Bat Activity Surveys Report

Lower Blacup Farm, Cleckheaton

Newett Homes

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1	8 January 2025	Peter Wigglesworth and Hannah Mercer	Tom Redman	Lucy Sumner

Basis of Report

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1.0 Introduction

SLR Consulting Limited (SLR) was commissioned by Newett Homes in July 2024 to undertake bat activity surveys, for an approximately 2.37 ha site at Lower Blacup Farm, off Ashbourne Way, Cleckheaton, West Yorkshire (approximate central Ordnance Survey National Grid Reference (OSNGR): SE 18615 24799), hereafter referred to as the 'Site'. The surveys were required to inform a planning application for a residential development at the Site.

This report presents the findings of bat surveys undertaken within the Site, as well as an assessment of impacts upon bats resulting from the proposed development and mitigation requirements.

1.1 Relevant Legislation and Planning Policy

All species of native bat are listed on Annex IV (with several species also on Annex II) of the EU Habitats Directive[1]. This Directive is transposed into UK law through The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) (as amended)[2].

All species of native bat are listed on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended)[3].

These pieces of legislation combine to give substantial protection to bats and their resting places. In summary, it is an offence to:

- Deliberately kill, injure or take a bat;
- Deliberately disturb a bat or bats in such a way as to be likely to impair their ability to survive, breed, or rear or nurture their young; to hibernate or migrate; or to affect significantly the local distribution or abundance of that species;
- Damage or destroy the breeding or resting place of a bat;
- Intentionally or recklessly obstruct access to a place that bats use for shelter or protection; and
- Intentionally or recklessly disturb a bat occupying a place which it uses for shelter or protection.

Additionally, several native bat species are listed a Species of Principal Importance (SPI) under Section 41 of the Natural Environment & Rural Communities Act (NERC Act) 2006[4]. These species are barbastelle (*Barbastella barbastell*us, Bechstein's bat (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe *(Rhinolophus hipposideros*).

Under Section 41 of the NERC Act, there is a requirement that adverse effects of development on a SPI should be avoided through planning conditions or obligations, and that planning permission should be refused where harm to these species, or their habitats occur, unless the benefits of the development clearly outweigh the harm to the SPI.

[1] https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en

[2] https://www.legislation.gov.uk/uksi/2017/1012/contents

[3] https://www.legislation.gov.uk/ukpga/1981/69/contents

[4] https://www.legislation.gov.uk/ukpga/2006/16/contents

2.0 Methodology

2.1 Desk Study

A desk study search was conducted on 25th June 2024, the methodology and results are provided within the Ecological Impact Assessment (EcIA) report[5]. In summary 86 records of bats within 2 km of the Site were returned. The most abundant species was common pipistrelle (*Pipistrellus pipistrellus*) with 48 records, including 12 specified as roosts. The closest roost was unspecified and recorded in 2017, 450 m northwest of the Site. There are eight records of Leisler's (*Nyctalus leisleri*), three of which are maternity roosts. The closest maternity roost was recorded in 2007, 820 m northwest of the Site. Other species records returned include brown long-eared bat, soprano pipistrelle, Myotis species (*Myotis*) and noctule. There were also nine records of unidentified bat species.

There were no European Protected Species Licences (EPSLs) granted for bats within 2 km of the site when searching the Multi-Agency Geographic Information System for the Countryside (MAGIC) website managed by Natural England on the 25th June 2024.

2.2 Existing Site Information

The application Site is 2.37 hectares (ha) in extent and comprises several fields of modified grassland, several of which were grazed by livestock at the time of the habitat survey[5]. An unsealed track runs east to west across the centre of the Site, along which also runs a Public Right of Way (PRoW). The northern side of this track is planted with a native hedgerow, while on the southern side of the track a shorter line of trees is present. A further hedgerow is located on the southern boundary of the Site, and two further lines of trees are located running east to west across the middle of the Site, and north to south, extending from the southern boundary. Blacup Beck is present on the northern boundary of the Site, flowing west to east.

The Site is located on the western edge of the town of Cleckheaton, and approximately 8 km south of the centre of Bradford. Residential developments are located immediately to the south and east of the Site, while further agricultural land is present to the west. An industrial estate is present to the north of the Site, on the far side of Blacup Beck. Immediately surrounding the Site is further agricultural land, used both for arable and livestock grazing.

Commuting and foraging bats may utilise the Site hedgerows and treelines with wider suitable habitat well-represented in the wider landscape in the form of lines of trees and hedgerows to the west/south-west. Due to these factors, the Site has been assessed as having moderate suitability for foraging and commuting bats[5].

