



Urban Tree Experts

BS5837 – Tree Surveys – Ecological Consulting

ECOLOGICAL SURVEY REPORT (BATS) AT SOUTHERNWOOD NEWBURY



Prepared for:
Mr & Mrs O'Mahony
c/o Southernwood
Tile Barn
Woolton Hill
Newbury
RG20 9UZ

22 June 2023

Ref: SPH/ESR-23/12.06



Urban Tree Experts

BBS5837 – Tree Surveys – Ecological Consulting

Bramley House
Newnham Bridge
Tenbury Wells
Worcestershire
WR15 8NX

Tel [REDACTED]
Mobile [REDACTED]

Email [REDACTED]

CONTENTS

EXECUTIVE SUMMARY	3
1 Introduction	5
1.1 Instruction	5
1.2 Aims and Objectives	5
1.3 Proposed Works	5
1.4 Surveyor Background and Experience	5
2 Survey Methodology	5
2.1 Constructions/Limitations	5
2.2 Dusk & Dawn Surveys	6
3 Survey Findings	7
3.1 Dusk & Dawn Surveys	7
4 Conclusions/Interpretation	8
5 Method Statement for Planning	10
6 References	11
7 Queries	12

Appendix 1 Appendix 2

©2023 Urban Tree Experts

All rights in this report are reserved. No part of it may be reproduced, edited or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature, without our written permission. Its content and format are for the exclusive use of Mr & Mrs O'Mahony and their agents in dealing with this site. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of Urban Tree Experts. It may be reproduced as part of a planning application.

The validity of this report ceases at the prescribed time limit or after one year from the survey, or if the site conditions change due to unspecified works that affect the site whichever is the sooner.



EXECUTIVE SUMMARY

Urban Tree Experts was commissioned by Mr & Mrs O'Mahony to carry out two dusk emergence surveys and a dawn return to roost survey at Southernwood, Tile Barn, Woolton Hill, Newbury RG20 9UZ. This report is prepared to support a forthcoming planning application to Basingstoke and Dean Council.

The application site comprises a detached, brick-built property with an attached garage. The remainder of the site comprises a wraparound front and rear garden, which has recently been part cleared, with some trees, hedgerows and shrubs remaining. The site itself offers some foraging and commuting habitat for bats around the boundaries.

A desk top study was conducted prior to the survey to review existing information about the site and its surroundings and to inform the design of subsequent bat surveys, if required. The desk top study was conducted based upon a 2km search radius and it revealed one statutory designated site is located within, and four current European protected species Licences (EPSLs) for bats have been granted within 2km of the proposed development site.

Due to the location of the property, a search of both Hampshire bat group and Berkshire and South Buckinghamshire bat group records was requested. The records confirmed 9 different species within the 2-kilometer search radius, including *Myotis sp.* A summary of these records is included at Appendix 1.

The preliminary ecological appraisal (bats) comprised a detailed search of the interior and exterior of the building for bats, signs of bats and features suitable for use by roosting bats. This includes droppings, internally or externally, scratch marks, rubbing and staining at exit holes, live or dead bats and other features such as missing tiles, this list is not exhaustive.

The initial site visit was carried out on by Emma Turnbull on Tuesday 21 March 2023 at 10.45am. An internal and external inspection of the property and attached garage took place to look for signs of bats.

The property and garage are in good condition externally and the property is in a good condition internally. There are a small number of gaps within the verges externally on the north east elevation which could provide potential roosting opportunities or access into the building for bats. In addition, a small number of bat droppings were recorded within the loft spaces, indicating that bats are or have been using the building for roosting. DNA analysis of the droppings by SureScreen Scientific confirmed them to be those of the brown long-eared (BLE) bat, see Appendix 2.

Full access to the site for the survey was made possible by the client.

In line with best practice guidelines, three activity surveys (two dusk emergence and one dawn re-entry) were recommended to provide additional evidence in support of the preliminary survey result and the effort is considered proportionate to the building and risk associated with any proposed works.

The dusk emergence surveys were conducted on Friday 12 May and Sunday 28 May 2023 and the dawn return to roost survey was conducted on Monday 12 June 2023. A number of bats were heard and seen foraging in and around the site throughout the surveys and none were seen emerging from or re-entering the property to roost.



Urban Tree Experts

BBS5837 – Tree Surveys – Ecological Consulting

The evidence observed during the preliminary survey (bat droppings), indicates historical use by a low number (<5) bats, and that the property has been used as a day/summer roost on an opportunistic basis and that an EPSL from Natural England (NE) is not required. However, a site-specific method statement is provided to comply with EU Article 12 and 16 which help guide works that affect a bat resting place when the species is not present in order to avoid a licence/derogation, it will be necessary, to ensure following development the “favourable conservation status” of bats is maintained and an appropriately worded ecological method statement must be conditioned to any planning consent.

With careful timing and close supervision no offence should occur, and the FCS will remain unaffected. If bats are encountered during the work, all work must stop and the project ecologist informed, and an EPSL will be required.

An ecological method statement has been included to enable the Local Planning Authority to have regards to the requirements of the Habitats Directive... *“in the exercise of their functions in considering the planning application”*.



1. Introduction

1.1 Instruction

Urban Tree Experts were commissioned by Mr & Mrs O'Mahony to carry out two dusk emergence surveys and a dawn return to roost survey at Southernwood, Tile Barn, Woolton Hill, Newbury RG20 9UZ.

1.2 Aims and Objectives

The dusk emergence surveys, and dawn return to roost survey are designed to:

- Identify the presence/likely absence of bats using the building to roost.
- Estimate the size and status of any existing bat roosts within the building.
- Establish where the bats are accessing the building.
- Determine the potential impacts on any bat roost from the proposed development.
- Determine if an EPSL is required.

