

Hillingdon Hospital

Bat Emergence Survey Report

Hillingdon Hospitals NHS Foundation Trust

February 2024

Quality information

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Table 1. Bat Emergence Survey Conditions

1. Executive Summary

AECOM Ltd (hereafter 'AECOM') completed a Preliminary Ecological Appraisal (PEA) of Hillingdon Hospital (hereafter 'the Site') in November 2020 (AECOM, 2022a). The PEA determined that the Furze building on the hospital estate (also known as Building 10) had a high suitability to support roosting bats.

Following the 2020 PEA report, an internal inspection and three dusk emergence surveys of the Furze building were conducted in 2021. These surveys found no evidence of roosting bats, although potential access points were identified during the internal inspection, and bats were recorded foraging and commuting in the wider area (AECOM, 2022b). In accordance with current guidance (CIEEM, 2019) the existing bat emergence survey data have a 'shelf-life' of 18 months, and should only be relied on for a period of up to 18 months from the date of survey, and as such an updated suite of bat emergence surveys was required.

Therefore, AECOM was commissioned to complete three bat emergence surveys during August and September 2023. The aim of the surveys was to determine the presence or likely absence of roosting bats using the Furze building.

No bats were recorded emerging from or re-entering the Furze building; therefore, roosting bats are likely absent. Common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), serotine (*Eptesicus serotinus*), noctule (*Nyctalus noctula*) and Leisler's bat (*Nyctalus leisleri*) were recorded foraging and commuting within the wider area, including registrations of bats from 18 minutes after sunset, indicating that bat roosts are likely to be present in the wider area.

Bats are a highly mobile species and readily seek out new roost locations. Given the presence of suitable features for roosting bats within the Furze building and the activity recorded in the wider area during the emergence surveys conducted, it is recommended that a Precautionary Method of Working (PMoW) is prepared and implemented for works on or in proximity to the Furze building as follows:

Prior to demolition, the features on the Furze building that are suitable to support roosting bats (comprising gaps under lifted flashing, dormer windows, slipped tiles, gaps in brickwork and under guttering as detailed within the AECOM 2020 Preliminary Ecological Appraisal report) should be fully inspected by a suitably experienced, licenced bat ecologist. The features should then be removed by hand. If bats, or signs of bats such as droppings, are recorded during the inspection, works will need to stop immediately, and a European Protected Species Mitigation Licence (EPSML) obtained from Natural England before works can recommence.

In accordance with the current guidance (CIEEM, 2019), the results of the bat emergence survey of the Furze building are considered to be valid for a period of up to 18 months. If works commence more than 18 months after the completion of the bat emergence surveys on 26th September 2023, the survey will require updating to confirm the continued absence of roosting bats.

2. Introduction

AECOM Ltd (hereafter 'AECOM') completed a Preliminary Ecological Appraisal (PEA) of Hillingdon Hospital (hereafter 'the Site') in November 2020. The PEA determined that the Furze building (also known as Building 10) had a high suitability to support roosting bats (AECOM, 2022a). The Furze building will be subject to refurbishment works during the redevelopment of the Hillingdon Hospital site and a new footpath will also be constructed adjacent to the building.

Following the 2020 PEA report, an internal inspection of three roof voids on the building was completed on 18th February 2021, followed by three dusk emergence surveys completed on 24th May 2021, 12th July 2021 and 11th August 2021. These surveys did not record any bat emergences from the building, and the internal inspection did not record any signs of bats, although suitable access points were present. Common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*), serotine (*Eptesicus serotinus*), and brown long-eared bat (*Plecotus auritus*) were recorded foraging and commuting in the wider area (AECOM, 2022b).

In accordance with current guidance (CIEEM, 2019), the existing bat emergence survey data has a 'shelf-life' of x18 months and should only be relied on for a period of up to 18 months from the date of survey. As such, a suite of updated bat emergence surveys of the Furze building was required.

Therefore, AECOM was commissioned to undertake three bat emergence surveys during August and September 2023. The aim of the surveys was to determine the presence or likely absence of roosting bats using the Furze building.

