

# Nocturnal Survey Report for Bats

**Site:** Sproughton Courtenay Avenue London N6 4LR

**Ref:** 231511 /E1

**Client:** Leonidas Polemis



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|--------------------------------|
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## QUALITY CONTROL

| Date              | Version             | Name                                          |
|-------------------|---------------------|-----------------------------------------------|
| 14.8.23<br>6.9.23 | Nocturnal Surveys   | Neil Musgrave – BEng (Hons)                   |
| 3.10.23           | Report prepared     | Neil Musgrave – BEng (Hons)                   |
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| 09.10.23          | Reviewed and issued | Neil Musgrave – BEng (Hons)                   |

The information in this report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. The conclusions and recommendations expressed are reasoned judgements based on the evidence.

Every reasonable attempt has been made to comply with BS42020:2013 *Biodiversity – Code of practice for planning and development*, CIEEM *Guidelines for Ecological Report Writing* (CIEEM, 2017) and Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edition, Collins, 2016). If there has been deviation from recognised practice, justification/explanation has been given.

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## SUMMARY

At Sproughton on Courtenay Avenue London N6 4LR, planning permission is being sought to demolish the existing buildings and replace with a new dwelling.

The buildings have both been assessed as having moderate potential to support roosting bats, therefore a minimum of two emergence surveys are required on each building.

In June 2023 Indigo Surveys were instructed to undertake two nocturnal surveys of the buildings.

The first nocturnal survey was undertaken on the evening of 14<sup>th</sup> August 2023 and the second on the evening of 6<sup>th</sup> September 2023 as a bat was observed to emerge from the house during the first.

The first emergence survey recorded a Common Pipistrelle *Pipistrellus pipistrellus* emerging from the house on the garden facing slope, Common Pipistrelles, Soprano Pipistrelles *Pipistrellus pygmaeus*, Noctules *Nyctalus noctula* and Brown Long-eared bats *Plecotus auritus* were recorded flying round and over the site.

The second emergence recorded Common Pipistrelles, Soprano Pipistrelles, Noctules and Brown Long-eared bats flying round and over the site. No bats emerged from either building.

Taking all the visits into account, the status of bats at the site is considered thus:

- ❑ Common Pipistrelle – house day roost used occasionally.

Since the roost will be lost with the demolishing of the buildings, suitable mitigation will be required.

As such a Schwegler 1FD or similar bat box will be installed on a retained tree.

The site is eligible for registration under Natural England's Bat Mitigation Class Licence (BMCL) scheme.

Mitigation measures will include a 'toolbox talk' by a Registered Consultant (RC) to contractors about bats and what to do if one is unexpectedly encountered, a pre-works inspection of the roof void by the RC, supervision of the destructive roof works by the RC, the latter undertaken by hand, and the provision of a Schwegler 1FD bat box or similar installed on a retained tree in which to relocate a bat if one is discovered before or during works.

It should be noted that under BMCL there will be no timing constraints, and an ecologist will be present at all key stages to ensure the replacement roosting provision is correctly installed.

## 1. INTRODUCTION

At Sproughton on Courtenay Avenue London N6 4LR, planning permission is being sought to demolish the existing buildings and replace with a new dwelling.

The buildings have both been assessed as having moderate potential to support roosting bats, therefore a minimum of two emergence surveys are required on each building.

In June 2023 Indigo Surveys were instructed to undertake two nocturnal surveys of the buildings.

The first nocturnal survey was undertaken on the evening of 14<sup>th</sup> August 2023 and the second on the evening of 6<sup>th</sup> September 2023 as a bat was observed to emerge from the house during the first.

The results of the nocturnal surveys are contained in this report.

In England, Scotland and Wales, all bat species are fully protected under the Wildlife and Countryside Act 1981 (WCA) (as amended), through inclusion in Schedule 5. In England and Wales this Act has been amended by the Countryside and Rights of Way Act 2000 (CROW) and the Natural Environment and Rural Communities Act 2006 (NERC), which add an extra offence, makes species offences arrestable, increases the time limits for some prosecutions, and increases penalties.