The survey was carried out in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).

1.3 Proposed Works

The survey was commissioned in connection with a forthcoming planning application to Basingstoke and Deane Council, the plans of which have not yet been finalised, however, will likely either be, the construction of a new dwelling following the demolition of the existing bungalow, or the construction of a first floor onto the existing dwelling.

1.4 Surveyor Background and Experience

The activity surveys were conducted by Katie Holmes and Nick Powell together with a remote camera/bat logger and the report was compiled by Simon Holmes MSc, CEnv a Natural England licensed bat ecologist.

Simon Holmes MSc. CEnv. Simon holds Class 3 (CL19) and 4 Bat (CL20) Licenses (Nos. 17637 and 17638) and Science and Education license (SCI-64844). He has 34 years' experience of carrying out bat surveys and bat conservation work.

Katie Holmes. Katie holds a Class 2 Bat License (CLS-35124) and has been surveying bats for 11 years with various ecological consultancies and has received training in surveying techniques, bat detector use, bat biology, identification, acoustic monitoring, echolocation analysis and netting.

Nick Powell commenced surveying bats in 2022 and has received training in bat surveying techniques, bat detector use, bat biology, bat identification, acoustic monitoring, and echolocation analysis.

2. Survey Methodology

2.1 Constraints/Limitations

An assessment of the building exterior was conducted on 12 May 2023, prior to the first survey being undertaken and there were no constraints or limitations to the surveys. Weather conditions were suitable for the surveys being conducted during warm weather, and bats were observed foraging and in transit during the surveys.



2.2 Dusk and Dawn Surveys

The dusk emergence surveys were conducted on the evenings of Friday 12 May and Sunday 28 May 2023 and the dawn return to roost survey was conducted on Monday 12 June 2023. The surveyors/remote cameras/bat logger were stationed (as shown in Figure 1 below), to ensure the features identified in the preliminary bat report could be observed.

During the surveys bat activity was monitored using two BatLogger M bat detectors together with two Sony Handycam night shot video cameras with high intensity IR lamps. The detectors and cameras were fitted with SD cards for recording bat activity, allowing for later analysis with Kaleidoscope Pro 3 software, VLC media player and DVR Scan.

Figure 1 – Southernwood, surveyor/remote camera/bat logger location and common pipistrelle bat flight paths.



During the surveys no bats were seen emerging from and/or returning to the building to roost. In total six different species were recorded and identified foraging and commuting around the site. A simple summary of the bats recorded can be seen in Table 2 commencing on page 7. The most frequently used flight paths of common pipistrelle bats are shown on Figure 1 above.



3. Survey Findings

3.1 Dusk and Dawn Surveys

The weather conditions and surveyor/remote camera/bat logger details from the surveys can be found in Table 1 below.

Table 1 – Surveyor details and weather conditions for bat activity survey conducted at Southernwood, Newbury.

Date:	12 May 2023	28 May 2023	12 June 2023
Survey Type	Emergence survey	Emergence survey	Dawn re-entry survey
Surveyor and location	(A) Nick Powell (B) Katie Holmes	(A) Nick Powell (B) Remote camera/ bat logger	(A) Nick Powell (B) Remote camera/ bat logger
Weather Conditions (Start)	Temperature 12°C, Cloud cover 95% Humidity 81.9% Dry Wind Beaufort 2-3	Temperature 21.5°C, Cloud cover <5% Humidity 51.1% Dry Wind Beaufort 1	Temperature 19.7°C, Cloud cover 60% Humidity 84.3% Dry Wind Beaufort 0
Sunset/Sunrise	20:45	21:08	04:49
Start time	20:30	20:50	03:15
Finish Time	22:15	22:40	05:05
Duration	01:45	01:50	01:50
Weather Conditions (Finish)	Temperature 11.2°C Cloud cover 75% Humidity 85.8% Dry Wind Beaufort 3-4	Temperature 13.6°C Cloud cover 0% Humidity 83.2% Dry Wind Beaufort 2	Temperature 15.8°C Cloud cover 85% Humidity 98.7% Dry Wind Beaufort 0

Table 2. Summary of bat calls recorded in the vicinity of Southernwood, Newbury.

Date	Surveyor Position	Time	Seen	Heard	Species	Comments
12/05/23	A	20:30 – 22:15	Y	Y	Common and soprano pipistrelle, noctule, serotine and BLE	At 20.41 (4 minutes before sunset) a brief call from a soprano pipistrelle bat was heard, the bat was then heard once more during the survey but not seen. Common pipistrelle activity commenced at 20.46 with the bat being seen entering the site to the left of the surveyor and over the property. Thereafter common pipistrelle foraging and transit activity dominated until survey end. At 21.11 a serotine was both seen and heard in transit over the head of the surveyor heading toward the back garden over the garage. Numerous serotine foraging calls were then heard until 21.53 with the bat being seen on a number of occasions foraging in the garden to the left of the surveyor. A noctule was heard on 4 occasions between 21.20 and 22.00, the bat was not seen. Analysis of the data recorded revealed a single call from a BLE bat.



Table 2 continued.

