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Bat surveys

Higher Biscovillack

November 2025

A report by
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Report details

Site address:	Land at Higher Biscovillack, Trenance Downs, Saint Austell PL25 5RH
Grid reference:	SW 997 544
Report date:	9th November 2025
Report author:	Oscar Bates BSc (Hons)
Report reviewer:	Colin Hicks BSc (Hons), MCIEEM
Report reference:	WOR-5797

Declaration of compliance

BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of practice for planning and development.

Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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1. Introduction

Western Ecology has been commissioned to complete bat activity surveys at land at Higher Biscovillack, St Austell in Cornwall. The proposed development concerns the installation of a wind turbine.

1.1. Site location

The site lies within arable land adjacent to Greensplat Road approximately 1.5km to the northwest of the town of St. Austell. Wheal Martyn Clay Works is located to the east of the site.

1.2. Survey aims

The aim of the survey is to characterise the assemblage of bats using the site allowing an assessment of the potential impacts of the proposals for this site. Where impacts are considered significant[1], mitigation proposed follows the mitigation hierarchy detailed in paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance.

[1] For the purposes of this report, a practical approach has been taken to define the term 'significant'. If an effect is sufficiently important to be given weight in the planning process, or to warrant the imposition of a planning condition, it is likely to be 'significant' in the context of the level under consideration (BSI, 2013).

2. Survey methodology

2.1. Bat activity transects

Two 2-hour bat activity transect surveys were completed on foot by a suitably experienced ecologist walking a pre-planned route through this site, with attention being paid to bat activity along boundary features (Map 1). The survey began around sunset. At locations along the route the surveyor paused to record bat activity in that area making a note of any bat species encountered, number of passes and any other pertinent information. Details of the surveys are provided in Table 1.

Table 1. Bat activity transect details

Date	Surveyor	Start time	Finish time	Sunset time	Weather conditions
29th May 2025	Martin Rule	21:18	23:18	21:18	16ºC temperature. Moderate S, 80% CC and dry.
15th October 2025	Martin Rule	18:25	20:25	18:27	10ºC temperature. Light E, 100% CC and dry.

Bat activity was monitored using an Echo Meter Touch Pro connected to an Apple or Android device running the Echometer touch app. with GPS logging enabled.

2.2. Remote monitoring

Two Wildlife Acoustics remote bat monitors were deployed for seven periods from April to October 2025 (Table 2). Information of remote monitoring locations is detailed below and in Map 1:

- Remote 1 - placed on a hedgerow away from the turbine
- Remote 2 - adjacent to the turbine site in an open arable field

Table 2. Number of recording hours at each remote monitoring location by month.

	May	June	July	Aug.	Sep.	Oct.	Total
Location 1	26.78	95.08	64.45	83.82	72.95	97.98	441.07
Location 2	26.78	95.08	64.45	83.82	72.95	15.02	358.10
Total	53.57	190.17	128.90	167.63	145.90	113.00	**799.17**

After deployment, sonograms were downloaded and analysed using Analook software (version 4.2n) and Kaleidoscope Pro (version 5.6.4) to ascertain which species are using the site.

2.3. Survey constraints

Data at remote location 2 in October was limited. This is not considered to be a significant constraint as there was an average of more than 5 nights of data recorded per month throughout the bat active season at each location, providing a full season of remote monitoring data.

Transect routes cover a wider area than the planning boundary due to changes in project scope (see Map 1). This is not considered to be a constraint as the transect data provides information on bat activity for the wider area.

It is assumed that Long-eared bat activity is Brown Long-eared bats (*Plecotus auritus*) rather than the rarer Grey Long-eared (*Plecotus austriacus*). The site lies outside of the excepted UK distribution for Grey Long-eared bat[2]. Myotis spp. were assessed as a group due to limitations associated with identifying these species from sonograms.

These limitations are accepted and not judged to be a constraint to making a full and robust assessment of bat activity at this small site.

3. Results

3.1. Bat activity transects

Table 3 in combination with Map 2 and Map 3 describes how each species of bat that was encountered during the activity transect uses the site.