All bats are also included in Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations (the Habitats Regulations), which defines 'European protected species of animals'. In England this is the Conservation of Habitats and Species Regulations 2010, in Scotland the Habitat Regulations 1994 (as amended), and in Northern Ireland the Conservation Regulations 1995.

All bats are also protected under the Bern Convention Appendix II, the Bonn Convention Appendix II, and the Wild Mammals (Protection) Act 1996.

The above legislation can be summarised thus (Mitchell-Jones and McLeish, 2004):

- ❑ *Intentionally or deliberately kill, injure or capture (or take) bats*
- ❑ *Deliberately disturb bats (whether in a roost or not)*
- ❑ *Recklessly disturb roosting bats or obstruct access to their roosts*
- ❑ *Damage or destroy roosts*
- ❑ *Possess or transport a bat or any part of a bat, unless acquired legally*
- ❑ *Sell (or offer for sale) or exchange bats, or parts of bats*

The word 'roost' is not used in the legislation but is used here for simplicity. The actual wording is 'any structure or place which any wild animal...uses for shelter or protection' (WCA), or 'breeding site or resting place' (Habitats Regulations).

As bats generally have both a winter and a summer roost, the legislation is clear that all roosts are protected whether bats are in residence at the time or not.

## 2. METHODOLOGY

To fully assess bat occupation of a particular site, the Bat Conservation Trust (2016) recommends that information gathered from a desk study of known bat records, and a daytime site walkover, is used to inform the type and extent of future bat survey work, potentially including nocturnal surveys.

The diurnal walkover provides an opportunity to check for signs of occupancy, such as droppings, scratch marks, feeding remains, carcasses, or even animals in residence, whilst nocturnal surveys (if required) allow numbers and species of bats to be confirmed. The latter are also used to determine the presence or absence of bats, where signs of bat activity are indeterminate or absent, but suitability of roosting is considered medium to high.

Roosting places vary depending on the species. Pipistrelles usually inhabit narrow cracks or cavities around the outside of buildings, but they will roost in similar niches inside larger barns. Typical sites include soffit spaces, gaps behind fascia boards and end rafters, crevices around the ends of projecting purlins, under warped or lifted roof and ridge tiles, or in gaps in stone and brickwork where mortar has dropped out.

Larger species such as Brown Long-eared Bats, Myotis bats (Natterer's *Myotis nattereri* and Whiskered/Brandt's *M. mystacinus/M. brandtii*), and Lesser Horseshoe Bats *Rhinolophus hipposideros*, like to roost in the roof voids of buildings, and can often be found hanging singly or in small groups from ridge boards or roof timbers, especially where they butt up against gable walls or chimney breasts. They especially favour older structures with timber frames. Here they squeeze into tight crevices making them difficult to observe.

Diurnal walkovers can be carried out at any time of the year, but nocturnal surveys should only be undertaken when bats are out of hibernation and in their summer roosts. The recommended period is from May to September inclusive, with May to August optimum and September sub-optimum. The season can be extended into October, although particularly cold weather will render this inadvisable. Indeed, the air temperature at the start of each survey must be at least 10°C or above.

Nocturnal surveys must be a minimum of two weeks apart, and the number of surveys is dependent on the evidence found or the suitability of the site to bats.

Where bats are found, or there is evidence of bat occupation or activity, the number and timing of visits will be decided by the ecologist and will be appropriate for the type of roost. In general, at least two nocturnal surveys must be carried out, both of which can be emergence surveys, or one emergence and one dawn re-entry.

Where there is no evidence of bat presence, and no suitability for roosting, no nocturnal surveys will be needed.

For a site with no evidence but low suitability, just one nocturnal survey is required, this to be in the optimum period, and either an emergence or a dawn re-entry.

For medium suitability a minimum of two nocturnal surveys are needed, of which one must be in the optimum period, and one must be a dawn re-entry survey. With high suitability, three nocturnals will be necessary, of which two must be in the optimum period. At least one of these must be a dawn re-entry survey, with the third visit either an emergence or a dawn re-entry.

