection undertaken in September 2021 showed that no loft voids showed signs of light ingress or potential access points for bats and no evidence of bats was present within. As such, all features were considered external and covered by these surveys.

Two emergence surveys undertaken in August 2021 confirmed likely absence of roosting bats within the building with no emergences noted. An updated bat survey was prescribed within the demolition consent for the Site should demolition not occur prior to May 2023. This report has been updated with the details of the update survey.

1.1 The Site

The Site is approximately 0.3ha (central OS grid reference SK 02794 94240, postcode SK13 7AJ) and is located on Glossop Brook Road in the town of Glossop, Derbyshire. The Site comprises primarily of an urban mosaic of natural and sealed surfaces (a combination of hard standing, grassland, amenity tree and shrub), a two-storey building, a parcel of broadleaved woodland, and a steep bank of neutral grassland with ruderal and emerging scrub growth following recent clearance. The Site is surrounded by industrial buildings, roads, car parks, and a water course (Glossop Brook) lies immediately to the south. The Site boundary (red line) is shown in Figure 1 below.

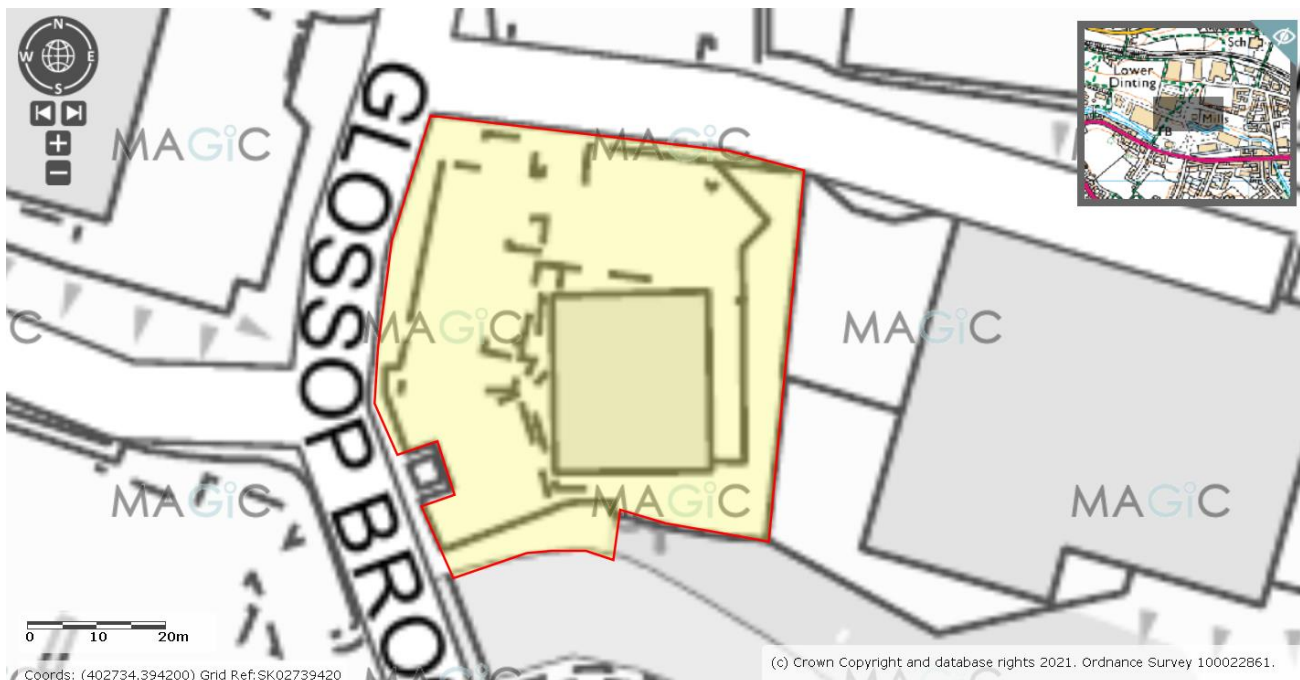


Figure 1: Site Boundary

1.2 Proposals

The proposals include clearance of the Site, including the thinning of the area of woodland, and the development of a McDonalds Restaurant and Drive-Thru with associated car park. A proposal plan has been included in Appendix 1 (AEW Architects, 2020, Drawing number: 12200_AEW_XXXX_F001 B "Feasibility Site Layout Option 1").