3. Relevant Wildlife Legislation

All UK native bat species and their roosts (whether bats are present or not) are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under the Wildlife and Countryside Act 1981 (as amended). Taken together, under this legislation it is an offence to:

- deliberately, intentionally or recklessly capture, injure or kill a bat;
- damage/destroy a breeding site or resting place of a bat (this is an offence whether the act is deliberate or not);
- deliberately, intentionally or recklessly disturb a bat; or
- intentionally or recklessly obstruct access to any structure which a bat uses for shelter or protection.

A bat roost is defined as “any structure or place, which is used for shelter or protection” or a “breeding site or resting place”. Because bats commonly use the same roosts at particular times of the year after periods of absence, the roost is protected whether or not bats are resident.

Given the above legislation the potential presence of bats at a site represents a material consideration in the planning process. Even where planning permission is not required there is still a legal responsibility placed on the developer to ensure that a Natural England licence is obtained to cover any works that have the potential to result in an offence under the above legislation.

Seven of the UK bat species are listed as species of principal importance within Section 41 of the NERC Act (2006; as amended): namely, barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat (*Rhinolophus ferrumequinum*) and lesser horseshoe bat (*Rhinolophus hipposideros*).

4. Method

Emergence Survey

Five suitably experienced ecologists from AECOM completed three dusk emergence surveys of the Furze building.

These surveys took place on:

- 29th August 2023;
- 12th September 2023; and
- 26th September 2023.

The aim of the survey was to identify any bats leaving and/or returning to any roost that may be present in the Furze building. These surveys were conducted in accordance with best practice guidance from the Bat Conservation Trust (BCT) available at the time of the first two surveys (Collins, 2016). In accordance with the BCT survey guidelines (Collins, 2016), the dusk emergence survey covered the period from fifteen minutes before sunset to one-and-a-half hours after sunset. It should be noted that new best practice guidance from the BCT was issued on 15th September 2023. The surveys conducted in August and September 2023 are broadly in line with the new guidelines; any deviations are discussed in the 'Limitations' section below.

During these time periods experienced ecologists observed potential access/egress points on the Furze building, with ecologists situated to cover potential access/egress features. The suitable features on the building comprised gaps under lifted flashing, dormer windows, slipped tiles, gaps in brickwork and under guttering as detailed within the AECOM 2020 PEA report. The location of the Furze building and the survey locations are shown on Figure 1. Surveyors carried echolocation detectors (Elekon Batlogger M or Echometer Touch detectors) to help determine which species were present.

The time, location, number, species (where possible) and direction of flight were recorded for each bat pass (either echolocation heard, or activity seen) encountered during the survey. The echolocation calls detected were recorded to allow the use of analysis software to verify bat calls where required.

In addition, the survey was supplemented using cameras with infrared capabilities (Canon XA20) to assist in identifying emerging bats and allow review of potential emergences. Either three or four cameras were deployed around the building during each survey visit.

The surveys were undertaken during favourable weather conditions, as summarised in Table 1.

Table 1. Bat Emergence Survey Conditions

Survey date	Building reference	Sunset	Start time	End time	Temperature (°C) at start of survey	Weather conditions
29/08/2023	B10 – the Furze	19:55	19:40	21:40	16	Drizzle at start of survey, overcast, light breeze
12/09/2023	B10 – the Furze	19:24	19:07	20:54	17	Overcast, dry, light breeze
26/09/2023	B10 – the Furze	18:52	18:36	20:52	19	Light breeze, Dry, 1/5 cloud cover

Limitations

While five surveyors were the preferred number to ensure maximum coverage of the building, on the survey of 29th August 2023, only four surveyors were able to attend the Site due to an incident earlier in the day. There was still substantial coverage of the building and as such the results of the survey are still valid.

Ecosystems are dynamic and constantly changing, and therefore species may move, or new species may be recorded in subsequent years. For this reason, and in accordance with current guidance, the existing survey data have a 'shelf-life' of 18 months and should only be relied on for a period of 18 months from the date of survey (CIEEM, 2019).