Table 3. Bat passes during activity transect surveys

	Common pipistrelle	**Noctule**	**Total**
29th May 2025	14	2	16
15th October 2025	50	0	50

[2] Bat Conservation Trust; Grey Long-eared bat at *https://www.bats.org.uk/about-bats/what-are-bats/uk-bats/grey-long-eared-bat*

Total	64	2	66

Common Pipistrelle (15 passes)

During the transects common pipistrelle were the most frequently recorded species of bat. Calls were most frequent along boundary features such as hedgerows at the west of the survey area (Map 2).

Noctule (2 passes)

During the transects noctule were recorded twice during the May survey (Map 2).

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Legend
- Transect routes
- Remote Monitoring Locations
- Turbine Location
- Planning Boundary (approximate)

0 200 400 m

N

Google earth : Digital Globe

Title: Map 1. Remote monitoring locations and transect routes

Project: Land at Higher Biscovillack

Checked by:
CDH
Version: 01
Date: 09.11.25

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Legend
Bat Calls
- Noctule
- Common pipistrelle
- Turbine Location
- Planning Boundary (approximate)

0 200 400 m

N

Google earth : Digital Globe

Title: Map 2. Bat passes recorded during activity transects

Project: Land at Higher Biscovillack

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3.2. Remote monitoring

Calls per hour at each location have been calculated for each species and provide a measure of relative activity by each species, and in each habitat (Table 3, Chart 1 (Pipistrelle species), and Chart 2 (Less frequently recorded species)).

Table 3. Calls per hour recorded during remote monitoring at each location

	Barbastelle	Serotine	Myotis spp.	Noctule	Nathusius pipistrelle	Common pipistrelle	Soprano pipistrelle	Brown long-eared	Greater horseshoe	Average calls per hour
Location 1	0.045	0.002	0.059	0.168	0.005	6.031	0.034	0.057	0.197	6.598
Location 2	0.003	0.000	0.036	0.212	0.006	0.508	0.006	0.092	0.008	0.871
Average calls per hour	0.026	0.001	0.049	0.188	0.005	3.556	0.021	0.073	0.113	

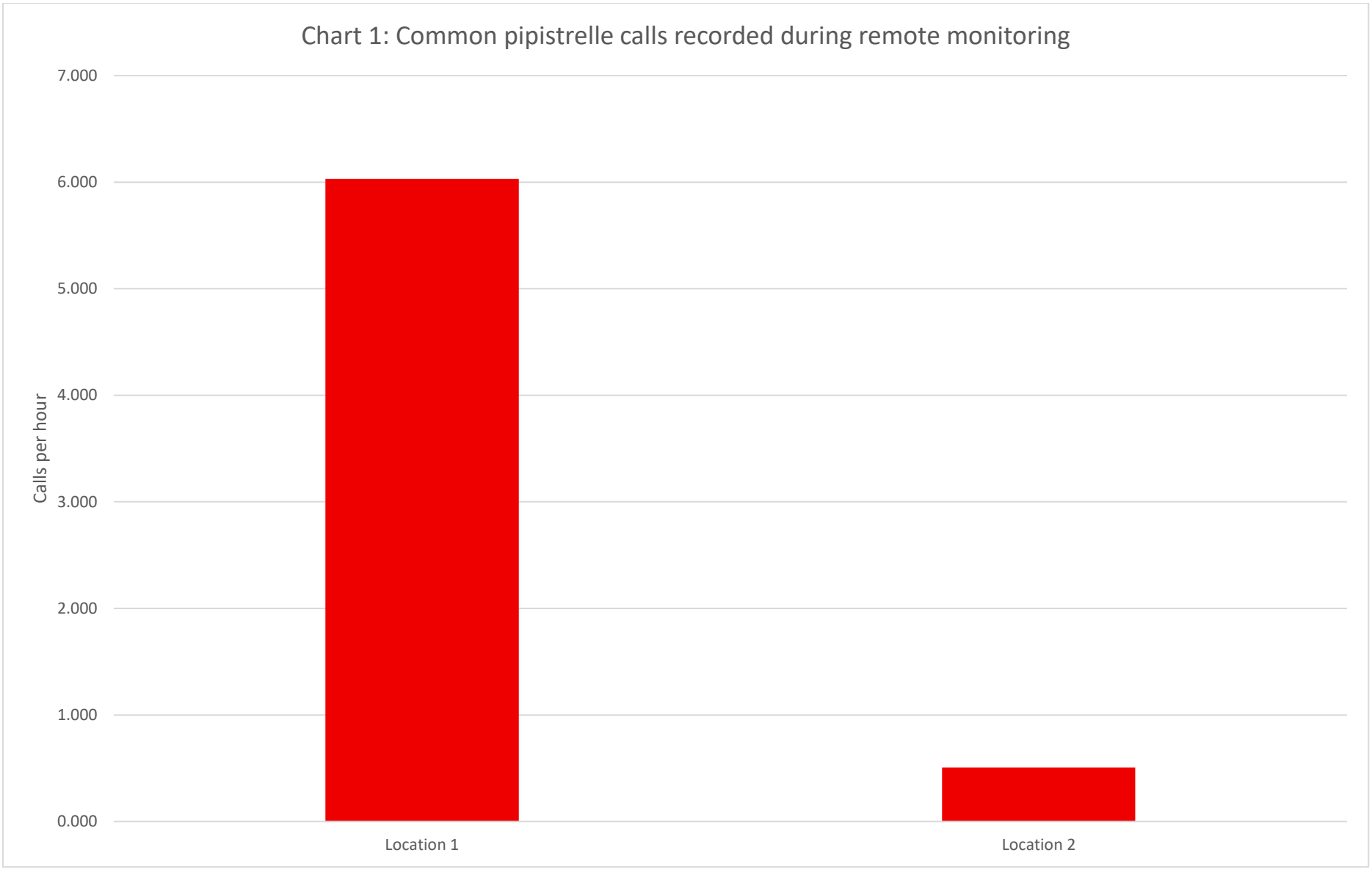
Chart 1: Common pipistrelle calls recorded during remote monitoring
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Calls per hour
Location 1
Location 2