For sites < 5 ha in size, and/or regularly shaped structures, at least two surveyors must be present, with more surveyors at larger sites and more complex buildings, e.g., those with multiple elevations and/or roof structures.

On the evenings of 14<sup>th</sup> August and 6<sup>th</sup> September 2023 nocturnal surveys were undertaken by Neil Musgrave (Natural England bat licence No. 2020-44602-CLS-CLS) and assistants to determine absence or presence of bats using either building and if using what species and in what numbers.

The emergence surveys began quarter of an hour before and continued for one- and three-quarter hours after sunset

The surveyors were aided by electronic Echo Meter Touch bat detectors and iPads.

The results of the surveys are detailed in Section 3.

### 3. RESULTS

#### 3.1 First emergence Survey

The first emergence survey was carried out on 14<sup>th</sup> August 2023, commencing at 20:10 and finishing at 22:10. The weather conditions during the time of the survey were recorded and are presented in Table 1.

| Parameter                   | Value                   |
|-----------------------------|-------------------------|
| Temperature (°C)            | 18.0 start; 17.5 finish |
| Cloud cover (%)             | 50                      |
| Precipitation               | None                    |
| Wind speed (Beaufort scale) | 0                       |
| Sunset                      | 20:26                   |

**Table 1 Weather conditions during the first emergence survey**

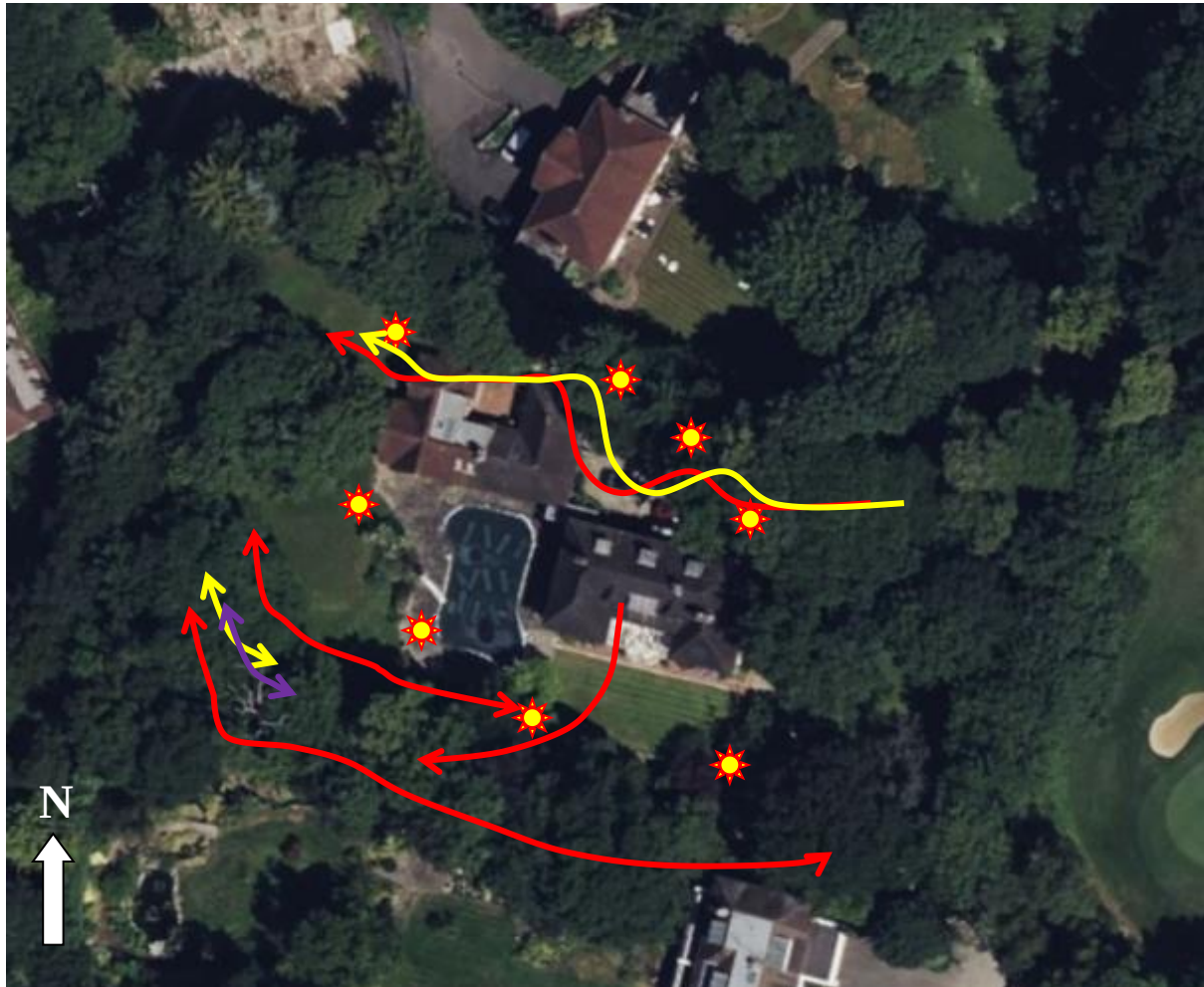
A Common Pipistrelle emerging from the house on the garden facing slope, Common Pipistrelles, Soprano Pipistrelles, Noctules and Brown Long-eared bats were recorded flying round and over the site.

