

Sports Pavilion, Court Place Farm, Oxford

Bat Emergence Survey

On Behalf of:
The Oxford Hindi Temple and
Community Centre Project

Issue No.	1
Issue Date	31/05/2023
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1. Executive Summary

- 1.1 The building is a single storey detached property located within the City of Oxford near Marston (Central Grid Reference SP 53260843).
- 1.2 There are plans to convert the building to a Hindu Temple and Community Centre. Therefore, a Preliminary Roost Assessment was undertaken to inform the planning decision.
- 1.3 No evidence of bats was found, but due to a number of access points at the gable ends, the property was assessed as having low potential for roosting bats and a single emergence survey was required to confirm likely absence of roosting bats.
- 1.4 The dusk bat emergence survey was carried out on 30th May 2023. No bats emerged from the building, so according to best practice, roosting bats are likely absent from the building and are not a constraint to the development plans.
- 1.5 Recommendations for enhancements have been reprised from the initial report to help fulfil some of the aims of the NPPF.

2. Introduction

Background

- 2.1 The building is located in the Court Place Farm area on the north-western edge of the City of Oxford (Central Grid Reference SP 53260843). The site consists of a two-storey detached single-storey building with a strip of amenity grass on three sides, with tarmac hard standing on the fourth and beyond the amenity grassland.
- 2.2 There are plans to convert the building to a Hindu Temple and community centre with Lottery Funding to provide a much-needed resource for the city, which does not currently have a Hindu Temple. Therefore, a Preliminary Roost Assessment was undertaken 11th May 2023 to help inform the planning decision.
- 2.3 The building is a single storey brick walled building with windows below the eaves and a modern corrugated steel roof. No signs of bats were found within the building, but there was a small number of gaps in the gable wooden cladding that crevice dwelling bats could enter. Therefore, to prove likely absence of roosting bats, or confirm their presence, a single dusk emergence survey was recommended.
- 2.4 Mark Bhagwandin commissioned 4 Acre Ecology Limited on behalf of the The Hindu Temple and Community Centre on 29th May 2023 to undertake a single dusk emergence survey of the property to allow this report to be written.

Aims and Objectives

- 2.5 The aim of the survey was to determine whether roosting bats were present or likely absent from the building. The objective was to support a successful application, whilst maintaining the conservation status of bats within the local area.

About the Author

- 2.6 Mark Satinet has been working in the field of Wildlife Conservation and Ecology since 1992. 13 years at the Wildlife Trusts working on wider countryside habitat and species projects provided a good background in habitat surveys, species identification, habitat management advice to landowners and dealing with the public and media. He became the County Mammal Recorder for Wiltshire in 2000 and set up the Wiltshire Mammal Group in 2005. He is also a voluntary Bat Warden for Natural England and has been an active member of the Wiltshire Bat Group since 2001.
- 2.7 Since 2005 he has been a consultant ecologist, first as a senior ecologist at a multi-disciplinary company for a year and then the principal ecologist running the ecology team in a specialised ecological firm for a further four years. He is a full member of the Chartered Institute of Ecology and Environmental Management and a Chartered Environmentalist.

2.8 He now owns and runs his own company, 4 Acre Ecology Limited. He holds disturbance licences for bats, Great Crested Newts, Dormice, Barn Owls and Shrews and has held development licences for Great Crested Newts, bats, [REDACTED] and Dormice and holds both a Bat Mitigation Class Licence and Great Crested Newt Low Impact Class Licence.

3. Methodology

Desk Study

3.1 The previous report was used as background for this one.

Field Survey

3.2 Following best practice guidelines (BCT, 2016) it was determined that a single dusk emergence survey would be required to be confident that no bats were using the building to roost in.

3.3 For dusk surveys the surveyors arrive half an hour before sunset and continue to survey for up to two hours after sunset, to allow for late emerging bat species.

3.4 The building has a simple roof structure, so only two surveyors were required to fully cover this.

3.5 Surveyors were equipped with an Echo Meter Touch attached to an I-pad for immediate identification and recording for later analysis of any unidentified bats. Surveyors also had standardised recording forms, a map of the site and building, pencils, a weather writer and head-torch with replacement batteries.