A fourth edition of the BCT best practice guidelines (Collins, 2023) was released between the second and third survey visits. The surveys were in line with the new edition of the guidelines, with the exception of surveys being

completed two weeks apart, instead of three weeks apart as suggested in the new fourth edition. However, surveys were in line with best practice available at the time (Collins, 2016). This is not considered to be a constraint to the validity of the survey results.

Quality Assurance

AECOM Ecologists are members, at the appropriate level, of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct when undertaking ecological work.

5. Results

Bat Emergence Survey

This section details the results of emergence survey conducted of the Furze building. Full emergence and re-entry survey results are included in Appendix A.

Dusk Emergence Survey 29th August 2023

During the dusk emergence survey on 29th August 2023, no bats were recorded emerging from the building. Bat activity was observed in the wider area. The first recorded bat was an individual common pipistrelle, 18 minutes after sunset. In addition to common pipistrelle, soprano pipistrelle, noctule, Leisler's bat (*Nyctalus leisleri*), serotine and brown long-eared bat were recorded in the wider area.

Dusk Emergence Survey 12th September 2023

During the dusk emergence survey on 12th September 2023, no bats were recorded emerging from the building. Bat activity was observed in the wider area. The first recorded bat activity was an individual noctule 28 minutes after sunset. In addition to noctule bats, common pipistrelle, soprano pipistrelle and Leisler's bat were recorded in the wider area.

Dusk Emergence Survey 26th September 2023

During the dusk emergence survey on 26th September 2023, no bats were recorded emerging from the building. Bat activity was observed in the wider area. The first recorded bat was an individual common pipistrelle 24 minutes after sunset. In addition to common pipistrelle bats, soprano pipistrelle and noctule bats were recorded, as well as a single pipistrelle bat (*Pipistrellus* sp.) social call.

6. Discussion and Recommendations

All UK native bat species and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under the Wildlife and Countryside Act 1981 (as amended). A bat roost is defined as any structure showing evidence of use by bats, whereby a roost is afforded protection even when bats are absent. Under this legislation it is an offence to deliberately, intentionally or recklessly kill, injure or disturb a bat in any structure which the bat uses for shelter or protection or obstruct or modify a roost.

The Furze building will be subject to refurbishment works during the redevelopment of the Hillingdon Hospital site and a new footpath will be constructed adjacent to the building. The dusk bat emergence surveys undertaken during August and September 2023 in line with the recommendations of the best practice guidelines available at the time (Collins, 2016) did not record evidence of any bats utilising the Furze building as a roost. This was in line with the findings of the bat emergence survey conducted by AECOM of the Furze building in 2021, which did not record any bats utilising the building for roosting. As such it is considered likely that roosting bats are absent from the Furze building. However, the building retains its suitability to support roosting bats.

Activity by common pipistrelle, soprano pipistrelle, brown long-eared bat, serotine, noctule and Leisler's bat was recorded in the wider area during the emergence surveys. Previous surveys of the wider site by AECOM in 2021 identified a common pipistrelle day roost in Building 19, approximately 260m west of the Furze building, a common pipistrelle transitional roost in Tree 14, approximately 20m south of the Furze building, and a noctule transitional roost in Tree 12, approximately 10m west of the Furze building (AECOM, 2022b). These trees will be retained.

Bats are highly mobile and readily seek out new roost locations. Given the presence of suitable features for roosting bats within the Furze building and the activity recorded in the wider area during the emergence surveys, and roosts recorded in trees in proximity to the building during surveys by AECOM in 2021, it is recommended that works proceed under a precautionary method of works in the form of a Non-licenced Method Statement (NLMS). The NLMS will include an inspection prior to removal of any roost features that will be damaged, destroyed or removed during the refurbishment works by an ecologist that holds a Natural England WML-CL18 (Bat Survey Level 2) class licence, as well as an internal building inspection where safe to do so to ensure the continued absence of bats. If bats or signs of bats are found, works will cease, and a Natural England European Protected Species Mitigation Licence (EPSML) applied for.

