# Bat Emergence Activity Survey Report

13111 Castle Mews, Camden

July 2024

www.phlorum.com

# Bat Emergence Activity Survey Report

13111 Castle Mews, Camden

30/07/2024

Montagu Evans
70 St Mary Axe
London
EC3A 8BE

Document Control:

| Project no.: | | Project name: | | |
|---|---|---|---|---|
| 13111 | | Castle Mews, Camden | | |
| **Version:** | **Written by:** | **Checked by:** | **Authorised by:** | **Date:** |
| V1 | Rachel Wilkinson | Billie Clifford | Paul Carter | 30 July 2024 |



**Phlorum Limited**

Southern Office: Unit 12, Hunns Mere Way, Brighton, BN2 6AH

T: 01273 307 167 E: info@phlorum.com W: www.phlorum.com

# Contents

# Non-technical Summary

Phlorum was commissioned by Montagu Evans to carry out a single bat activity emergence survey which was carried out at Castle Mews, Camden, NW1 8SU, on the 18th July 2024, prior to development. The bat survey follows on from a Preliminary Ecological Appraisal (PEA) and concurrent preliminary roost assessment for bats and this report should be read in conjunction with the PEA report (Phlorum 2024).

Current proposals are for the redevelopment of the railway arches and partial demolition of the onsite building. The survey area extended over approximately 0.2 hectares (ha).

The main findings of the survey are as follows:

- Within building one there was one potential point of egress on the southern wall where light could be seen entering the building. Building two was open to the front and rear and had gaps in the brickwork that provide potential roosting features. Building three was open to the front and had wooden planks to the rear that provide a potential roosting feature. Building four had several potential points of ingress with potential roosting features internally in the form of gaps in the brickwork and wooden planks that have gaps behind.
- Overall, there was a moderate level of bat activity at the site. A total of four bat species were recorded foraging and commuting at the site which included common pipistrelle (*Pipistrellus pipistrellus*), Leisler's noctule (*Nyctalus leisleri*) and noctule (*Nyctalus noctula*). The bats were seen foraging and commuting over the hardstanding area to the north of the site.
- Therefore it was determined that no roost was present on site at the time of the survey and a precautionary approach to the start of works is recommended to minimise disturbance should any bats utilise the potential roosting feature in the interim before developments start. Providing a precautionary approach is followed, and no bats are found, then a European Protected Species Mitigation will not be required. A suitably experienced ecologist should oversee the start of the works and discuss the stages of the proposed works with the on-site contractors. The ecologist may then return to the site to oversee certain stages of the works as considered necessary.

Further information regarding mitigation and site enhancement is provided in the recommendations section of the report.

# 1. Introduction

## Background

1.1 Phlorum Limited was commissioned by Montagu Evans to carry out a bat activity emergence survey in relation to Castle Mews, Camden, NW1 8SU (hereafter referred to as "the site") prior to development.

1.2 The bat survey follows on from a Preliminary Ecological Appraisal (PEA) and concurrent preliminary roost assessment for bats and this report should be read in conjunction with the previous PEA report (Phlorum 2024).

1.3 It is understood that current proposals are for the redevelopment of the railway arches and partial demolition of the onsite building. The survey area extended over approximately 0.2 hectares (ha).

1.4 During the initial preliminary roost assessment buildings one and four were identified as having points of ingress and potential roosting features. Additionally, buildings two and three were open on at least one side and had potential roosting features. The onsite buildings were assessed as having **low** potential for bats. It was therefore recommended that a single activity survey be undertaken to assess whether or not bats are using the structures.

1.5 This report provides an assessment of the status of bats within the site, providing information on their likely absence and distribution. Potential impacts of the proposed development are identified and measures to mitigate the effects of the proposed development on bats are discussed in outline.

## Site Description

1.6 The site is located at Castle Mews, Camden, NW1 8SU. The surrounding area is predominantly residential with a trainline running directly overhead. Regent's canal is located approximately 0.35km to the south of the site and Kentish town west train station is located approximately 0.26km to the north. The site is bound to residential properties to the north, east and south. There is a school located to the west and a trainline running directly above the site.

1.7 The site consisted of buildings, hardstanding and ruderal vegetation.

1.8 The National Grid Reference for the centre of the site is TQ 28612 84641. The survey area extended over approximately 0.2 hectares (ha).

