
Pump Houses, Ampney Park

Bat Survey

May 2023

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1. Introduction

- 1.1.1 In February 2023, Seasons Ecology was instructed by Simon Morray-Jones Architects, on behalf of the owner, to undertake a bat survey of the Pump Houses located within the Ampney Park estate, London Road, Ampney Crucis, Cirencester (central grid reference: SP 06205 02029).
- 1.1.2 A Preliminary Bat Roost Assessment of the Pump Houses undertaken in April 2023 by Seasons Ecology, assessed the two buildings as *Low* suitability to roosting bats owing to a low number of external and internal features but dilapidated condition of the buildings. No evidence of roosting bats was found during an inspection of the buildings.
- 1.1.3 This report details the results of the bat survey and should be read alongside the Preliminary Bat Roost Assessment report (Seasons Ecology, April 2023, report reference SEB2428_05).

2. Survey Method

- 2.1.1 The survey method is provided below and refers to survey guidelines in BCT (2016)¹.

2.2 Dusk Emergence Survey

- 2.2.1 One dusk emergence survey was carried out of the Pump Houses on 22nd May 2023. The survey commenced 15 minutes before sunset and continued for an hour-and-a-half after sunset.
- 2.2.2 Three surveyors attended the survey. Each surveyor was equipped with an Echo Meter Touch Pro bat detector supported by an Apple iPad Mini 4 interface, on which all bat activity was recorded.
- 2.2.3 Passive acoustic recording devices (*Titley AnaBat Express*) were also deployed. These were positioned in the same locations as the surveyors and were set on 'continuous' recording mode for the duration of the surveys. Recordings were later analysed using AnalookW 4.2.24. software to aid the identification of species with reference to Russ (2012²).

2.3 Constraints to Survey

- 2.3.1 There were no constraints to the survey; all identified features on the buildings were in full view, the weather conditions were suitable, and the survey was undertaken during the recommended survey period.

2.4 Personnel

- 2.4.1 The survey was led by Principal Ecologist, Kate Hayward, who has produced this report. Kate is a licensed bat ecologist registered to use Class Licence CL18 (Bat Survey Level 2) (class licence registration number 2015-15106-CLS-CLS) and is a full member of the Chartered Institute for Ecology and Environmental Management (CIEEM).

¹ Bat Conservation Trust (BCT) (2016) *Bat Surveys for Professional Ecologists. Good Practice Guidelines*. Bat Conservation Trust. Third Edition. Collins.

² Russ, J. (2012) *British Bat Calls. A Guide to Species Identification*. Pelagic Publishing.



- 2.4.2 The survey was assisted by Emma Shaw, Consultant Ecologist and Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Emma has over two years' experience in undertaking surveys for bats.
- 2.4.3 The survey was also assisted by Patrick Ryan, Assistant Ecologist.

3. Survey Results

- 3.1.1 The results of the bat survey is provided below. The buildings and surveyor locations are shown at Annex 1.

3.2 Dusk Emergence Survey: 2nd May 2023

- 3.2.1 The survey commenced at 20:48 and finished at 22:33. Sunset was at 21:03. Weather conditions were suitable with a start temperature of 16°C and end temperature of 14°C, wind was at a Beaufort 2³ (light breeze), with 20% cloud cover and no rain.

3.2.2 No bats were observed emerging from the Pump Houses during the survey.

- 3.2.3 General bat activity was by at least eight species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, noctule *Nyctalus noctula*, brown long-eared bat *Plecotus auritus* and *Myotis* species, including probable whiskered bat *Myotis mystacinus*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri* and Brandt's bat *Myotis brandtii*.

- 3.2.4 Common pipistrelle bats were recorded 34 times during the survey. One bat was first heard commuting past the Pump Houses at 21:14 (11 minutes after sunset). One bat was next observed at 21:20 (17 minutes after sunset) foraging above the Pump Houses. Individual bats were then observed periodically throughout the survey, foraging over the site and commuting past, or near to, the Pump Houses.

- 3.2.5 Soprano pipistrelle bats were recorded 22 times during the survey. One bat was first heard commuting at 21:16 (13 minutes after sunset) and again at 21:18 (15 minutes after sunset). Soprano pipistrelle was first seen at 21:20 (17 minutes after sunset) foraging over the Pump Houses. Bats were then observed and heard between 21:25 and 22:26 commuting and foraging in the area.