Refurbishment works for the Furze building are not anticipated to be at night. If there is a requirement for works at night in the wider site, any temporary construction lighting required will be designed to not spill onto the Furze building and adjacent habitat. Measures could include the use of hoods or louvres, as well as directional lighting. Any construction lighting required will be designed in line with the Bat Conservation Trust (BCT) and Institute of Lighting Professionals (ILP) best practice guidance (ILP, 2023). Where external security lighting is required, such as at site compounds, this will be set on a motion sensor and set to as short a possible illumination time as the risk assessment will allow.

The results of the bat emergence survey of the Furze building are valid for a period of 18 months. If works are scheduled more than 18 months after the completion of the bat emergence surveys on 26th September 2023, the survey will require updating to confirm the continued absence of roosting bats.

7. References

AECOM (2022a). *Hillingdon Hospital Preliminary Ecological Appraisal (THHR-ACM-ZZ-XX-RP-Y-000010)*

AECOM (2022b). *Hillingdon Hospital Bat Survey Report (THHR-ACM-ZZ-CC-RP-Y-000013)*

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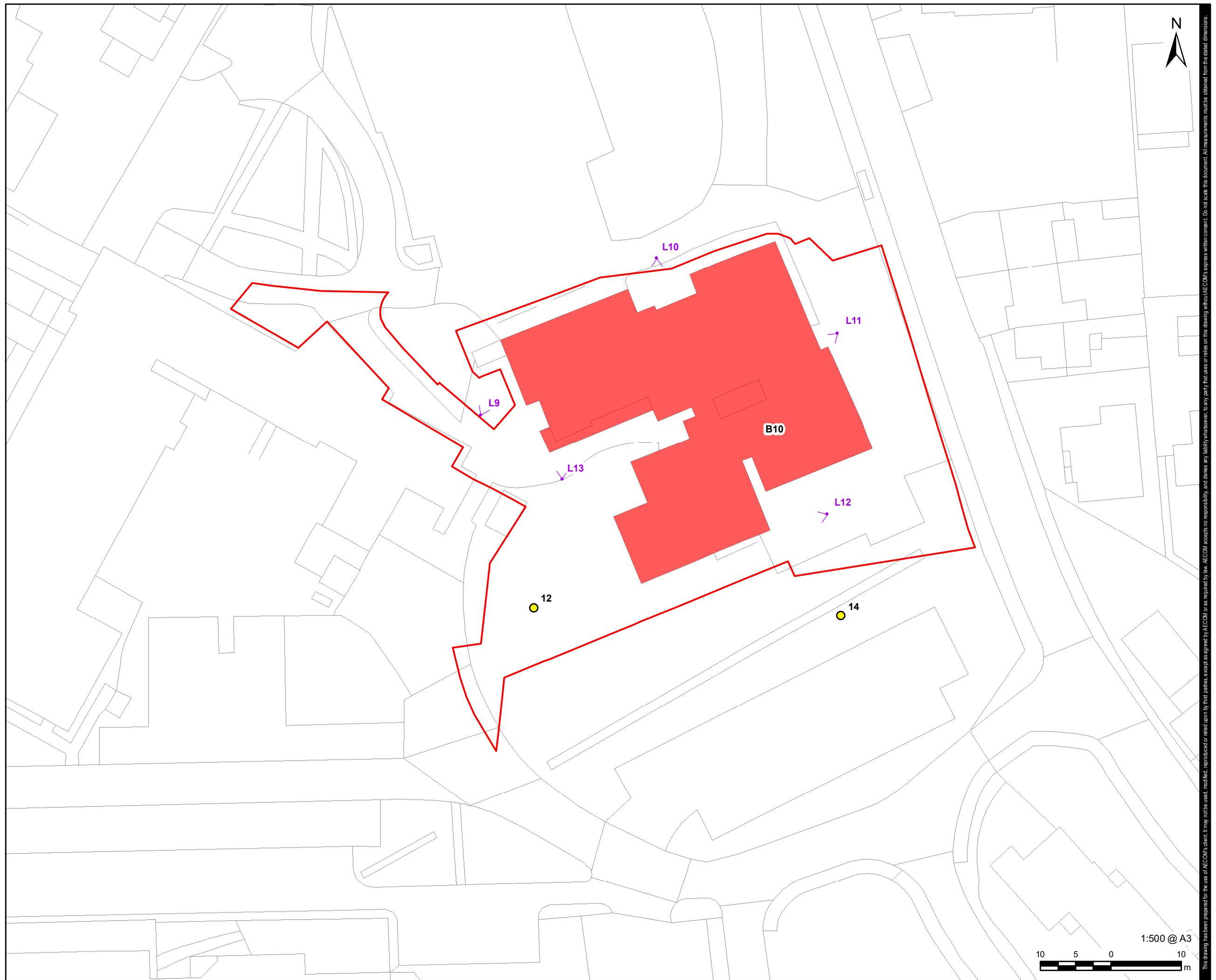
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HMSO (2017). The Conservation of Habitats and Species Regulations 2017 (as amended).