# 2. Methodology

## Data Search

2.1 Records for bats within a 2km radius of the site were obtained from the Local Records Centre (GiGL, 2024) as part of the Preliminary Ecological Appraisal.

2.2 The data search showed records of bats within the last 15 years. Species include Serotine (*Eptesicus serotinus*), Daubenton's (*Myotis daubentonii*), Noctule (*Nyctalus noctula*), Common pipistrelle (*Pipistrellus pipistrellus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), Soprano pipistrelle (*Pipistrellus pygmaeus*) and Brown long-eared bat (*Plecotus auritus*).

## Review of Bat Building Inspection (Preliminary Roost Assessment)

2.3 A bat building inspection (Preliminary Roost Assessment) was carried out as part of the Preliminary Ecological Appraisal (Phlorum 2024). A review of this document was carried out to guide the activity surveys and ensure appropriate coverage.

## Personnel

2.4 The survey was led by Rachel Wilkinson, an ecological consultant with over 2 years' survey experience. Rachel Wilkinson has conducted emergence and re-entry surveys over the last two years as well as carrying out a number of bat building inspections and transect surveys. The survey results and assessment was reviewed by Paul Carter (BSc (Hons), MBA, MCIEEM), an ecologist with over 20 years of experience of managing ecological and landscaping projects and holder of a Bat Class Licence Level 1 CL17 (Ref: 2020-44978-CLS-CLS), and by the project director Richard Schofield (BSc (Hons), MSc, CSJK, MCIEEM, MIEMA, CEnv), with over twenty years of experience in managing projects and holder of a Bat Class Licence Level 1 CL17 (Ref: 2021-51095-CLS-CLS).

## Dusk Emergence Survey

2.5 An activity survey was carried out on the 18th July 2024. Four surveyors were used to assess the site for roosting, foraging and commuting activity. Echo Meter Touch 2 Pro frequency division detectors and night vision aids (Sony FDR-AX53 4K camcorders and infrared LED lights) were used. It is considered that this method would allow any roosts present to be identified and located with high accuracy (Bat Conservation Trust, 2024).

2.6 During the survey the lead surveyor was positioned to the north of building four with a view of the roof and shutter on building four as well as the gap between building four and offsite buildings which contained vegetation. The second surveyor was positioned to the west of building three with views of building three which was open at the front. The third surveyor was located to the west of building two with a view of into building two which was open to the front specifically focusing on the gaps in the brickwork. The fourth surveyor was located to the south of building four with a view of the roof and brickwork to the rear of the building.

2.7 The evening surveys commenced at least 15 minutes before sunset and lasted for at least two hours after sunset.

2.8 All surveys followed standard protocols and accepted standards (Mitchell-Jones and McLeish, 2004; Collins, 2016).

## Roost Characterisation

2.9 Where a potential bat roosting feature or confirmed roost was identified, the surveyor assessed how these could be used by bats throughout the year, in accordance with Natural England (2015):

- day roost - where individual bats, or small groups of males, rest or shelter in the day, but rarely on summer nights;
- night roost - where bats rest or shelter at night, but rarely during the day;
- feeding roost - where bats rest at night between feeding sessions, but rarely during the day;
- hibernation roost - where bats are found during winter;
- transitional or occasional roost - where bats gather at a temporary site before and after hibernation;
- mating site - where males and females gather from late summer to early winter;
- maternity roost - where babies are born and raised until they're independent;
- satellite roost - where breeding females roost close to the main nursery colony in the breeding season; and
- swarming site - where bats gather in large numbers from late summer to autumn.

## Constraints

### Data Search Constraints

2.10 It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

### Bat Survey Constraints

2.11 Bats are mobile animals which can move roost sites both within and between years. It is possible that surveys carried out in July may miss roosts occupied earlier in the year.

# 3. Results

## Data Search

3.1 The data search returned records (post 2004) for at least seven different species of bat within 2km of the site, including Serotine (*Eptesicus serotinus*), Daubenton's (*Myotis daubentonii*), Noctule (*Nyctalus noctula*), Common pipistrelle (*Pipistrellus pipistrellus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), Soprano pipistrelle (*Pipistrellus pygmaeus*) and Brown long-eared bat (*Plecotus auritus*). The closest records for bats were for *Pipistrelles* located approximately 262m southeast of the site in 2023.