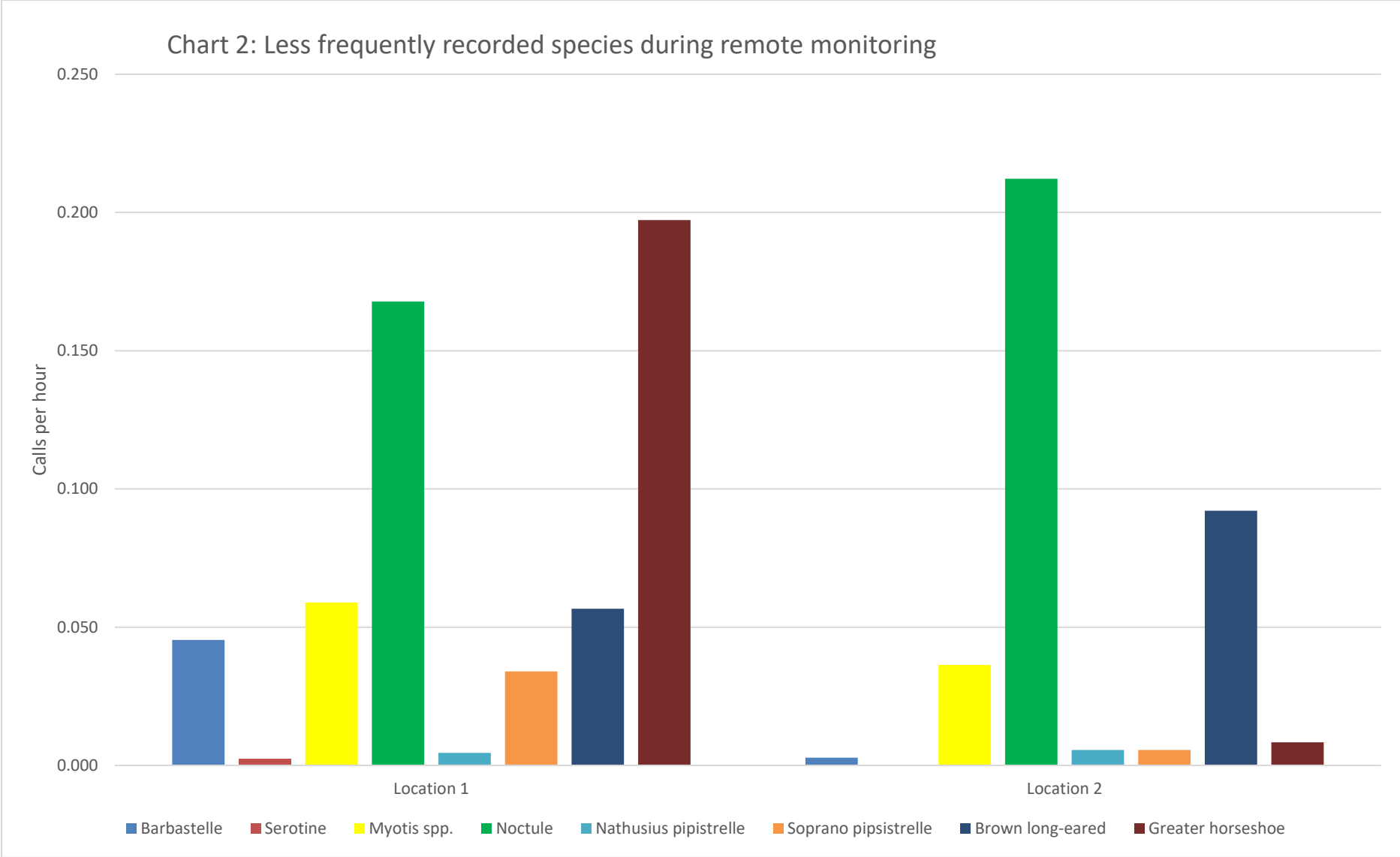
Chart 2: Less frequently recorded species during remote monitoring
0.250
0.200
0.150
0.100
0.050
0.000
Calls per hour
Location 1
Location 2
Barbastelle
Serotine
Myotis spp.
Noctule
Nathusius pipistrelle
Soprano pipsistrelle
Brown long-eared
Greater horseshoe