AECOM

PROJECT

Hillingdon Hospital

CLIENT

Hillingdon Hospitals
NHS Foundation Trust

CONSULTANT

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LEGEND

- Site Boundary
- Surveyor Location
- Previously Confirmed Roost
- Building Bat Roost Suitability**
- High

NOTES

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Ordnance Survey 0100031673. The Site
Boundary is from the THHFP1-LDW-ZZ-00-
DR-A-SKET023 CAD file and has been
indicatively georeferenced.

ISSUE PURPOSE

DRAFT

PROJECT NUMBER

60642181

FIGURE TITLE

Bat Emergence Survey

FIGURE NUMBER

Figure 1

Appendix A – Full Bat Emergence Survey Results

A.1 Dusk 29th August 2023

Project Name		Hillingdon Hospital		Surveyors (surveyor position)		CWF (L10), PW (L11), LB (L12), CF (L13)
Survey Location		B10 – The Furze		Rain (0-5)		1
Date		29/08/2023		Wind (Beaufort 0 - 7)		3
Start		19:40		Temperature (°C)		16
Sunset		19:55		Weather Description		Drizzle, cloudy, some wind
Finish		21:40		Cloud Cover (0-5)		5
Time	Species	No. of Bats	Emerge (Y/N)	Recording (Y/N)	Description	Surveyor Position
20:13	Common pipistrelle	1	N	Y	Call recorded on batlogger	L12
20:14	Noctule	1	N	Y	Heard not seen	L11
20:14	Noctule	1	N	Y	Call recorded on batlogger	L10
20:14	Leisler's bat	1	N	Y	Call recorded on batlogger	L13
20:15	Noctule	1	N	Y	Heard not seen	L13
20:15	Noctule	1	N	Y	Heard not seen	L10
20:15	Noctule	1	N	Y	Call recorded on batlogger	L11
20:16	Noctule	1	N	Y	Call recorded on batlogger	L12
20:17	Noctule	1	N	Y	Call recorded on batlogger	L12
20:18	Serotine	1	N	Y	Heard not seen	L13
20:18	Noctule	1	N	Y	Faint in recording.	L10
20:18	Noctule		N	Y	Call recorded on batlogger	L11
20:19	Leisler's bat	1	N	Y	Call recorded on batlogger	L12
20:20	Brown long-eared bat	1	N	Y	Heard not seen	L13
20:20	Noctule	1	N	Y	Call recorded on batlogger	L10
20:20	Noctule	1	N	Y	Call recorded on batlogger	L12