3.6 Any registrations of bats on the detectors and/or direct observations of bats or their behaviour were noted with the time on the recording forms and a location of this on the map. As emergence from the roost was a priority, surveyors did not always see passing bats out of their line of vision and would therefore mark where they were standing when the registration occurred. Most bats were identified by the surveyors by sound through experience, but the recordings allowed verification and identification of unknown bats where required.

3.7 The survey data was summarised into the number of passes by each species, the location of exit/entrance points in the building and the type of behaviour (e.g., foraging or emerging). Where direct observations of bats emerging/re-entering were made, these are depicted on a plan.

4. Legislation and Planning Policy

- 4.1 There are a number of tiers of legislation protecting wildlife in England and Wales. The highest tier is for those species protected by European Legislation, such as the Dormouse, Great Crested Newt, Otter and all species of bat. These are known as European Protected Species (EPS), which gain their protection from the Conservation of Habitats and Species Regulations (Habitat Regulations) 2017 (As Amended), whereby under section 43 it is an offence to

deliberately capture, injure or kill an EPS

deliberately disturb or take/destroy the eggs of an EPS

damage or destroy a breeding site or resting place of an EPS

- 4.2 Nationally protected species are either fully protected (e.g. Water Vole, Bat) or partially protected (e.g. Adder or Smooth Newt) under the Wildlife and Countryside Act (WCA) 1981 and amendments, including the Countryside and Rights of Way Act (CRoW) 2000. Under the WCA it is an offence to:

intentionally kill, injure or take any wild bird, take or destroy any wild bird egg or take, damage or destroy any nest while it is in use or being built

intentionally or recklessly disturb any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird

intentionally or recklessly at any other time take, damage, destroy or otherwise interfere with any nest habitually used by any wild bird included in Schedule A1

intentionally or recklessly kill, injure or take from the wild or possess all or any part of a Schedule 5 species

intentionally or recklessly damage or destroy any structure or place which a schedule 5 species uses for shelter or protection, or disturb a schedule 5 species while it is occupying such a place

obstruct access to any structure or place which a schedule 5 species uses for shelter or protection

intentionally pick, uproot or destroy any wild plant included in Schedule 8

- 4.3 The CRoW Act 2000 added the term recklessly after intentionally in the Wildlife and Countryside Act 1981 and introduced a maximum custodial sentence of 6 months for offences.

- 4.4 The Natural Environment and Rural Communities Act 2006 (NERC) made provision about bodies concerned with the natural environment and rural communities and in connection with wildlife, sites of special scientific interest, National Parks and the Broads. Section 41 established a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. This is known as the UK Biodiversity Action Plan (BAP) list.
- 4.5 The National Planning Policy Framework (NPPF) updated in July 2018 (Revised in July 2021) states that Planning policies and decisions should contribute to and enhance the natural and local environment by:
- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 4.6 To protect and enhance biodiversity and geodiversity, plans should:
- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
 - b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

5. Results

Desk Study

- 5.1 No protected sites designated for bats were identified within 5 km of the site. There are two sites of national importance within 2km of the site; Sidling Copse and College Pond SSSI and New Marston Meadows SSSI.
- 5.2 Twenty-one protected species licences have been issued for bats within 5km of the site, but only two within 2km; 1km east for both Common and Soprano Pipistrelles and one 2km SSW for Brown Long-eared and Soprano Pipistrelle.
- 5.3 The Thames Valley Environmental Records Centre (TVERC) holds 150 records of bats within 2km of the site covering at least seven species; Bat (2), Brown Long-eared (16), Common Pipistrelle (36), Daubenton's (2), Myotis sp. (8), Nathusius Pipistrelle (2), Noctule (18), Nyctalus sp. (4), Pipistrelle Bat sp. (34), Serotine (1), Soprano Pipistrelle (27).