## Review of Bat Building Inspection (Preliminary Roost Assessment)

3.2 A bat building inspection (Preliminary Roost Assessment) was carried out as part of the Preliminary Ecological Appraisal (Phlorum, 2024). This discovered the following potential roost features:

3.3 Point of ingress into building one. Inside the building there were areas of loose and missing plasterboard that bats could roost behind.

3.4 There were gaps in the brickwork in building two that could provide a potential roost feature.

3.5 Building three was open to the front and blocked with wooden boards to the rear. There were gaps between the boards that could provide a roost feature.

3.6 The main point of ingress into building four was a large gap between the brickwork and the shutter to the front of the building. There were also skylights and windows that could have provided ingress however this could not be seen clearly. Within the building there were gaps in the brickwork, missing plasterboard and gaps between wooden boards that provided potential roost features.

## Survey Overview

3.7 The survey concentrated on the gap in the brickwork on the eastern side of building two, the space between the wooden boards on building three, the shutter and roof at the front of building four and the brickwork and roof to the rear of building four.

3.8 No bats were seen to emerge from any of the onsite buildings.

3.9 Overall, there was a moderate level of bat activity recorded at the site. A total of three bat species were recorded foraging and commuting at the site which included common pipistrelle (*Pipistrellus pipistrellus*), noctule (*Nyctalus noctula*) and Leisler's noctule (*Nyctalus leisleri*). Individuals were mainly observed foraging and commuting over the hardstanding area to the north of the site. Common pipistrelle was the most frequently recorded bat species.

3.10 The area surveyed is illustrated in the Map in Appendix A.

## Dusk Emergence Survey

**18th July 2024**

3.11 Sunset was at 21:07hrs and the temperature at the start of the survey was 21°C, falling to 19°C at the end of the survey. The weather was clear and warm with a very light breeze.

3.12 In total three bat species were recorded during the survey. These were common pipistrelle (*Pipistrellus pipistrellus*), noctule (*Nyctalus noctula*) and Leisler's noctule (*Nyctalus leisleri*).

3.13 No bats were seen to emerge from any features for the duration of the survey.

3.14 The first bat pass was recorded at 21:10hrs which was a common pipistrelle observed foraging over the hardstanding area to the north of the site. Based on the time of the first passes, it can be assumed that roosts are close by for these species. Foraging was recorded over the hardstanding area to the front of the site. The highest level of activity was at 21:10hrs and 21:56hrs where a common pipistrelle made five passes over the area on both occasions. The last pass was recorded at 22:40hrs which was a common pipistrelle which was heard but not seen.

3.15 The full survey data can be found in Appendix C.

# 4. Discussion and Recommendations

## Discussion

4.1 Overall, there was a **moderate** level of bat activity recorded at the site. A total of four bat species were recorded foraging and commuting at the site. No emergences were recorded.

4.2 Based on the findings of this survey a European Protected Species Mitigation (EPSM) licence **will not be required**.

4.3 A precautionary approach to the removal of any potential bat roost features is recommended. A suitably experienced ecologist should oversee the start of the works and discuss the stages of the proposed works with the on-site contractors. The ecologist may then return to the site to oversee certain stages of the works as considered necessary. If during the precautionary works a bat is found, then the ecologist needs to be informed and all work stopped until it has been assessed. If a roost is confirmed, then a bat EPSM licence may be required before the work commences.

## Recommendations

### Construction Phase

*4.4* The results of this survey found that there was likely not a roost on site however a precautionary approach to works is recommended and certain aspects of the works should be overseen by a suitably experienced ecologist.

4.5 It is recommended that any works to demolish/renovate the onsite buildings commence outside of the hibernation period, when bats are considered least vulnerable. The hibernation period is taken to run between mid to late November and mid-March, weather dependant.

4.6 A suitably experienced ecologist should oversee the start of the building works. On arrival to the site the ecologist will re-inspect the onsite buildings to look for evidence of roosting bats. An on-site assessment can then be made by the ecologist regarding the status of any roosts present.

4.7 The ecologist will then discuss the different stages of the proposed works with the on-site contractors. The ecologist may need to return to the site to oversee certain stages of the works.