20:20	Noctule	1	N	Y	Brief pass, heard not seen	L11
20:21	Noctule	1	N	Y	Heard not seen	L13
20:22	Noctule	1	N	Y	Call recorded on batlogger	L12
20:28	Leisler's bat	1	N	Y	Call recorded on batlogger	L13
20:39	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L13
20:41	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L12
20:41	Serotine	1	N	Y	Call recorded on batlogger	L13
20:42	Leisler's bat	1	N	Y	Call recorded on batlogger	L13
20:42	Brown long-eared bat	1	N	Y	Call recorded on batlogger	L13
20:48	Noctule	1	N	Y	Call recorded on batlogger	L10
20:49	Noctule	1	N	Y	Call recorded on batlogger	L10
20:49	Noctule	1	N	Y	Call recorded on batlogger	L13
20:49	Noctule	1	N	Y	Call recorded on batlogger	L13
20:49	Leisler's bat	1	N	Y	Faint	L11
20:49	Soprano pipistrelle	1	N	Y	Heard not seen	L12
20:50	Soprano pipistrelle	1	N	Y	Faint, brief pass, heard not seen	L11
20:51	Noctule	1	N	Y	One pass overhead	L12
20:51	Serotine	1	N	Y	Call recorded on batlogger	L13
20:51	Common pipistrelle	1	N	Y	Heard not seen	L10
20:52	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:52	Leisler's bat	1	N	Y	Heard not seen	L13
20:54	Common pipistrelle	1	N	Y	Call recorded on batlogger	L12
20:57	Common pipistrelle	1	N	Y	Heard not seen	L13
20:58	Common pipistrelle	1	N	Y	Call recorded on batlogger	L12
20:59	Common pipistrelle	1	N	Y	Heard not seen	L10
21:01	Common pipistrelle	1	N	Y	Heard not seen	L12
21:01	Noctule	1	N	Y	Faint	L11
21:01	Noctule	1	N	Y	Call recorded on batlogger	L10
21:02	Noctule	1	N	Y	Call recorded on batlogger	L12

21:03	Noctule	1	N	Y	Call recorded on batlogger	L12
21:05	Leisler's bat	1	N	Y	Call recorded on batlogger	L10
21:05	Leisler's bat	1	N	Y	Heard not seen	L11
21:05	Leisler's bat	1	N	Y	Call recorded on batlogger	L13
21:07	Leisler's bat	1	N	Y	Call recorded on batlogger	L12
21:17	Soprano pipistrelle	1	N	Y	Heard not seen	L10
21:17	Common pipistrelle	1	N	Y	Heard not seen	L10
21:18	Common pipistrelle	1	N	Y	Call recorded on batlogger	L10
21:18	Common pipistrelle	1	N	Y	Faint, Brief pass, heard not seen	L11
21:19	Common pipistrelle	1	N	Y	Heard not seen	L12
21:20	Common pipistrelle	1	N	Y	Call recorded on batlogger	L12
21:21	Common pipistrelle	1	N	Y	Call recorded on batlogger	L12
21:21	Soprano pipistrelle	1	N	Y	Heard not seen	L10
21:25	Common pipistrelle	1	N	Y	Heard not seen	L10
21:25	Common pipistrelle	1	N	Y	Brief pass, heard not seen	L11
21:33	Common pipistrelle	1	N	Y	Heard not seen	L10
21:34	Common pipistrelle	1	N	Y	Call recorded on batlogger	L13
21:34	Common pipistrelle	1	N	Y	Heard not seen	L12
21:35	Common pipistrelle	1	N	Y	Heard not seen	L12

A.2 Dusk 12th September 2023

Project Name	Hillingdon Hospital	Surveyors (surveyor position)	LL (L9), RW (L10), TC (L11), AF (L12), JC (L13)
Survey Location	B10 – The Furze	Rain (0-5)	0
Date	12/09/2023	Wind (Beaufort 0 - 7)	3
Start	19:07	Temperature (°C)	17
Sunset	19:24	Weather Description	Overcast, dry, light breeze
Finish	20:54	Cloud Cover (0-5)	5