Date	Surveyor Position	Time	Seen	Heard	Species	Comments
12/05/23	B	20:30 – 22:15	Y	Y	Common and soprano pipistrelle, noctule, serotine and BLE	Numerous (150+ per species) foraging and transit calls were heard during the survey from both soprano and common pipistrelle bats from 20.42 until survey end with the bats being seen foraging in and around the tree lines of the site. A serotine was both seen and heard in transit over the garage at 21.12 and thereafter another 9 foraging calls were heard from the bat, but it was not seen again. A couple of transit calls from a noctule were heard, at 21.21 and 21.29 and a single call from a BLE bat was heard at 21.48.
28/05/23	A	20:50 – 22:40	Y	Y	Common, and soprano pipistrelle noctule and serotine	At 21.12 (4 minutes after sunset) a common pipistrelle bat was both seen and heard foraging entering the site to the left of the surveyor, the bat then constantly foraging around the garden and site until survey end. Soprano pipistrelle activity was limited with only 11 foraging calls being heard between 21.38 and 21.46, the bat was not seen. A noctule was heard on a few occasions between 21.26 and 21.31, the bat was not seen. The serotine was both seen and heard at 20.32 entering the site over the head of the surveyor, it then began foraging in the rear garden intermittently until survey end.
28/05/23	B	20:50 – 22:40	N	Y	Common, and soprano pipistrelle, noctule and serotine	Analysis of the data recorded revealed 213 transit and foraging calls from common pipistrelle bats and 20 calls from soprano pipistrelle bats during the entire survey. 1 transit call from a noctule bat was recorded and 31 foraging calls from a serotine were also recorded. No bats were recorded by the night vision camera.
12/06/23	A	03:15 – 05:05	N	Y	Common, and soprano pipistrelle noctule and western barbastelle	Common pipistrelle foraging activity was heard and recorded from survey beginning until 04.34, being the last bat call heard and recorded during the survey, with up to 2 bats being seen foraging in and around the site. Soprano pipistrelle activity was limited with only 9 foraging calls being heard between 03.06 and 04.04 with the bat being seen on the last occasion foraging in the garden. A faint call from a noctule was heard only once, at 03.36. Analysis of the data recorded revealed a single call from a western barbastelle.
12/06/23	B	03:15 – 05:05	N	Y	Common, and soprano pipistrelle, BLE and western barbastelle	Analysis of the data recorded revealed 45 transit and foraging calls from common pipistrelle bats and only 9 calls from soprano pipistrelle bats during the entire survey. A single call from a BLE bat and a single call from a western barbastelle were also recorded. No bats were recorded by the night vision camera.

4. Conclusions/Interpretation

- 4.1 The DNA evidence confirmed the droppings observed during the preliminary survey are those of the BLE bat, a common (widespread in the UK and Hampshire) species and there was no evidence to indicate maternity use or hibernation. The evidence indicates that the roost is historic, as there were no fresh droppings, or bats and no bats emerged or re-entered the property to roost therefore an EPSL from Natural England is not required.



- 4.2 Roosting and foraging opportunities are good with tree lined roads surrounding the site and a variety of alternate roosting provisions including the and Little Pen Wood to the south and east of the site. The roost is considered to be of low conservation significance that is important at a site level only.
- 4.3 The location and number of droppings observed in the loft indicate it was most probably occupied opportunistically by a solitary BLE bat as a day roost. There is no evidence to support current bat roosting. Furthermore, there is no evidence to suggest that it has been used this season (2023), therefore a method statement is included within this report in accordance with EU Article 12 and 16 which help guide works that affect a resting place when the species is not present in order to avoid a licence/derogation.
- 4.4 The building has a low number of crevice like features, and bats may return to roost at the building following the surveys, an ecological method statement must be conditioned with any planning consent. This will provide suitable ecological safeguards should bats be discovered and enable the Local Planning Authority to have regards to the requirements of the Habitats Directive... *in the exercise of their functions in considering the planning application.*
- 4.5 The calls detected and recorded from the survey provided identification of common pipistrelle, *Pipistrellus pipistrellus*, soprano pipistrelle, *Pipistrellus pygmaeus*, serotine, *Eptesicus serotinus*, noctule, *Nyctalus noctula*, Western barbastelle, *Barbastella barbastellus*, and BLE, *Plecotus auritus*, all foraging and/or transiting across the site. The longest and most frequently recorded calls were from common pipistrelle bats.
- 4.6 The first soprano pipistrelle first bats heard during the emergence surveys was at 4 minutes before sunset and the common pipistrelle bats at 1 minutes after sunset, indicating that the bats are roosting close by, but they did not emerge from the property. Serotines are also known to emerge early, as the serotine call was heard at 26 minutes after sunset the bat is most probably roosting close by, but also did not emerge from the property. The bat calls and field observations provide a high level of confidence in support of the opinions as set out in this report. Bat activity was dominated by the common pipistrelles, with the number of calls and visual observations indicating a low number (<4) of individual bats foraging in the vicinity.
- 4.7 Whilst a limited number of calls from BLE bats were heard by the surveyor/remote bat logger, this is not unusual as the BLE bat is commonly referred to as the 'silent' bat as the calls are very quiet and difficult to detect as they prefer to hunt using their hearing and sight.
- 4.8 All bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017, and the Wildlife and Countryside Act 1981 (as amended). The provisions set out in the ecological method statement must be implemented in order for the works to be legally undertaken and must form part of any planning conditions.
- 4.9 To ensure that any planned development is in full compliance with European and national legislation, and national and local biodiversity planning policy an appropriate and proportionate program of mitigation and enhancement must be agreed to ensure protection and enhancements for bats.



5. Method Statement for Planning

This site-specific method statement is provided to comply with EU Article 12 and 16 which help guide works that affect a bat resting place when the species is not present in order to avoid a licence/derogation, it will be necessary, to ensure following development the “favourable conservation status” of bats is maintained.