Field Survey

Local Context

- 5.4 The site lies to the north of the Oxford city centre with the landscape a mixture of housing and parkland. To the south and west is the suburban area of Marston. To the north there is the northern by-pass road open farmland beyond. To the immediate east is an area of playing fields, with urban housing beyond.
- 5.5 The building is surrounded on the west, north and east by amenity grassland, with a tarmac car park to the south. Beyond the grass there is an access drive, lined by mature trees, with a road beyond these to the west, with a tarmac car park to the east. There is a larger building to the north.

Dusk Emergence Survey

- 5.6 The survey was conducted on 30th May 2023, a dry, mild night with a temperature of 13° centigrade, dropping to 12°C by the end. There was a moderate wind and 100% cloud cover. Sunset was at 21:11.
- 5.7 The survey began at 20:56 and ended at 22:41. No bats emerged from the building.
- 5.8 The first bat recorded was a Soprano Pipistrelle commuting across the building from the trees to the west (See Figure 1). There was generally very little activity throughout the evening, with the few registrations mainly towards the southern end.
- 5.9 There were a total of 22 registrations made by the two surveyors during the 90 minutes of the survey after sunset. This equates to 0.12 registrations per minute per surveyor, indicating a low level of bat activity.

5.10 Soprano Pipistrelles made up 81.8% of registrations, Common Pipistrelles 4.5%, Noctule 4.5% and Long-eared 9.2%.

6. Discussion

- 6.1 The structure of the immediate surrounding area offers good commuting and foraging habitat for bats with the surrounding buildings offering potential roosting habitat.
- 6.2 There were no signs of bats found within the roof space during the Preliminary Roost Assessment, but the wooden clad gable had vertical boards overlying the main wooden joints, leaving small gaps at each of these, whilst the southern boarding was in poor conditions with a number of additional holes.
- 6.3 Therefore, the building was assessed as having low potential for roosting bats, requiring an emergence survey to confirm likely absence of roosting bats.
- 6.4 The survey dusk bat emergence survey was carried out on the evening of 30th May 2023. This lies in the peak activity season for bats, with most maternity colonies having been formed at this point.
- 6.5 The weather was dry and the cloud overcast, creating good conditions for bats to emerge.
- 6.6 No bats were seen emerging from the building, with generally a low level of bat activity, mainly towards the southern side of the building. The first bat was seen flying from the tree line to the west across the building. As this was at 21:15, only four minutes after sunset, it can be assumed this Soprano Pipistrelle had just emerged from a roost to the west, possibly the tree line itself or from the buildings of Marston to the west.
- 6.7 Therefore, the survey has determined likely absence of roosting bats in the building, according to best practice guidelines. Bats are not a constraint to the development proposals and no further surveys are required.
- 6.8 As there is some good potential foraging and commuting habitat adjacent to the building, recommendations have been put forward with regard to lighting. However, it was noted that the immediate buildings closed around 21:30 and the car park lighting turned off at 21:44.

7. Further Surveys, Recommendations and Enhancements

Further Surveys

7.1 No further surveys are required.

Recommendations

7.2 There will be no direct lighting of the tree line on the opposite side of the access drive adjacent to the building. Any outdoor lighting should be;

Less than 3 lux light level

Led luminaries with warm white spectrum <2700 Kelvin (To Avoid Blue / UV Elements)

Bollard or low-level downward directional luminaries are used and mounted on the horizontal with no upward tilt.