Details of the bat observations and detections are listed below.

| Time  | Observation                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------|
| 20:30 | Common Pipistrelle emerged to the left of the central dorma window over the in-fill conservatory, on the garden facing slope |
| 20:35 | Soprano Pipistrelle flew by the cars and the rear of the garage                                                              |
| 20:40 | Soprano Pipistrelle flew to the southwest                                                                                    |
| 20:45 | Common Pipistrelle in the trees south and southwest                                                                          |
| 20:49 | Common Pipistrelle flew over the cars then the garage                                                                        |
| 20:52 | Common Pipistrelle flew over the cars then the garage                                                                        |
| 20:53 | Common Pipistrelle flew to the southwest                                                                                     |
| 21:12 | Common Pipistrelle flew to the southwest                                                                                     |
| 21:14 | Common Pipistrelle flying over the cars then the cars                                                                        |
| 21:35 | Common Pipistrelle flew to the southwest                                                                                     |
| 21:44 | Brown Long-eared bat flew to the southwest                                                                                   |

The bat flight paths at emergence on 14<sup>th</sup> August 2023 are shown on Plan 1 overleaf.

### Plan 1 Bat flight paths at emergence on 14<sup>th</sup> August 2023



**Brown Long-eared Bat** —————→

**Common Pipistrelle Bats** —————→

**Soprano Pipistrelle Bats** —————→

**Positions of surveyors** ★

### 3.2 Second Emergence Survey

The second emergence survey was conducted on 6<sup>th</sup> September 2023 commencing at 19:20 and finishing at 21:20. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

| Parameter                   | Value                 |
|-----------------------------|-----------------------|
| Temperature (°C)            | 25.0 start; 24 finish |
| Cloud cover (%)             | 25                    |
| Precipitation               | None                  |
| Wind speed (Beaufort scale) | 0                     |
| Sunset                      | 19:37                 |