This watching brief aims to address:

- Timing and methods of activities
- Provision of new bat roosting
- Impact on and replacement of existing roosts
- Lighting and habitat provisions as applicable

5.1 Pre-commencement

5.1.1 A project ecologist or their agent must be engaged prior to commencement to provide advice should it be required and supervision for the duration of the proposed works. A record of all site visits must be made, with photographs taken as required. This ecological method statement must be adhered to, it provides project supervision and will ensure that best practice and compliance is adhered to. If there is a delay of greater than one year from the date of this report, further survey effort will be required. Bats are highly mobile wild animals and may be encountered within a building following negative activity survey results.

5.1.2 One general purpose woodcrete bat box, for example a Schwegler 1FF bat box (see www.NHBS.com) or similar design will be suitably sited on a mature tree on the site, the siting to be agreed with the project ecologist. The bat box will provide alternative roosting habitat for the species (BLE) that have roosted at the site, should it be required. The box should remain in situ even if it is unused as this will provide an overall increase in ecological features and provide a biodiversity net gain.

5.2 Method

5.2.1 A tool box talk must be given to the contractors prior to commencement of works, which will include: background legislation in relation to bats; the most likely areas to expect bats (based on the survey results), good working practice and, details of what to do if a bat or additional evidence of bats is discovered. In the unlikely event that bats, or evidence of other roost locations are found, works must stop immediately and Natural England or the project ecologist contacted immediately, and any requisite license obtained.

5.3 Timing of work

5.3.1 Any works that have the potential to disturb bats during the bat activity period (1 May to 31 August) for example, removing the roof tiles near the verges, and must be conducted outside this period. If the works cannot be undertaken during the period 1 September to 1 May and should bats be encountered during this period or at any time during the work, then all work must stop and an EPSL will be required.

5.3.2 All work must be undertaken in normal working, daylight, hours, which is in accordance with best working practice and allows the project ecologist or their agent to address any issues if bat(s) are found during the demolition work.



5.4 Ecological supervision

- 5.4.1 Prior to any works being undertaken on the building (internally or external), the building must be inspected for any new evidence of bats and the project ecologist, or their agent must be available (on-call) to provide advice should it be required.
- 5.4.2 If, during the work, when the licenced bat worker is not on-site, and a bat is discovered that appears to be injured or distressed, then the animal should be carefully placed in a small box (e.g. shoe box) by either handling the bat with thick gloved hands or covering the bat with the box and sliding a thin piece of cardboard under to create a floor to the box. A clean piece of cloth loosely crumpled will be placed in one corner of the box (to allow the bat to crawl under and hide), a few small air holes will be put into the lid of the box, and a very shallow container (e.g. foil milk bottle top) of water will be placed in one corner of the box. The licensed bat worker must then be called without delay and all work must stop until the licensed bat worker has been consulted.

5.5 Incorporation of bat roosting

- 5.5.1 There are existing features that provide possible bat access, e.g. a number of gaps within the verges on the north east elevation of the property. Access to suitable roosting provision must be compensated for in any proposed extension or new building. Any new extension or building must provide at least two suitable crevice like features, for example integral bat boxes set between the joists or soffits at eaves level where possible and must be positioned on south, east or west facing elevations but not directly above a window. Suitable alternatives would include bat bricks or bat access tiles and where they provide access to the roof, they must incorporate a bitumen felt roof lining, non-breathable roofing membranes must not be used as they entangle and kill bats.

5.6 Lighting proposals

- 5.6.1 Lighting: The exact lighting proposals are not known at this stage but where new external lighting is provided the Institute of Lighting Professionals (ILP) guide must be followed.

For example; all external lighting must be Light Emitting Diode (LED) and directed downward or be located at a low level. LED bulbs produce the least amount of heat and no UV light minimising the attraction effect of impact on insects and foraging bats. By carefully directing light downwards any using a PIR with short illumination sensor the impact of external lighting on any foraging bats will be minimal.

5.7 Post construction work

- 5.7.1 There is no requirement for post-construction monitoring of this scheme.

6. References

- Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).
Bat Workers Manual – Mitchell-Jones & McLeish 2004.
Bat Mitigation Guidelines – Natural England 2006.
The Conservation and Habitat Regulations – 2017.



Urban Tree Experts

BS5837 – Tree Surveys – Ecological Consulting

7. Queries

Any queries regarding this report should be addressed, in the first instance, to Urban Tree Experts:

Telephone: [REDACTED]

Email: [REDACTED]

Urban Tree Experts
Bramley House
Newnham Bridge
Tenbury Wells
Worcestershire WR15 8NX



Simon Holmes, MSc
Consultant, Urban Tree Experts
Bat License CLS-CLS- 17637 & 17638



Urban Tree Experts
BS5837 – Tree Surveys – Ecological Consulting

APPENDIX 1

Data Search for 2 km around SU 43399 61818

Hampshire Bat Group, as at 26/5/23

Bat distribution records for all species for the area around Southernwood, Tile Barn, Woolton Hill, Hampshire, RG20 9UZ