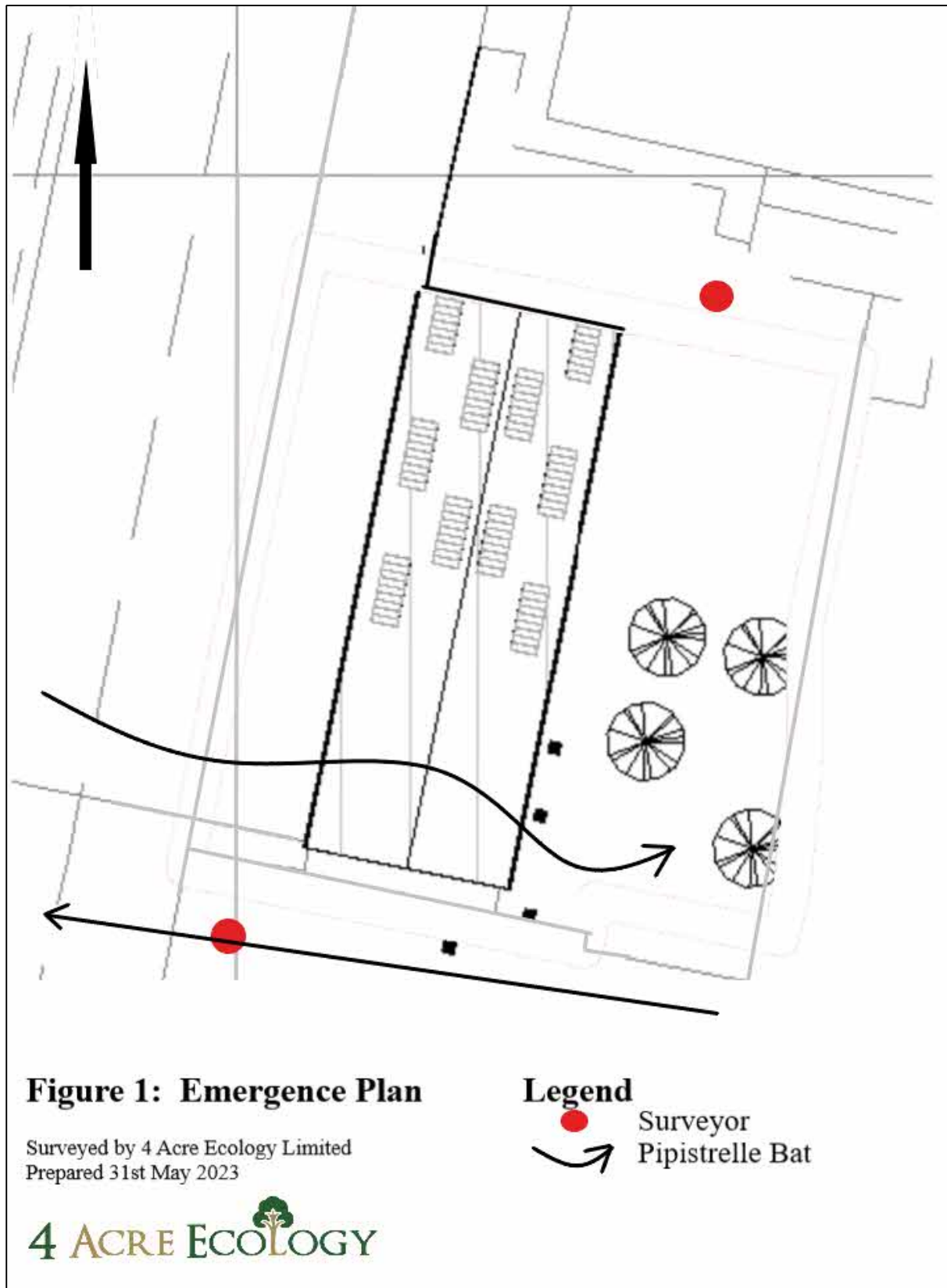
Any security lighting should not exceed 75w in power, the light should be motion activated with short timers (1 Minute), angled downwards as sharp as possible to light up the immediate area only.

Enhancements

7.3 Any future planting should include night flowering plants to encourage insects for bats to feed on, such as Honeysuckle, Evening Primrose or White Jasmine.

8. Figures

Figure 1: Emergence Summary Plan



9. References

Bat Conservation Trust, 2016: *Bat Surveys by Professional Ecologist: Good Practice Guidelines Third Edition*. Bat Conservation Trust, London

Countryside and Rights of Way Act 2000. Available on-line at: <http://www.legislation.gov.uk/ukpga/2000/37/contents> accessed 14/11/10

The Conservation of Habitats and Species Regulations (and amendments) 2017. Available on-line at: <http://www.legislation.gov.uk/ukxi/2017/1012/contents/made>. Accessed on 10/11/2021

English Nature, 2004: *Bat Mitigation Guidelines*. English Nature, Peterborough

Entwistle A.C. & Swift S.M. 2008: *Brown Long-eared Bats*. Pp 364-370 of; *Mammals of the British Isles Handbook, 4th edition*. Mammal Society, Southampton

JNCC, 2004: *Bat Workers Manual 3rd Edition*. JNCC, Peterborough.