4.8 If considered necessary following consultation with the on-site contractors, the ecologist will guide the start of the works.

4.9 The ecologist should be kept informed throughout the construction phase and an ecological watching brief may be required to oversee certain phases of the re-development.

4.1 If bats are subsequently found to be present during the remainder of the work, activities should cease immediately and advice sought from a suitably experienced ecologist.

### Habitat Enhancement/Retention

4.2 Additional roosting opportunities could be incorporated into the final design to enhance the site for roosting bats post works. This could include the installation of at least two bat boxes such as the Schwegler 1FF bat box located on surrounding mature trees within the site. These should be orientated with a southeast or southwest aspect and located at least 3m from ground level.

### Bats and Lighting

4.3 Different species of bat have been found to react differently to night-time lighting however research has found that generally, all species of bats are sensitive to artificial lighting and that excessive lighting can delay bats from emerging, thus shortening the time available for foraging, as well as causing individuals to move away from suitable foraging grounds or roost sites, to alternative dark areas (Jones, 2000). Bats can also become isolated from their foraging grounds if the linear features they use for commuting are suddenly illuminated, creating a light barrier (Fure, 2006).

4.4 The current site is not well lit at night and therefore the development should serve to maintain the site's value for foraging bats and to minimise indirect impacts from lighting associated with the new development. This can be achieved by following accepted best practice (Institute of Ecology and Environmental Management 2006, Institute of Lighting Professionals 2018, Bat Conservation Trust, 2014):

- The level of any artificial lighting including flood lighting should be kept to a minimum, particularly around the site boundaries;
- LED lights are a preferred option to low pressure sodium lights or high pressure sodium or mercury lamps. LED lights do not emit UV radiation, towards which some insects are attracted, drawing them away from bat foraging areas in the surrounding landscape;
- all lights should be directed at a low angle with minimal light spillage wherever possible;
- ideally the site boundaries should be kept dark, preferably at bat emergence (0-1 hour after sunset) and during peak bat activity periods (e.g. 1.5 hours after sunset and 1.5 hours before sunrise);
- Artificial lighting should not directly illuminate any potential bat commuting areas such as boundary features. Similarly, any newly planted linear features or buffer areas around the site boundary should not be directly lit; and
- If security lights are required, then they will be set on a Passive Infrared (PIR) sensor and timer so that the light is only emitted for the short time period required.

# 5. Conclusions

## Conclusions

5.1 The site is located at Castle Mews, Camden, NW1 8SU. The land surrounding the site is predominantly urban and residential. A trainline runs over the top of the site and a park is located approximately 0.12km to the north. The Grand Union Canal is located approximately 0.3km to the south of site. Together with a network of treelines, hedgerows and parkland provide potential roosting, foraging and commuting opportunities for bats in the wider landscape.

5.2 The site comprises areas of buildings, hardstanding and ruderal vegetation. It is understood that current proposals are for the redevelopment of the railway arches and partial demolition of the onsite building. The survey area extended over approximately 0.2 hectares (ha).

5.3 During the initial preliminary roost assessment undertaken on 18th June 2024 (Phlorum 2024) the buildings built into the railway arches and an additional building that was built adjacent to the railway arches were assessed. There were several potential roosting features identified including gaps in the brickwork, gaps between wooden slats and several potential entry points into the onsite buildings.

5.4 Overall, there was a moderate level of bat activity observed at the site. A total of three bat species were recorded foraging and commuting which included common pipistrelles, noctule and Leisler's noctules. Common pipistrelle was recorded most frequently. Species were observed foraging over the hardstanding area to the north of the site as well as commuting through the site. No bats were seen to emerge from any of the features monitored on site.

5.5 Bats are using the site to forage and commute; no emergences were seen at the site. There remains potential for bats to roost in the gaps in the brickwork and the gaps between the wooden boards and therefore a precautionary approach to the start of works is recommended to minimise disturbance to the gaps in the brickwork and gaps in the wooden boards. Providing a precautionary approach is followed, a European Protected Species Mitigation licence will not be required.