3.3. Species use of the site and assessment of site importance

Geographical levels of importance have been determined in line with scientific literature[3][4][5], and use of professional judgement by an experienced ecologist based on the overall knowledge of bat activity in the area. This assessment has considered the following:

- Levels of bat activity indicating reliance
- Landscape context
- The species using a feature, and their conservation status
- Whether any species present are edge-of-range

Common Pipistrelle

Common Pipistrelle were the most frequently recorded bat with 3.556 calls per hour. This species was also recorded during bat activity transects. Calls were highest at remote location 1, adjacent to the hedgerow and away from the turbine site (Map 2, Chart 1).

Common Pipistrelle are the most common bat in the UK and are regularly recorded foraging for extended periods along field boundaries and under streetlights on the urban fringe. The common pipistrelle bat is currently considered to have a stable population status in the UK[6].

Activity levels are typical for the habitats found within the survey area and do not indicate reliance on this site. The site is of **Site** value for this species.

Noctule

Noctule calls were recorded 0.188 times per hour during remote monitoring and were recorded twice during bat activity transects. Activity was slightly higher at remote location 2, in the open habitat. It should be noted than the high amplitude calls produced by Noctule can be detected from more than 100m away, and remote location 2 is approximately 35m from the field boundary (Map 2, Chart 2).

Noctule are widespread in the UK with populations considered to be in decline. This decline is attributed to habitat loss, changes in land use, and reductions in insect prey availability.

Activity levels are typical for the habitats found within the survey area and do not indicate reliance on this site. The site is of **Site** value for this species.

Greater Horseshoe

Greater Horseshoe call frequency averaged 0.113 calls per hour across remote monitoring locations but were not recorded during the transect surveys. Activity was highest at remote location 1 adjacent the hedgerow and away from the turbine site (Chart 2).

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[3] Walsh, A.L. and Harris, S. (1996) Foraging Habitat Preferences of Vespertilionid Bats in Britain. *Journal of Applied Ecology,* British Ecological Society, 33 (3): 508-518.