Jones G. & Racey P.A., 2008: *Common and Soprano Pipistrelles*. Pp 343-351 of; *Mammals of the British Isles Handbook, 4th edition*. Mammal Society, Southampton.

MAGIC, 2023. Available on-line at: <http://magic.defra.gov.uk/website/magic/>. Accessed on 15/05/2023

Natural England, 2010: *Ten 'Handy Hints' for obtaining a bat mitigation licence at first Submission*. Available at: http://www.naturalengland.org.uk/Images/bat-handy-hints_tcm6-15663.pdf. Accessed on 22/3/12.

National Planning Policy Framework, 2021. Available online at: [National Planning Policy Framework - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/91212/nppf-2021.pdf) Accessed on 10/01/2022.

Satinet, M., 2023: *Court Farm Pavilion, Oxford, Preliminary Roost Assessment*. 4 Acre Ecology Limited, Minster Lovell

Waring, S. D., Essah, E. A., Gunnell, K. & Bonser R. H. C, 2013: *Double Jeopardy: The Potential for Problems when Bats Interact with Breathable Roofing Membranes in the United Kingdom*. Architecture & Environment. AE 2013, 1(1):1-13. Sci-know Publications Ltd.

Wildlife and Countryside Act 1981 (and amendments). Available on-line at: <http://www.legislation.gov.uk/ukpga/1981/69/contents>. Accessed on 14/11/10

Appendix 1: Information on British Bats

There are 18 species of bat in the UK (17 of which are known to be breeding here). They range from the tiny **Pipistrelle**, weighing in at around 5g (less than a £1 coin), to our biggest bat, the **Noctule**, which is still smaller than the palm of your hand.

All British bats eat insects exclusively, a **Pipistrelle** bat eating as many as 3,000 midges in one night, while **Long-eared** bats eat moths and **Noctule** or **Greater Horseshoes** also eat larger beetles.

The **Alcothoe** bat is the latest addition to the UK bat family, only being confirmed as a resident species in 2010 due to its similarity to the **Whiskered** and **Brandt's** bat species.

The **Daubenton's** bat is known as the 'water bat', as they fish insects from the water's surface with their large feet or tail. In England and Wales the majority of known summer colonies are in humid, more or less underground sites near water. These may be tunnels or bridges over canals and rivers, or in caves, mines and cellars. They are only occasionally found in buildings, usually old stone structures such as moated castles and waterworks.

Bats do not build nests, but use small spaces to shelter and rest in during the day, or hibernate in during winter. These places are known as roosts. There are a variety of different types of roost, from winter hibernation roosts, spring and autumn transitory roosts to summer maternity roosts. However, not all bats will roost within buildings, with the following being those most likely to:

Pipistrelle bats (both Common and Soprano species) are the most common bats in this country. They prefer to roost in very confined spaces around the outside of buildings, typically behind hanging tiles, soffits and barge boards, under roofing felt or in cavity walls. They do not usually enter roof spaces, although well-established large colonies in older buildings may do so.

Brown Long-eared bats are the third most commonly occurring species, after the two **Pipistrelle** species. They roost singly or in small groups among the roof timbers at the apex, particularly around ridge ends and chimneys, and in crevices in ridge tiles. These medium sized bats spend more time inside the roof space than many other bats, and are generally very quiet inside the roost, not leaving until after dark.

The **Serotine** bat, one of the largest bat species in the UK, is almost exclusively found roosting in houses across southern England and Wales. Rarer than **Pipistrelles** and **Brown Long-eared** bats, **Serotines** usually roost in crevices around chimneys and in cavity walls. Their favoured prey is large beetles, which they find over farmland and grassland.

Horseshoe bats, probably the most unusual looking of the UK's bats, are sometimes found roosting in houses in south-western England and Wales. **Greater** and **Lesser Horseshoe** bats hang free in the roost from their feet.

(Find further details from the Bat Conservation Trust Website at: www.bats.org.uk)