- 3.2.6 Noctule was recorded twice during the survey. This bat was first heard commuting overhead at 22:05 (1 hour and 2 minutes after sunset) and again at 22:06 (1 hour and 3 minutes after sunset).

- 3.2.7 There was one brief, unseen pass by brown long-eared bat during the survey. This was recorded at 21:47 (44 minutes after sunset).

- 3.2.8 Whiskered bat was recorded three times during the survey. This bat was first seen foraging above the Pump Houses at 21:33 (30 minutes after sunset). It was then heard foraging at 21:40 (37 minutes after sunset) and again at 22:10 (1 hour and 7 minutes after sunset).

³ The Beaufort scale of wind velocity: 0 = Calm, 1 = Light Air, 2 = Light Breeze, 3 = Gentle Breeze, 4 = Moderate Breeze, 5 = Fresh Breeze, 6 = Strong Breeze, 7 = Near Gale, 8 = Gale, 9 = Strong Gale, 10 = Storm, 11 = Violent Storm, = 12 Hurricane (<http://www.metoffice.gov.uk>).



- 3.2.9 Daubenton’s bat was recorded five times during the survey. This bat was first seen flying over the Pump Houses and foraging, at 21:44 (41 minutes after sunset). One bat was then heard by all three surveyors at 21:53 (50 minutes after sunset), foraging. Daubenton’s bat was also heard at 22:03 (1 hour after sunset) foraging, and at 22:13 (1 hour 10 minutes after sunset) also foraging.
- 3.2.10 Natterer’s bat was recorded twice during the survey. This bat was first heard at 22:22 (1 hour and 19 minutes after sunset) and again at 22:25 (1 hour and 22 minutes after sunset).
- 3.2.11 Brandt’s bat was recorded six times during the survey. This bat was first heard at 22:40 (37 minutes after sunset), and again at 21:45 (42 minutes after sunset). Bats were then observed between 21:48 to 22:25 foraging in the area.
- 3.2.12 Activity by common pipistrelle was highest during the survey, making up approximately 45% of all activity recorded. Soprano pipistrelle contributed 29% of activity. Brandt’s bat contributed 8%, Daubenton’s bat 7%, whiskered bat 4%, noctule 3%, Natterer’s bat 3% and brown long-eared bat 1% of overall bat activity.

3.3 Survey Summary

3.3.1 Table 1 below summarises the results of the survey.

Table 1: Survey Summary – Bat Emergence Survey, 22nd May 2023

Survey	Summary
1	<p><u>22nd May 2023</u></p> <p>No bats were observed emerging from the Pump Houses during the survey.</p> <p>General bat activity was by at least eight species: common pipistrelle, soprano pipistrelle, noctule, brown long-eared bat, whiskered bat, Daubenton’s bat, Natterer’s bat and Brandt’s bat.</p>

4. Interpretation and Evaluation

- 4.1.1 The bat survey did not record any bats emerging from the Pump Houses. General bat activity was moderate across the site and mainly by pipistrelle species foraging over the site and in the surrounding woodland.
- 4.1.2 The site offers a small area of moderate-quality foraging habitat for bats, being situated in a woodland with an adjacent watercourse, Ampney Brook. The area is known to be used for foraging by pipistrelle species and low numbers of *Myotis* species, including probable whiskered bat, Daubenton’s bat, Natterer’s bat and Brandt’s bat. Noctule and brown long-eared bat were recorded commuting across the site.
- 4.1.3 Early passes by common pipistrelle, soprano pipistrelle and brown long-eared bat indicate roosts nearby for these species, but not within the Pump Houses.



5. Legislation

- 5.1.1 Bat species in England and Wales are protected under the Conservation of Habitats and Species Regulations 2019 (as amended) (EU Exit) and the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to:
- Deliberately capture, injure or kill bats;
 - Intentionally or recklessly disturb bats;
 - Intentionally or recklessly obstruct access to any structure or place which bats use for shelter or protection; and,
 - Deliberately damage or destruction of a breeding site or resting place.
- 5.1.2 With the exception of disturbance, this legislation applies throughout the year whether bats are present or not at the time of works being carried out and irrespective of planning permission being obtained or being required.

6. Recommendations

6.1 The Proposal

- 6.1.1 The planned works are for the renovation of the Pump Houses as they are currently in a state of disrepair.