Search area SU 413 598 to SU 454 639

VC12 is Vice County 12, i.e. North Hampshire

Taxon	Vernacular	Site	Gridref	VC	Quantity	Date	Method	Comment	
Chiroptera sp.	a bat species	Penwood, Highclere	SU443614		12 present	11-Jul-83	Roosting		
Pipistrellus sp.	Pipistrelle species	East Woodhay, near Newbury	SU417615		12	02-Mar-86	Field Record		
Plecotus auritus	Brown Long-eared Bat	East Woodhay, near Newbury	SU417615		12	02-Mar-86	Field Record		
Plecotus auritus	Brown Long-eared Bat	Hollington, near Highclere	SU421600		12	21-Sep-86	Field Record		
Plecotus auritus	Brown Long-eared Bat	Highclere	SU437611		12 present	1989	Roost visit		
Plecotus auritus	Brown Long-eared Bat	Andover Road, Wash Water, near Newbury	SU451629		12	21-May-98	Roost visit		
Pipistrellus sp.	Pipistrelle species	Walton Hill, near Newbury	SU418604		12	30-Aug-98	Roosting		
Chiroptera sp.	a bat species	Penwood Heights, Penwood, Burghclere	SU444615		12	25-Mar-00	Roosting		
Pipistrellus sp.	Pipistrelle species	Paintings Lane, Highclere	SU435613		12 present	04-Jul-00	Roost visit	Maternity Roost	
Chiroptera sp.	a bat species	Highclere	SU440602		12 present	09-Jul-01	Roosting		
Pipistrellus sp.	Pipistrelle species	Westridge, Highclere	SU434604		12 present	11-May-02	Roost visit (droppings)		
Plecotus auritus	Brown Long-eared Bat	Highclere	SU441602		12	30-Sep-03	Roost visit	Male	
Plecotus auritus	Brown Long-eared Bat	Highclere	SU441602		12 present	30-Sep-03	Roost visit (droppings)		
Plecotus auritus	Brown Long-eared Bat	Woolton Hill	SU433616		12	3	14-Jun-10	Bat detector - time expansion recording	Time Expansion Recordings. Bachelor pad/satellite colony. Dwelling house.
Myotis nattereri	Natterer's Bat	Woolton Hill	SU433616		12	1	15-Jun-10	Bat detector - time expansion recording	Time Expansion Recordings
Plecotus auritus	Brown Long-eared Bat	Woolton Hill	SU433616		12	7	16-Jun-10	Bat detector - time expansion recording	Time Expansion Recordings
Pipistrellus pygmaeus	Soprano Pipistrelle	Woolton Hill	SU433616		12	3	16-Jun-10	Bat detector - time expansion recording	Time Expansion Recordings
Pipistrellus pygmaeus	Soprano Pipistrelle	Woolton Hill	SU433616		12	1	16-Jun-10	Bat detector - time expansion recording	Time Expansion Recordings. Bachelor pad/satellite colony. Dwelling house.
Pipistrellus pipistrellus	Common Pipistrelle	Woolton Hill	SU433616		12	1	16-Jun-10	Bat detector - time expansion recording	Time Expansion Recordings. Bachelor pad/satellite colony. Dwelling house.
Pipistrellus pipistrellus	Common Pipistrelle	Woolton Hill	SU433616		12	16	21-Jul-10	Bat detector - time expansion recording	Time Expansion Recordings
Barbastella barbastellus	Western Barbastelle	Woolton Hill	SU433616		12	2	22-Jul-10	Bat detector - time expansion recording	Time Expansion Recordings
Eptesicus serotinus	Serotine	Woolton Hill	SU433616		12	2	29-Aug-10	Bat detector - time expansion recording	Time Expansion Recordings
Plecotus auritus	Brown Long-eared Bat	Enborne Row	SU448632		12 present	19-Jul-13	Droppings	Via HMG and Living Record	
Plecotus auritus	Brown Long-eared Bat	Enborne Row	SU448632		12 present	22-Jul-13	Bat detector	Dusk activity survey. Recorded in garden. Record via HMG and Living Record.	
Nyctalus noctula	Noctule Bat	Enborne Row	SU448632		12 present	22-Jul-13	Bat detector	Dusk activity survey. Record via HMG and Living Record.	
Pipistrellus pipistrellus	Common Pipistrelle	Enborne Row	SU448632		12 present	22-Jul-13	Field record / observation	Living Record download: Dusk Activity Survey, Emerging from hanging tiles	
Myotis nattereri	Natterer's Bat	Enborne Row	SU448632		12 present	22-Jul-13	bat detector and visual	Emerging from hanging tiles. Record via HMG and Living Record.	
Barbastella barbastellus	Western Barbastelle	Woolton Hill, Newbury	SU43126157		12	4	27-May-15	bat detector	
Pipistrellus pipistrellus	Common Pipistrelle	Woolton Hill, Newbury	SU43126157		12	6	27-May-15	bat detector	
Pipistrellus pygmaeus	Soprano Pipistrelle	Woolton Hill, Newbury	SU43126157		12	3	27-May-15	bat detector	
Nyctalus noctula	Noctule Bat	Woolton Hill, Newbury	SU43126157		12	4	27-May-15	bat detector	
Eptesicus serotinus	Serotine	Woolton Hill, Newbury	SU43126157		12	4	27-May-15	bat detector	
Plecotus sp.	Long-eared bats	Woolton Hill, Newbury	SU43126157		12	1	10-Jun-15	bat detector	
Myotis sp.	Myotis bat sp.	Woolton Hill, Newbury	SU43126157		12	2	23-Jun-15	bat detector	
Plecotus sp.	Long-eared bats	Woolton Hill, Newbury	SU43126157		12	1	23-Jun-15	bat detector	
Myotis sp.	Myotis bat sp.	Little Pen Wood, south of Heathlands, Highclere	SU441615		12	1	02-Apr-16	Tree survey	Seen with endoscope roosting within cavity in holly tree, Photos taken.
Plecotus auritus	Brown Long-eared Bat	Woolton Hill	SU430617		12	1	Jun-16	bat droppings with DNA analysis	
Pipistrellus pipistrellus	Common Pipistrelle	Woolton Hill	SU430617		12	1	Jun-16	Bat detector	Activity survey
Plecotus sp.	Long-eared bats	Penwood	SU4482862770		12	1	10-Jul-16	bat detector time expansion recording	
Pipistrellus pipistrellus	Common Pipistrelle	Penwood	SU4482862770		12	1	01-Aug-16	bat detector time expansion recording	
Eptesicus serotinus	Serotine	Penwood	SU4482862770		12	1	10-Aug-16	bat detector time expansion recording	
Pipistrellus pygmaeus	Soprano Pipistrelle	Penwood	SU4482862770		12	1	10-Aug-16	bat detector time expansion recording	
Pipistrellus sp.	Pipistrelle species	Highclere	SU4373860578		12 present	03-May-17	bat droppings	2 droppings found to the exterior of the hall on a windowsill and in a cobweb.	
Eptesicus serotinus	Serotine	Hollington, Woolton Hill, RG20 9XN	SU429610		12	1	26-May-17	Roost inspection	Roost within the south roof void, subsequent emergence survey recorded bats emerging from under a ridge tile.
Plecotus auritus	Brown Long-eared Bat	Hollington, Woolton Hill, RG20 9XN	SU429610		12	20	26-May-17	Roost inspection	Maternity roost within the main roof void, subsequent emergence survey recorded bats emerging from the eaves of the west roof section.
Plecotus auritus	Brown Long-eared Bat	Hollington, Woolton Hill, RG20 9XN	SU429610		12	1	26-May-17	Roost inspection	Roost within the south roof void, subsequent emergence survey recorded bats emerging from under a ridge tile.
Pipistrellus pipistrellus	Common Pipistrelle	Highclere	SU4373860578		12	1	26-Jul-17	Bat detector	Day roost - 1 bat emerged from around the window on the southern gable end
Myotis sp.	Myotis bat sp.	Highclere	SU4373860578		12 present	26-Jul-17	Bat detector	In flight	
Pipistrellus pygmaeus	Soprano Pipistrelle	Highclere	SU4373860578		12 present	24-Aug-17	Bat detector	In flight	
Nyctalus noctula	Noctule Bat	Highclere	SU4373860578		12 present	24-Aug-17	Bat detector	In flight	
Plecotus sp.	Long-eared bats	Highclere	SU4373860578		12 present	24-Aug-17	Bat detector	In flight	
Pipistrellus pipistrellus	Common Pipistrelle	Highclere	SU4373860578		12 present	24-Aug-17	Bat detector	In flight	
Plecotus sp.	Long-eared bats	Penwood	SU426615		12	1	May-18	In roost	
Pipistrellus pipistrellus	Common Pipistrelle	Penwood	SU426615		12	1	May-18	In roost	
Nyctalus noctula	Noctule Bat	Hollington Lane, Highclere	SU431600		12	1	26-Jul-18	bat detector	
Pipistrellus pipistrellus	Common Pipistrelle	Hollington Lane, Highclere	SU431600		12	1	26-Jul-18	bat detector	
Pipistrellus pygmaeus	Soprano Pipistrelle	Hollington Lane, Highclere	SU431600		12	1	26-Jul-18	bat detector	
Myotis nattereri	Natterer's Bat	Hollington Lane, Highclere	SU431600		12	1	26-Jul-18	bat detector	
Eptesicus serotinus	Serotine	Knights Lane, Ball Hill	SU4222963439		12 present	13-Aug-18	bat detector		
Pipistrellus pygmaeus	Soprano Pipistrelle	Knights Lane, Ball Hill	SU4222963439		12 present	13-Aug-18	bat detector		
Myotis sp.	Myotis bat sp.	Knights Lane, Ball Hill	SU4222963439		12 present	13-Aug-18	bat detector		
Plecotus sp.	Long-eared bats	Knights Lane, Ball Hill	SU4222963439		12 present	13-Aug-18	bat detector		
Pipistrellus pipistrellus	Common Pipistrelle	Knights Lane, Ball Hill	SU4222963439		12 present	13-Aug-18	bat detector	Single individual roosting behind hanging tiles	
Pipistrellus pygmaeus	Soprano Pipistrelle	Hollington Lane, Highclere	SU431600		12	1	23-Aug-18	bat detector	
Nyctalus noctula	Noctule Bat	Hollington Lane, Highclere	SU431600		12	1	23-Aug-18	bat detector	
Plecotus sp.	Long-eared bats	Highclere	SU4369661184		12	1	25-Sep-18	bat detector	One bat emerged from the western end of the property.
Pipistrellus pygmaeus	Soprano Pipistrelle	Highclere	SU4369661184		12 present	25-Sep-18	bat detector	In flight	
Nyctalus noctula	Noctule Bat	Highclere	SU4369661184		12 present	25-Sep-18	bat detector	In flight	
Chiroptera sp.	a bat species	Highclere	SU4369661184		12 present	25-Sep-18	bat detector	Likely Nyctalus leisleri	
Pipistrellus pipistrellus	Common Pipistrelle	Highclere	SU4369661184		12 present	25-Sep-18	bat detector	In flight	
Nyctalus sp.	a bat species	Highclere	SU4369661184		12 present	07-May-19	bat detector	In flight	
Plecotus auritus	Brown Long-eared Bat	Highclere	SU4369661184		12	1	07-May-19	bat detector	One bat emerged from the western end of the property. Confirmed by DNA.
Pipistrellus pipistrellus	Common Pipistrelle	Highclere	SU4369661184		12 present	07-May-19	bat detector	In flight	
Pipistrellus pygmaeus	Soprano Pipistrelle	Highclere	SU4369661184		12 present	07-May-19	bat detector	In flight	
Nyctalus noctula	Noctule Bat	Highclere	SU4369661184		12 present	07-May-19	bat detector	In flight	
Pipistrellus pygmaeus	Soprano Pipistrelle	Highclere	SU4369661184		12 present	30-May-19	bat detector	In flight	
Pipistrellus pipistrellus	Common Pipistrelle	Highclere	SU4369661184		12 present	30-May-19	bat detector	In flight	
Barbastella barbastellus	Western Barbastelle	Highclere	SU4369661184		12 present	30-May-19	bat detector	In flight	