[4] Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.walsh

[5] Wray S, Wells D, Long E, Mitchell-Jones T. 2010. Valuing Bats in Ecological Impact Assessment, IEEM In-Practice p 23-25

[6] Bat Conservation Trust, 2022. The National Bat Monitoring Programme Annual Report 2021. Bat Conservation Trust, London

The greater horseshoe bat has a limited distribution in the UK, mainly found in southwestern England and south Wales where it has shown signs of slow recovery due to targeted conservation efforts.The population is considered to be of conservation concern, with ongoing efforts to protect and restore its habitats contributing to a slow recovery in numbers. Conservation programs focus on preserving winter hibernation sites and enhancing foraging habitats.

Activity levels are typical for the habitats found within the survey area and do not indicate reliance on this site. The site is of **Site** value for this species.

Brown long-eared

Brown Long-eared call frequency averaged 0.073 calls per hour during remote monitoring and were not recorded during the activity transects. Activity was similar across remote monitoring locations. (Chart 2).

The brown long-eared bat is widely distributed throughout the UK its population is currently considered stable.

Activity levels are very low, and the site is of **Negligible** value for this species.

Myotis spp.

Myotis spp. calls were recorded 0.049 times per hour and were not recorded during bat activity transects (Chart 2).

The Myotis bat genus in the UK includes several species, with varying distributions and status as follows:

- Natterer's bats are widespread across the UK, but not as common as some other bat species, such as the soprano and common pipistrelle. They are threatened by the loss of roost sites due to barn conversions and older buildings being destroyed.
- Daubenton's bat is widely distributed in Great Britain and Ireland, though is scarce in the northwest of Scotland.
- Whiskered bat is thought to be slightly more common and widespread than Brandt's bat. It is found throughout England and Wales and even in southern Scotland and throughout Ireland.
- Brandt's bat is widely distributed across England. However, it is probably under recorded due to its similarity in physical appearance to whiskered bat and inability to be separated from this species easily through sound analysis, as the species' echolocation calls are very similar.

Activity levels are very low, and the site is of **Negligible** value for this species.

Soprano Pipistrelle

Soprano Pipistrelle were recorded 0.021 times per hour during remote monitoring and were not recorded during activity transects (Chart 2).

The soprano pipistrelle bat is widely distributed across the UK and is considered to have a stable or increasing population.

Activity levels are very low, and the site is of **Negligible** value for this species.

Barbastelle

Barbastelle were recorded 0.026 times per hour across remote monitoring locations but was not recorded during transect surveys (Chart 2).

The barbastelle bat in the UK is classified as a rare species with a scattered distribution. The population is considered vulnerable due to its specialized habitat requirements and low numbers.

Activity levels are very low, and the site is of **Negligible** value for this species.

Nathusius Pipistrelle

Nathusius Pipistrelle were recorded 0.005 times per hour across all remote monitoring locations and were not recorded during bat activity transects (Map 2, Chart 2).

Nathusius Pipistrelle is widely distributed in the UK but it is rare and records are sparse, meaning that their status is somewhat uncertain. Threats to this species includes loss of foraging habitats such as hedgerows and trees, and loss of insect prey due to water quality degradation[7].

Activity levels are very low, and the site is of **Negligible** value for this species.

Serotine

Serotine call frequency averaged 0.001 calls per hour during remote monitoring and was not recorded during transect surveys (Chart 2).

The serotine bat is primarily distributed in southern England and parts of Wales. The species is considered uncommon, with localized populations. The status of serotine bats in the UK is somewhat uncertain due to limited data, but they are generally stable where they occur.

Activity levels are very low, and the site is of **Negligible** value for this species.

[7] https://www.bats.org.uk/about-bats/what-are-bats/uk-bats/nathusius-pipistrelle

5. Legislation and policy guidance

Bat species and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010. They are identified as European Protected Species. Under these laws it is an offence to:

- capture, kill, disturb or injure bats (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (even accidentally);
- obstruct access to their resting or sheltering places (on purpose or by not taking enough care); or
- possess, sell, control or transport live or dead bats, or parts of them.

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to maintain a list of species which are of principal importance for conserving biodiversity in England; widely referred to as Priority Species. Seven species of bat are Priority Species.