6.2 Protection Measures

- 6.2.1 Based on the survey, the Pump Houses, do not currently support roosting bats, and the works are not likely to injure or kill bats, or damage or destroy a resting place or its accesses.
- 6.2.2 A precautionary approach to works is recommended, as follows:
- A toolbox talk to site contractors, a pre-works check and supervision of the removal of the identified suitable features for bats on the buildings, undertaken by a Licensed Bat Ecologist.
 - Should any evidence of bats be found during the works, then works should stop immediately and advice sought from the Licenced Bat Ecologist.

6.3 Replacement Roosting Opportunities

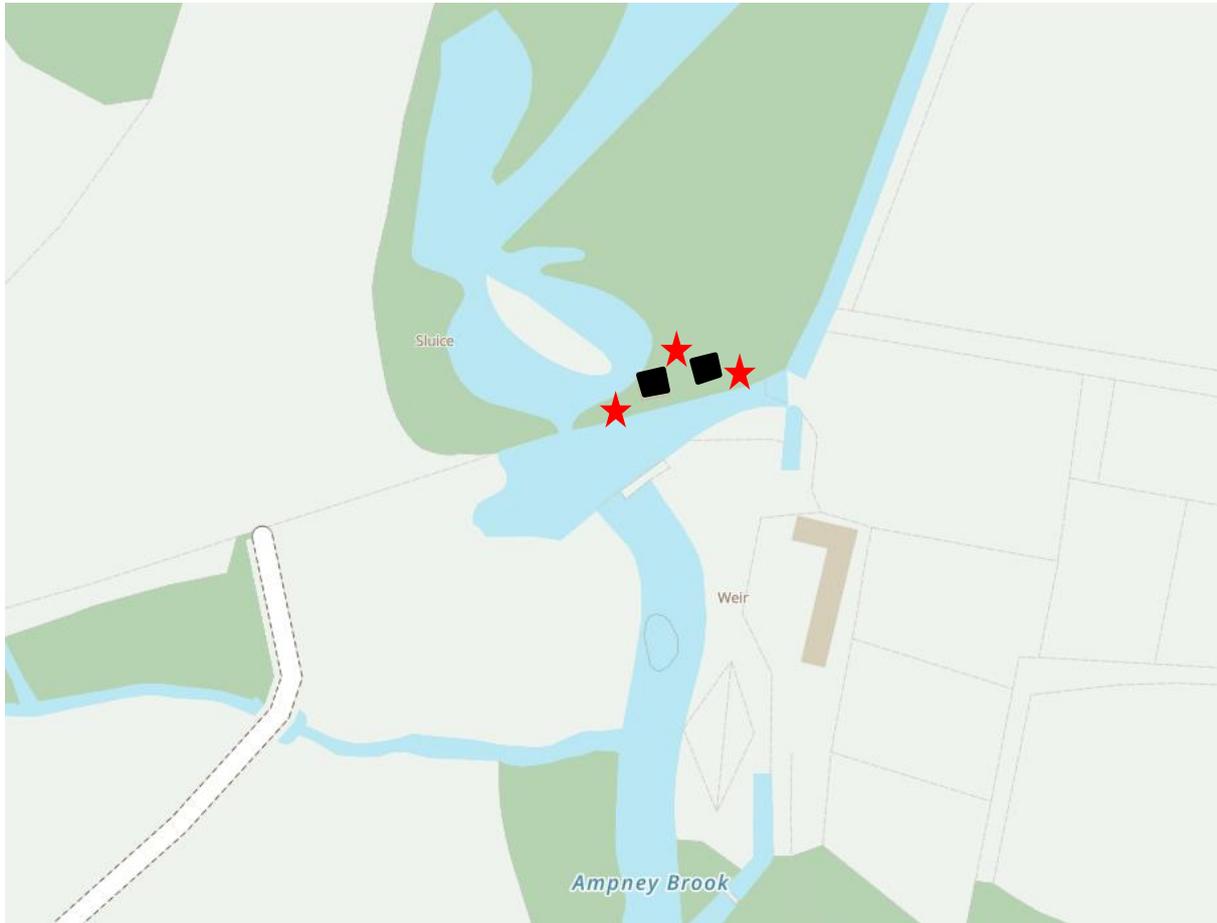
- 6.3.1 Bat boxes could be installed on suitable trees within the surrounding woodland to provide additional roosting opportunities to bats. The bat boxes should be placed between 3m and 5m above the ground and south-facing, in an area which is exposed to sun for at least part of the day.



7. Annexes

Annex 1: Building and Surveyor Locations (22nd May 2023)

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Key

■ = Pump House

★ = Surveyor Location