Plecotus sp.	Long-eared bats	Tubbs Lane, Highclere	SU4368760779	12	present	07-Oct-19	bat droppings	3 medium sized bat droppings in southern end of the roof space
Pipistrellus pipistrellus	Common Pipistrelle	Penwood	SU4482862770	12	12	19-Oct-19	destructive search under licence- bats found	found under hanging tiles under licenced destructive search
Myotis nattereri	Natterer's Bat	Penwood	SU4482862770	12	15	22-Oct-19	destructive search under licence- bats found	found under hanging tiles during licenced destructive search
Barbastella barbastellus	Western Barbastelle	Penwood	SU4482862770	12	1	11-Nov-19	destructive search under licence- bats found	found under hanging tiles during licenced destructive search
Pipistrellus pipistrellus	Common Pipistrelle	Woolton Hill	SU425625	12	1	06-May-20	bat detector	
Eptesicus serotinus	Serotine	Tubbs Lane, Highclere	SU4368760779	12	present	06-May-20	bat detector	In flight
Nyctalus noctula	Noctule Bat	Tubbs Lane, Highclere	SU4368760779	12	present	06-May-20	bat detector	In flight
Eptesicus serotinus	Serotine	Woolton Hill	SU425625	12	1	06-May-20	bat detector	
Pipistrellus pipistrellus	Common Pipistrelle	Tubbs Lane, Highclere	SU4368760779	12	present	06-May-20	bat detector	In flight
Pipistrellus pipistrellus	Common Pipistrelle	Tubbs Lane, Highclere	SU4368760779	12	present	21-May-20	bat detector	In flight
Plecotus auritus	Brown Long-eared Bat	Highclere	SU430600	12	present	20-Oct-21	bat droppings with DNA analysis	Roost. ID by DNA of droppings.
Pipistrellus pipistrellus	Common Pipistrelle	Pound Street, Penwood, RG20 9EW	SU451614	12	1m	10-Nov-21	bat in hand	Day roost. Bat found during works. One male found under rood tile.
Pipistrellus pipistrellus	Common Pipistrelle	Highclere	SU430600	12	present	05-May-22	Emergence survey	Roost.
Eptesicus serotinus	Serotine	Highclere	SU430600	12	present	05-May-22	Bat detector	
Pipistrellus pygmaeus	Soprano Pipistrelle	Highclere	SU430600	12	present	05-May-22	Emergence survey	Roost
Nyctalus noctula	Noctule Bat	Highclere	SU430600	12	present	05-May-22	Bat detector	
Nyctalus noctula	Noctule Bat	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 1 pass on detector.
Pipistrellus pipistrellus	Common Pipistrelle	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 19 passes on detector.
Pipistrellus pygmaeus	Soprano Pipistrelle	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 9 passes on detector.
Barbastella barbastellus	Western Barbastelle	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 2 passes on detector.
Myotis sp.	Myotis bat sp.	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 1 pass on detector.
Myotis daubentonii	Daubenton's Bat	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 1 pass on detector.
Plecotus auritus	Brown Long-eared Bat	Star Lane, Highclere, RG20 9PL	SU43626048	12	present	27-Sep-22	bat detector	Emergence survey. 2 passes on detector.