# 6. References


- Bat Conservation Trust (2014). *Interim Guidance: Artificial lighting and* wildlife - *Recommendations to help minimise the impact of artificial lighting*
- Bat Tree Habitat Key (2020) *Bat Roosts in Trees – A guide to identification and assessment for tree-care and ecology professional*. Pelagic Publishing.
- BCT and ILP. (2018). *Bats and Artificial Lighting in the UK, Bats and the Built Environment Series*. Guidance Note 8/18. Institute of Lighting Professionals and the Bat Conservation Trust
- BCT and ILP. (2023). *Bats and artificial lighting at night*. Guidance Note 08/23. Institute of Lighting Professionals and the Bat Conservation Trust.
- Collins, J. (ed.) (2024). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.
- Fure, A. (2006) *Bats and lighting*. The London Naturalist, No. 85.
- Greenspace infrastructure for Greater London (2024) *A ecological data search for land at Castle Mews, Camden*. [Unpublished]
- IEEM - Institute of Ecology and Environmental Management (2006). *Bats and Lighting*. Winchester: IEEM.
- Jones, J. (2000). *Impact of Lighting on Bats*. Bat Conservation Trust.
- Mitchell-Jones, T. & McLeish, A.P (2004). *The Bat Workers' Manual* (3rd Ed). Joint Nature Conservation Committee, Peterborough, UK.
- Natural England (2015). *Standing advice for local planning authorities to assess impacts of development on bats: Survey and Mitigation for development projects.*
- Phlorum (2024) *Preliminary Ecological Appraisal for land at Castle Mews, Camden*. [Unpublished].
- Schwegler (2016). *Bird and Nature Conservation Products* [on-line]. Available from http://www.schwegler-natur.de/pdf/Katalog/CatalogueEN_HQ.pdf

# Appendix A
# Bat Survey Map


# Figure 1: Castle Mews Bat Survey Map

Drawn by: RW
On the: 23/07/2024
Not to Scale
Ref: 13111

Phlorum Limited, 12 Hunns Mere Way,
Woodingdean, Brighton, East Sussex,
BN2 6AH
Tel: +44(0)1273 307167
Web: www.phlorum.com
Email: info@phlorum.com

# Appendix B
# Legislation

# Legislation

This section contains information pertaining to the legislation and planning policy applicable in Britain. This information is not applicable to Northern Ireland, the Republic of Ireland the Isle of Man or the Channel Islands. Information contained in the following appendix is provided for guidance only.

## Species

The objective of the EC Habitats Directive1 is to conserve plants and animals which are considered to be rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and also implements the obligations set out for species protection from the Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Various amendments have been made since the Wildlife & Countryside Act came into force in 1981. Further details pertaining to alterations of the Act can be found on the following website: www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000) and Nature Conservation (Scotland) Act 2004.

There are a number of other legislative Acts affording protection to species and habitats. These include:

- Countryside and Rights of Way (CRoW) Act 2000;
- Deer Act 1991;
- Natural Environment & Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

### Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). This act protects individuals from:

- intentional or reckless disturbance (at any level);
- intentional or reckless obstruction of access to any place of shelter or protection; and
- selling, offering or exposing for sale, possession or transporting for purpose of sale

[1] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

In addition, all species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring or capturing of Schedule 2 species (all bats);
- deliberate disturbance of bat species as to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young; and

  (ii) to hibernate or migrate.
- deliberate disturbance of bat species as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake activities listed above. A licence is required to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

# Appendix C
# Bat Survey Data

# Bat Survey Data

**Dusk Emergence Survey on 18th July 2024**

| Number of Surveyors | Site and Job no: | Start Time | Sunset Time | Finish Time | Temperature (°C) at start | Temperature (°C) at end | Cloud Cover (Oktas 1-8) | Windspeed (Beauforts 1-12) | Rain |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 13111 Castle mews, Camden | 20:52 | 21:07 | 23:07 | 21 | 19 | 2 | 2 | 1 |

| Surveyor 1:RW | | | | Bat Detector Used: Echo Meter Touch 2 Pro frequency division detectors |
|---|---|---|---|---|
| Time | Location | Activity observed | Number of passes | Comments/Notes |
| 21:10 | A | F | 5 | Heard - Common pipistrelle |
| 21:29 | A | F | 2 | Seen and heard - Common pipistrelle. Flew of to south adjacent to building four. |
| 21:29 | - | - | 1 | Seen and heard - Noctule |
| 21:31 | - | - | 1 | Heard - Leisler's noctule |
| 21:43 | - | - | 1 | Heard - Common pipistrelle |