1.3 Legislation

Bats are protected under section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended) and are a Schedule 2 species protected by the Conservation of Habitats and Species Regulations (amendments) (EU Exit) (2019) which continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

The Countryside and Rights of Way (CROW) Act 2000 also contains a provision for custodial sentences. Taken together it is illegal to:

- Deliberately kill, injure or capture any wild animal of a Schedule 2 species;
- Deliberately disturb wild animals of any Schedule 2 species in such a way as to be likely to:
 - Significantly impair their ability:
 - a) To survive, breed or reproduce, or to rear or nurture young;
 - b) In the case of animals of a hibernating or migratory species, to hibernate or migrate.
 - Significantly affect the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place, even if bats are not in current occupation;
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or any part thereof;
- Intentional or reckless disturbance (at any level); and
- Intentional or reckless obstruction of access to any place of shelter or protection.

Penalties for offences include unlimited fines and up to 6 months imprisonment instead of, or in addition to, a fine. Along with significant development delay until appropriate mitigation has been agreed and completed.

The NERC Act 2006 also lists bats as a species of principal importance under Section 41 and Section 40 requires every public body in the exercising of its functions to 'have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'.

2. Methods

2.1 Emergence / Re-Entry Surveys

2021 surveys- The surveys were led by Consultant Ecologist Ben Meadows BSc (Hons) who has over three years' experience, Ben was assisted by a number of ecologists and experienced field surveyors; Zoe Foster, Craig Smith, Martyn Barnes, Andy Sharples, and Ian Lowe.

Each surveyor watched a section of the building for the entirety of the survey to provide coverage of all potential roost features and to relay information on any bat activity to other surveyors. Each surveyor carried a bat detector: detectors used were Echo Meter Touch 2 (iOS and Android). Any bats seen during the surveys were noted, and the bat detector data was analysed to corroborate sightings. In addition to this, infrared cameras, supported by separate infrared floodlights, were used as surveyors viewing aids or to cover where limitations meant the number of surveyors was reduced due to last minute illness.

Details of the activity surveys undertaken on the site are provided in Table 1 below. Surveyors were positioned around the building to provide coverage of all potential roost features and to relay information on any bat activity to other surveyors.

The dusk emergence survey was undertaken in periods of suitable weather: above 10°C, minimal wind, and no precipitation which could impact bats flying. These times and conditions are in accordance with Bat Conservation Trust guidance¹ for completing activity surveys on buildings.

Table 1: Survey Date and Time

Date	Survey Type	Sunset / Sunrise Time	Survey Start / End	Weather
3 rd August 2021	Dusk Emergence	2100	20.25 – 22.30	19-15°C 50% cloud Light breeze
19 th August 2021	Dusk Emergence	2027	20.21 – 21.57	16-14°C Overcast Light breeze

May 2023- The survey was led by Ana Pino-Blanco BSc (Hons) MSc with over three years' experience in ecological consultancy and a level 2 bat license (Natural England Bats Level 2: 2022-10568-CL18-BAT). Survey assistants included Victoria Shone BSc MSc, Charis Russell-Smith and Daniel Silk.

As with the 2021 surveys each surveyor watched a section of the building for the entirety of the survey to provide coverage of all potential roost features and to relay information on any bat activity to other surveyors. Each surveyor carried a bat detector: detectors used were Echo Meter Touch 2 (iOS and Android). Any bats seen during the surveys were noted, and the bat detector data was analysed to corroborate sightings. In addition to the surveyors two IR video camera setups were employed to provide additional certainty with regards to any potential emergences.