Client for whom search carried out: Urban Tree Experts
 Client Purchase Order Number: N/A – Regular customer
 Client Reference: Southernwood, Tile Barn RG20 9UZ

Person requesting search: Katie Holmes
 Date of search: 26/05/2023

Search of Group Bat Records 2km radius centred on SU 43399 61818 (BSBBG Reference 1169UTE)

I have found the following records within your requested search area:

Grid reference	Species	Location	Date / Year	Additional information	Numbers if known	Km from centre	TVERC record count
SU41856315	Plecotus auritus	4 Crockers Mead, Ball Hill, East Woodhay RG20 OPT	28 Sep 2020	Injured / care bat - Dehydrated	1	2.0	
SU429617	Plecotus auritus	Tile barn, finchampstead	20 Jan 2013	Rescued - Overwintered	1	0.5	
SU429617	Plecotus auritus	Wootton Hill	12 Mar 2012	Rescued	1	0.5	
SU434618	Plecotus auritus	RG20 9UZ	15 Mar 2013	Roost visit - Dead bat	1	0.1	
SU4361761810	Plecotus auritus	Newbury Lodge, Woolton Hill	02 Apr 2013	Roost visit	1	0.2	
SU43626048	Pipistrellus pipistrellus	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 19 passes.		1.4	
SU43626048	Nyctalus noctula	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 1 pass.		1.4	
SU43626048	Plecotus auritus	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 2 passes.		1.4	
SU43626048	Myotis daubentonii	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 1 pass.		1.4	
SU43626048	Myotis sp.	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 1 pass.		1.4	
SU43626048	Barbastella barbastellus	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 2 passes.		1.4	
SU43626048	Pipistrellus pygmaeus	Westridge Oaks RG20 9PL	27 Sep 2022	Emergence survey - 9 passes.		1.4	
SU43746061	Plecotus sp.	Dwelling, Newbury	13 Jan 2017	Live bat identified in the hand - NE Roost visit. Roost type: Unknown/other	1	1.3	
SU44276349	Pipistrellus pipistrellus	Braidwood, Washwater, Enborne Row RG20 0LY	26 Sep 2017	Injured / Care Bat Record - Found indoors, v. hungry Fed and test flown r 1/10/17	1	1.9	
SU44516352	Plecotus sp.	Dwelling, Newbury	18 Jan 2017	By droppings - NE Roost visit. Roost type: Unknown/other		2.0	
SU451614	Pipistrellus pipistrellus	Yew Tree Farmhouse RG20 9EW	10 Nov 2021	Found during works - 1 male found under roof tile	1	1.8	
SU4161	Plecotus auritus	East End, near Newbury.	1998	Rural house loft, Hibernaculum	1	1.8	
SU425610	Pipistrellus sp.	Unknown	2002	Breeding roost		1.1	
SU425610	Plecotus auritus	Hollington House, Woolton Hill, Newbury.	2000	Large Manor House, Breeding roost	5	1.1	
SU436619	Pipistrellus sp.	Unknown	2002	In flight		0.3	
SU438617	Pipistrellus sp.	Withheld by EN at Grid Ref: SU438617	29 Nov 2001	Noise and smell problems reported. Roost visit?		0.5	
SU442615	Plecotus auritus	Millbank House, Newbury.	1997	Business premises, (6-20), Breeding roost	6	0.9	
SU444618	Pipistrellus sp.	Unknown	2002	Breeding roost		1.1	