Time	Species	No. of Bats	Emerge (Y/N)	Recording (Y/N)	Description	Surveyor Position
19:51	Noctule	1	N	Y	Heard not seen	L10
19:54	Leisler's bat	1	N	Y	Heard not seen	L10
19:56	Leisler's bat	1	N	Y	Call recorded on batlogger	L11
19:57	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:12	Common pipistrelle	1	N	Y	Heard not seen	L10
20:13	Common pipistrelle	1	N	Y	Heard not seen	L10
20:15	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:17	Noctule	1	N	Y	Heard not seen	L10
20:17	Common pipistrelle	1	N	Y	Heard not seen	L10
20:20	Noctule	1	N	Y	Call recorded on batlogger	L9
20:20	Common pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:20	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:30	Common pipistrelle	1	N	Y	Passed over the building	L10
20:30	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:31	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:33	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:41	Common pipistrelle	1	N	Y	Heard not seen	L10
20:41	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:42	Soprano pipistrelle	1	N	Y	Passed around the building at roof height	L10
20:43	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:44	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:45	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:51	Common pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:54	Common pipistrelle	1	N	Y	Call recorded on batlogger	L9

A.3 Dusk 26th September 2023

Project Name		Hillingdon Hospital		Surveyors (surveyor position)		CWF (L9), RW (L10), SG (L11), PW (L12), RJ (L13)
Survey Location		B10 – The Furze		Rain (0-5)		0
Date		26/09/2023		Wind (Beaufort 0 - 7)		2
Start		18:36		Temperature (°C)		19
Sunset		18:52		Weather Description		Dry, light breeze
Finish		20:52		Cloud Cover (0-5)		1
Time	Species	No. of Bats	Emerge (Y/N)	Recording (Y/N)	Description	Surveyor Position
19:16	Common pipistrelle	1	N	Y	Call recorded on batlogger	L9
19:28	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L9
19:56	Soprano pipistrelle	1	N	Y	Heard not seen	L11
19:57	Soprano pipistrelle	1	N	Y	Heard not seen	L10
19:57	Soprano pipistrelle	1	N	Y	Heard not seen	L11
19:58	Soprano pipistrelle	1	N	Y	Heard not seen	L11
19:58	Noctule	1	N	Y	Heard not seen	L10
19:58	Soprano pipistrelle	1	N	Y	Brief pass, Heard not seen	L12
19:59	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
19:59	Common pipistrelle	1	N	Y	Call recorded on batlogger	L9
19:59	Noctule	1	N	Y	Call recorded on batlogger	L12
20:00	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:00	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:01	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:01	Common pipistrelle	1	N	Y	Heard not seen	L11
20:01	Noctule	1	N	Y	Call recorded on batlogger	L11
20:02	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:10	Noctule	1	N	Y	Call recorded on batlogger	L9
20:10	Noctule	1	N	Y	Heard not seen	L10

20:10	Noctule	1	N	Y	Brief pass, heard not seen	L12
20:11	Noctule	1	N	Y	Brief pass, heard not seen	L12
20:13	Noctule	1	N	Y	Call recorded on batlogger	L11
20:13	Noctule	1	N	Y	Call recorded on batlogger	L13
20:17	Common pipistrelle	1	N	Y	Heard not seen	L11
20:18	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:19	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:20	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:21	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:22	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:23	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:24	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:28	Soprano pipistrelle	1	N	Y	Social calls, heard not seen	L10
20:29	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L12
20:31	Noctule	1	N	Y	Heard not seen	L11
20:31	Soprano pipistrelle	1	N	Y	Heard not seen	L11
20:32	Noctule	1	N	Y	Call recorded on batlogger	L11
20:32	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:33	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:34	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:38	Common pipistrelle	1	N	Y	Call recorded on batlogger	L9
20:40	Soprano pipistrelle	1	N	Y	Heard not seen	L11
20:41	Soprano pipistrelle	1	N	Y	Social call, heard not seen	L10
20:41	Pipistrelle sp.	1	N	Y	Social call only, heard not seen	L10
20:42	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:43	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:44	Common pipistrelle	1	N	Y	Heard not seen	L10
20:44	Soprano pipistrelle	1	N	Y	Heard not seen	L10

20:44	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:45	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:45	Common pipistrelle	1	N	Y	Brief pass, heard not seen	L12
20:46	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:47	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:47	Common pipistrelle	1	N	Y	Heard not seen	L11
20:48	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:49	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:52	Common pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:53	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11
20:54	Soprano pipistrelle	1	N	Y	Call recorded on batlogger	L11

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