Table 2: Survey Date and Time

Date	Survey Type	Sunset / Sunrise Time	Survey Start / End	Weather
17 th May 2023	Dusk Emergence	2104	20.45 – 23.04	12.5-10.5°C 100% cloud Light breeze

2.2 Limitations to Survey

In 2021 the second dusk survey was limited to three surveyors, as opposed to five. This last-minute change was caused by illness and Covid-19 isolation protocols in place during August 2021. The limitation was overcome by two surveyor

positions being covered by infrared cameras with subsequent footage being watched to check for emerging bats; thus the limitation was overcome.

A single loft void was inaccessible during the internal inspection²; this was overcome with an assessment of the construction of other voids (given the building is all of a similar age and other loft voids being well sealed) and the void being fully covered by the two activity surveys; it is considered significantly unlikely that either the inaccessible void had higher suitability requiring more surveys and should a higher status roost have been present, this would have been confirmed on the two surveys undertaken.

3. Results

3.1 Pre-Dawn Re-Entry Survey August 2021

No bats were observed emerging from the building by any surveyor.

Common pipistrelle were recorded foraging along the eastern boundary.

3.2 Dusk Emergence Surveys

In both the August 2021 and the May 2023 dusk emergence survey no bats were observed emerging from the building by any surveyor.

Common pipistrelle were recorded foraging along the eastern boundary.

4. Recommendations

It is considered that, as per guidance from the PEA Survey, to compensate for the loss of roosting potential for the loss of potential roosting habitat should be included at a design stage. This should take the form of three Kent-style bat boxes, or one "Bat Rocket"-style box mounted at least 4m high on a pole placed in the southeast corner of the Site away from any artificial lighting. Alternatively, these boxes could be mounted on retained trees.

Any lighting schemes to be installed during and post-construction must be designed to prevent unnecessary light spill onto retained vegetation or any bat boxes installed as part of the development. The following guidance³⁴ must be followed:

- Minimise light spill by eliminating any bare bulbs and upward pointing light fixtures. The spread of light must be kept near to or below the horizontal plane, by using as steep a downward angle as possible and/or shield hood. Flat, cut-off lanterns are best.
- Luminaires must feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats⁵.
- A warm white spectrum (ideally <2700Kelvin) must be adopted to reduce blue light component.
- All luminaires must lack UV elements when manufactured. Metal halide, fluorescent sources must not be used.
- Limiting the height of lighting columns to eight metres and increase the spacing of lighting columns⁶ will reduce the spill of light into unwanted areas such as the aforementioned habitats.
- Artificial lighting proposals must not directly illuminate trees or bat box locations.

With these lighting measures implemented, it is considered that any potential adverse effects from lighting upon bats will be minimised.

Good practice to prevent functional isolation and fragmentation of suitable bat habitat includes locating site compounds and generators away from suitable habitats and ensuring landscape proposals include planting of trees or scrub to re-connect habitats on site to the wider area.

5. References

¹ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed). The Bat Conservation Trust, London

² Practical Ecology Ltd, 2021, Wrens Nest Glossop, Version 2, September 2021

³ Miles, J., Ferguson, J., Smith, N., and Fox, H., 2018. Guidance Note 08/18 Bats and artificial lighting in the UK. [pdf] Available at: <https://cdn.bats.org.uk/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf>.

⁴ Gunnell, K., Grant, G., and Williams, C., 2012. Landscape and urban design for bats and biodiversity. Bat Conservation Trust, London, UK.

⁵ Stone, E.L., Jones, G., Harris, S., 2012. Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats. Glob. Change Biol. 18, 2458–2465.

⁶ Fure, A., 2012. Bats and Lighting – six years on. The London Naturalist 91, 69-88.

Appendix 1: Proposal Plan