**Table 2 Weather conditions during the dawn return survey**

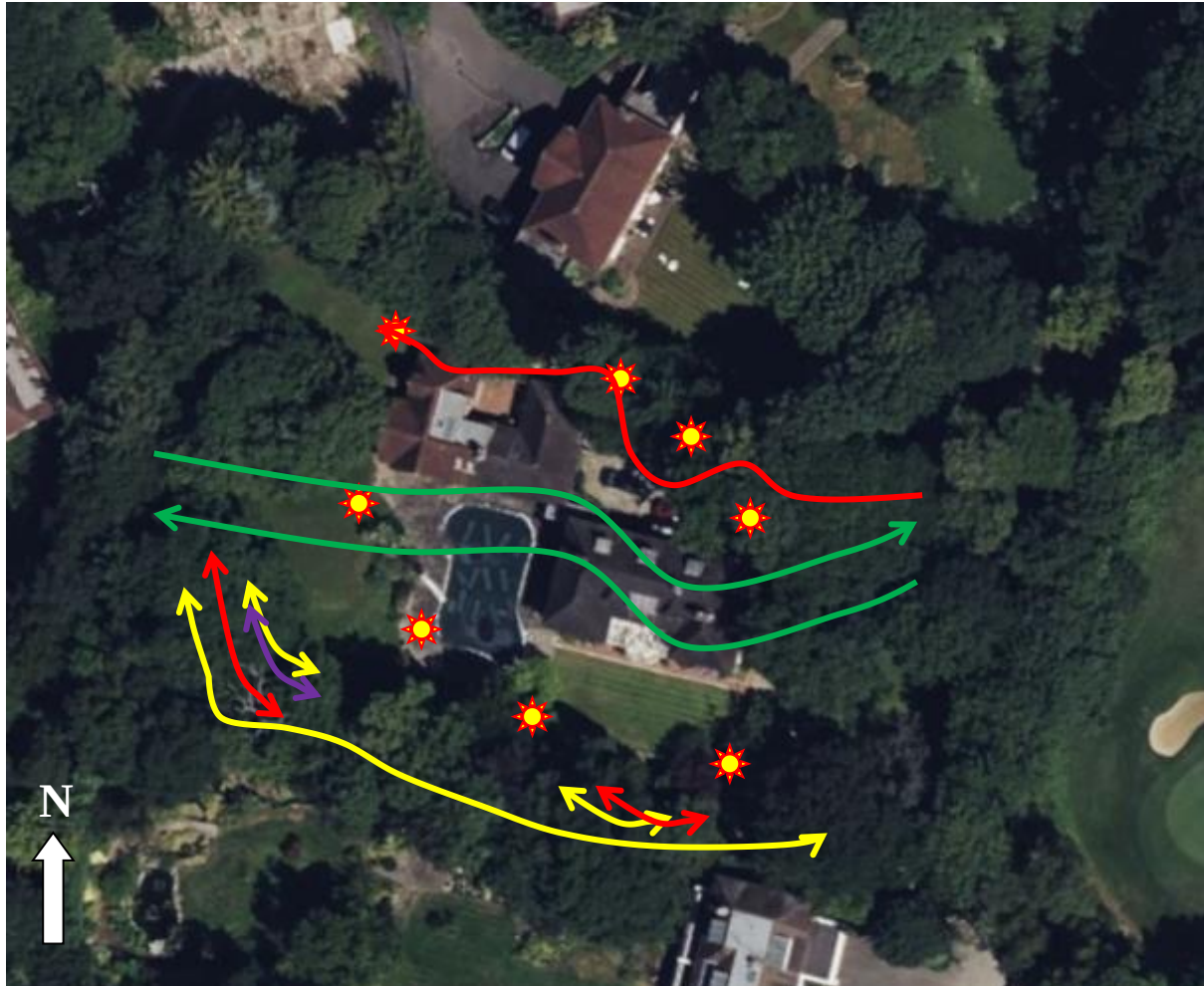
Common Pipistrelles, Soprano Pipistrelles, Noctules and Brown Long-eared bats flew round and over the site. No bats emerged from either building.

Details of the bat observations and detections are listed below.

| Time          | Observation                                                    |
|---------------|----------------------------------------------------------------|
| 19:41 – 19:59 | Soprano Pipistrelle foraging to the southwest                  |
| 19:44         | Soprano Pipistrelle flew to the south                          |
| 19:48         | Noctule flew over the site west to east                        |
| 20:00         | Common Pipistrelle heard to the southwest                      |
| 20:00         | Noctule flew over the site west to east                        |
| 20:02         | Common Pipistrelle flew to the south                           |
| 20:06         | Soprano Pipistrelle flew to the south                          |
| 20:12 – 20:17 | Soprano Pipistrelle foraging south and southwest               |
| 20:19         | Noctule flew over the site west to east                        |
| 20:31         | Brown Long-eared bat heard to the southwest                    |
| 20:35         | Common Pipistrelle heard to the southwest                      |
| 20:39         | Brown Long-eared bat heard to the southwest                    |
| 20:46         | Soprano Pipistrelle heard to the southwest                     |
| 20:58         | Common Pipistrelle flew by the cars and the rear of the garage |
| 21:01         | Noctule flew over the site east to west                        |
| 21:08         | Noctule flew over the site east to west                        |
| 21:16         | Common Pipistrelle heard to the southwest                      |