BSBBG has agreed an exchange of data with TVERC which enables us to provide records belonging to them with the grid reference given to 1 km precision. Such records are indicated by *TVERC under location. Enquirers are recommended to contact TVERC direct to obtain full locations details. Please note that TVERC provides BSBBG with an annual update of their records, so they may hold records for your search area that BSBBG does not yet have access to. Requests for information may be submitted via the TVERC website www.tverc.org.uk

However I must, as usual, point out that our records should not be considered a complete record of bats in the area since we only record sites where we, as a Bat Group, have been called to assist members of the public or Natural England (what was English Nature) to deal with 'bat problems', recorded bats whilst undertaking bat group events and walks or taken part in National Monitoring of bats for the Bat Conservation Trust. Records from the general public and bat group members submitted to the records officer are also kept in the database. To be certain what bats may or may not be present it would be necessary to undertake a detailed bat survey at various times throughout the year.



Urban Tree Experts
BS5837 – Tree Surveys – Ecological Consulting

APPENDIX 2

Folio No: E16410
 Report No: 1
 Purchase Order: KH202302
 Client: URBAN TREE EXPERTS
 Contact: Simon Holmes

TECHNICAL REPORT

ANALYSIS OF BAT DROPPINGS FOR SPECIES OF ORIGIN IDENTIFICATION

SUMMARY

The droppings of bats contain small amounts of DNA belonging to the organism from which they originated. By analysing droppings collected from a bat roost or colony for the presence of DNA, a robust identification of the species present can be made. Recent advancements in molecular methods including PCR (polymerase chain reaction) and DNA sequencing mean that 92% of bat species worldwide can be identified including all 17 UK resident bat species.

RESULTS

Date sample received at Laboratory: 30/03/2023
Date Reported: 12/04/2023
Matters Affecting Results: None

Lab Sample ID.	Site Name	O/S Reference	Genetic Sequence	Common Name	Result	Sequence Similarity
B1758	Southernwood		GGTTAGTGCCACTGATAATT GGAGCCCCTGACATAGCTTT TCCCGAATAAATAACATAA GCTTCTGACTGCTTCCCCCA TCTTTTCTACTACTTTTAGCT TCGTCTGCAGTAGAGGCTGG GGCAGGTACCGTTGAACAG TCTACCCTCCTTTAGCGGGA AA	Brown long-eared bat	<i>Plecotus auritus</i>	100%



If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chelsea Warner

Approved by: Chris Troth

METHODOLOGY

Once samples have arrived in the laboratory, a single bat dropping is selected for its suitability (freshness and size). The DNA is then isolated using a commercial DNA extraction kit. Using PCR, bat DNA (if present within the sample) is amplified using bat DNA-specific molecular markers designed to amplify a short fragment of the mitochondrial gene. If amplification is successful, the resulting DNA sequence is revealed using a process known as Sanger Sequencing in order to obtain the genetic sequence. The sequence results are aligned against a library of known bat reference sequences using bioinformatics software, which enables us to determine which species the extracted DNA matches with, informing the species identity and sequence similarity (%).

If the initial analysis is unsuccessful, the entire process is repeated up to two additional times with fresh reserve droppings. If no DNA is detected after three attempts, we can be confident that any further analysis of the sample will likely also fail to result in species identification.

INTERPRETATION

Genetic Sequence: The unique DNA sequence obtained from the sample.

Sequence Similarity: How closely matched the DNA sequence from your sample is to the sequences within our reference database. This can be interpreted as a score of result accuracy, with the maximum score of 100% indicating an exact match of dropping to the indicated species' reference sequence. Lower scores (80-99%) indicate some variation between the sample and reference sequence, likely due to natural variation between individual genetic sequences and/or systematic variations generated through the sequencing process. Scores below 80% similarity should be interpreted with care and can indicate part degraded or part contaminated samples.

Inconclusive Result: **Degraded sample:**
DNA degraded, unable to determine species identification due to degradation of sample DNA. This can happen either before sample collection (old droppings, exposure to UV etc.) or after sample collection if stored for long periods before analysis or not handled correctly.

Inhibited/contaminated sample:
Unable to determine species identity due to contamination or the suspected presence of large quantities of PCR inhibitors. Contamination sources can come from other species which come into contact with droppings, human contamination during sample collection.

Alternative Result: Sometimes, other mammalian species such as rodents are detected. We find this to be a common occurrence as some bat droppings can be similar in appearance to rodent droppings. Although sometimes unexpected, repeat analyses in these cases would likely return the same results.