| | | | | |
|---|---|---|---|---|
| 21:51 | - | - | 1 | Heard - Common pipistrelle |
| 21:56 | A | F | 5 | Seen and heard - Common pipistrelle |
| 21:59 | A | F | 1 | Seen and heard - Leisler’s noctule |
| 21:59 | - | - | 1 | Heard - Noctule |
| 22:02 | - | - | 1 | Heard - Common pipistrelle |
| 22:03 | - | - | 1 | Heard – Leisler’s noctule |
| 22:08 | - | - | 2 | Heard – Leisler’s noctule |
| 22:09 | - | - | 1 | Heard - Noctule |
| 22:17 | - | - | 1 | Heard – Common pipistrelle |
| 22:21 | - | - | 1 | Heard – Common pipistrelle |
| 22:31 | - | - | 1 | Heard – Common pipistrelle |
| 22:40 | - | - | 4 | Heard – Common pipistrelle |

| Surveyor 2: LD | | | | Bat Detector Used: Echo Meter Touch 2 Pro frequency division detectors |
|---|---|---|---|---|
| **Time** | **Location** | **Activity observed** | **Number of passes** | **Comments/Notes** |
| 21:10 | A | F | 3 | Seen and heard – Common pipistrelles. Foraging within site. |
| 21:29 | A | F | 2 | Seen and heard. |
| 21:43 | - | - | 2 | Heard – Common pipistrelle |
| 21:51 | - | - | 1 | Heard – Common pipistrelle |
| 22:02 | - | - | 3 | Heard – Common pipistrelle |
| 22:15 | - | - | 1 | Heard – Common pipistrelle |
| 22:17 | - | - | 1 | Heard – Common pipistrelle |
| 22:30 | - | - | 1 | Heard – Common pipistrelle |
| 22:40 | - | - | 3 | Heard – Common pipistrelle |

| Surveyor 3: GS | | | | Bat Detector Used: [A1/2/3 and/or BD1/2/3] |
|---|---|---|---|---|
| **Time** | **Location** | **Activity observed** | **Number of passes** | **Comments/Notes** |
| 22:03 | - | - | - | Heard – Common pipistrelle |
| 22:10 | - | - | - | Heard – Common pipistrelle |
| 22:11 | - | - | - | Heard – Common pipistrelle |
| 22:14 | - | - | - | Heard – Common pipistrelle |
| 22:20 | - | - | - | Heard – Common pipistrelle |
| 22:23 | - | - | - | Heard – Common pipistrelle |
| 22:24 | - | - | - | Heard – Common pipistrelle |

| Surveyor 4: LE | | | | Bat Detector Used Echo Meter Touch 2 Pro frequency division detectors |
|---|---|---|---|---|
| **Time** | **Location** | **Activity observed** | **Number of passes** | **Comments/Notes** |
| 21:10 | - | - | 2 | Seen and heard – Common pipistrelle |
| 21:15 | - | C | 2 | Heard - Noctule |
| 21:29 | - | - | 2 | Seen and heard – Common pipistrelle |
| 21:43 | - | F | 2 | Seen and heard – Common pipistrelle |
| 21:51 | - | F | 2 | Seen and heard – Common pipistrelle |
| 21:55 | - | - | 1 | Heard – Common pipistrelle |
| 22:26 | - | - | 1 | Heard – Noctule |
| 22:31 | - | - | 1 | Heard – Common pipistrelle |
| 22:40 | - | F | 4 | Seen and heard – Common pipistrelle |


## Phlorum Limited

**Head Office & Registered Office:**
Unit 12
Hunns Mere Way
Woodingdean
Brighton
East Sussex
BN2 6AH
**T:** 01273 307 167

**Northern Office:**
Ground Floor
Adamson House
Towers Business Park
Wilmslow Road
Didsbury
Manchester
M20 2YY
**T:** 0161 955 4250

**Western Office:**
One Caspian Point
Pierhead Street
Cardiff Bay
Cardiff
CF10 4DQ
**T:** 029 2092 0820

info@phlorum.com
**www.phlorum.com**



Registered in England & Wales. Reg No. 4967256