The location of the surveyors at dawn return on 6<sup>th</sup> September 2023 are shown on Plan 2 below.

**Plan 2 Positions of surveyors at second emergence on 6<sup>th</sup> September 2023**



**Common Pipistrelle Bats** →

**Positions of surveyors** ★

#### 4. CONCLUSIONS AND RECOMMENDATIONS

Bats tend to be seasonal visitors to properties and are not usually in occupation all year round. The females normally form maternity colonies during May or June and then leave for adjacent trees and/or woodland during July or August once the young bats are able to fly and become independent. Here they will spend the winter months in hibernation before returning to the house or barn the following spring.

Male bats generally live alone and have a number of favoured roosts. During the summer they visit each of these for a few days at a time, before moving to their chosen hibernation site in mid-late October. Different species have different habits, but this seasonal movement is common to all.

Bats choose their roosts carefully. During the summer they look for sites which are warmed by the sun, and as a result are most often found on the south and western side of buildings.

Pipistrelles, our smallest and commonest bats, prefer to roost in very confined spaces around the outside of buildings, typical places being behind hanging tiles, weather boarding, soffit, barge and eave boarding, between roof felt and roof tiles or in cavity walls. As such they can be difficult to find, so the suitability for roosting was also assessed.

The buildings have both been assessed as having moderate potential to support roosting bats, therefore a minimum of two emergence surveys are required on each building.

During the first nocturnal survey a Common Pipistrelle was seen and recorded emerging from the garden slope of the main residence.

Another bat frequently encountered in buildings is the Brown Long-eared Bat. This is also a common species, but unlike pipistrelles, they prefer the dry, warm space of the loft or roof void, and can often be found hanging from roof timbers, especially rafters and the ridge board next to chimney breasts.

No evidence of Brown Long-eared bat was found.

Taking all the visits into account, the status of bats at the site is considered thus:

- ❑ Common Pipistrelle – house day roost used occasionally

Since the roost will be lost with the demolishing of the buildings, suitable mitigation will be required.

As such a Schwegler 1FD or similar bat box will be installed on a retained tree.

The site is eligible for registration under Natural England's Bat Mitigation Class Licence (BMCL) scheme.

Mitigation measures will include a 'toolbox talk' by a Registered Consultant (RC) to contractors about bats and what to do if one is unexpectedly encountered, a pre-works inspection of the roof void by the RC, supervision of the destructive roof works by the RC, the latter undertaken by hand, and the provision of a Schwegler 1FD bat box or similar installed on a retained tree in which to relocate a bat if one is discovered before or during works.

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## 5. REFERENCES

**Collins, J. (ed.) (2016).** *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. (3<sup>rd</sup> edn). Bat Conservation Trust, London.

**English Nature, 2004.** *Bat mitigation guidelines*. English Nature, Peterborough.

**Mitchell-Jones A. J. & McLeish, 2004.** *Bat Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

**Russ, J., 1999.** *The Bats of Britain and Ireland. Echolocation Calls, Sound Analysis and Species Identification*. Alana Ecology Ltd., UK.

**Stebbing R.E., 1986.** *Which bat is it?* The Mammal Society and The Vincent Wildlife Trust, London.

**The Vincent Wildlife Trust, 2003.** *The Bats of Britain and Ireland*. The Vincent Wildlife Trust, Ledbury.

## APPENDICES

Appendix 1: Location plan

Appendix 2: Site layout

## Appendix 1: Location plan



**Sproughton, Courtenay Avenue, London, N6 4LR**

## Appendix 2: Site layout



**Sproughton**