A Preliminary Roost Assessment (PRA) was conducted on 3rd July 2024, the full methodology and results are provided within the EcIA report[5]. Three trees were assessed as having PRF-I suitability for roosting bats (TN1, 5 and 7 in Appendix C of the EcIA[5]). The residential development will result in the loss of one tree assessed as PRF-I (TN7). All other trees with roosting features will be retained.

[5] SLR Consulting Ltd (September 2024) Lower Blacup Farm, Cleckheaton Ecological Impact Assessment, report ref 424.065278.00001.

2.3 Bat Activity Surveys

2.3.1 Night-time Bat Walkover (NBW) Surveys

The Site was assessed as having moderate suitability for bats[5]. In line with Bat Conservation Trust (BCT) guidelines[6], one NBW was conducted per season in 2024, however due to the timing of commission Spring was not able to be captured by the surveys (see 2.7 Limitations). Surveys were conducted on the following dates:

- Summer – 25th July; and
- Autumn – 24th September.

Following a daytime walkover to scope the Site and adjacent areas for habitats and specific landscape features which could be of importance to bats, NBW transect routes were devised (see Drawing 1.1-1.2, passing through the full range of broad habitats present within the Site.

Surveys commenced at sunset and lasted for approximately two hours. At the start of the survey, each surveyor stood for 30 minutes at a single position within the Site (illustrated in Drawing 1.1-1.2), one within Stationary Point A and Stationary Point B. The starting points were chosen based on likely bat commuting routes across the Site. The starting point was altered, such that each survey commenced at a different location; in order to remove or reduce temporal bias as much as possible. For the remaining time, surveyors walked along the defined NBW route, but paused and deviated where observed bat activity warranted this.

Temperature, wind speed / direction and cloud cover were recorded at the beginning and end of each survey, along with any significant weather changes during the survey (e.g. heavy showers) if experienced. The surveyors were equipped with a Batlogger M (Elekon) or an Anabat Scout (Titley Scientific) full spectrum and GPS enabled bat detector and recording device. The surveyors recorded all observed bat passes on a detailed plan of the Site; noting the time, the location and, where possible, the direction of flight, species and behaviour of the bat (i.e., commuting, foraging, or social calling, where this was evident).

A summary of the survey times, weather conditions and the start and end points, are provided in Table 2-1.

Table 2-1: Summary of timings and weather conditions during NBW.

Date of Each NBW	Start / End & Sunset Times	Weather Conditions (Start / Finish)	Start and End Points
July 25/07/24	Sunset: 21:14 Start: 21:14End: 23:17	16°C / 15°C Wind Beaufort Scale - Start: 2 W / End: 2 SW Precipitation – 0 mm p/h / 0 mm p/h Cloud cover Oktas – 8/8 to 4/8 by the end	**A** – on northern boundary of northern field near to the trees **B** – next to the hedge row and central copse

[6] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

Sep 24/09/24	Sunset: 18:59 Start: 18:59End: 21:01	10°C throughout Wind Beaufort Scale - Start: 3 W / End: 3 NW Precipitation – 0/0 Cloud cover Oktas - 2/8 to 4/8 by the end	**A** – on southern boundary adjacent to central copse **B** – on southern boundary in the southwest corner

2.3.2 Static Bat Detector Surveys

The NBW surveys were supplemented by static bat detector surveys, due to the Site being assessed as having moderate suitability for bats[5]. In line with BCT guidelines, static data was collected for five consecutive nights per month using a combination of Anabat Swifts and Rangers (Titley Scientific) full spectrum bat detectors. which were deployed at five locations during the following 2024 dates:

- 26th – 31st July
- 21st – 26th August
- 4th – 9th September
- 24th – 29th October

The static detector sample Locations A-E (shown in Drawing 2) were located as follows:

- Location A – on the northern boundary of the field adjacent to off-site woodland and beck to the north-west (OSNGR SE 18558 24915);
- Location B – within the hedge (north facing) at the southern end of the northern field (OSNGR SE 18607 24843)
- Location C – located within modified grassland in the centre of the central field (OSNGR SE 18595 24798);
- Location D – at northern end on the central fence line within the southern field (OSNGR SE 18620 24761); and
- Location E – within a central copse of trees (west facing) at southern extent of south field (OSNGR SE 18639 24643).

Bat static surveys followed the methodologies contained within BCT guidelines. A summary of the survey times, weather conditions, and sunset and sunrise range, for each sampling period, are provided in Table 2-2.

Table 2-2: Summary of timings and weather conditions during static detector deployment

Average temp. at sunset (°C)	Average min. temp (°C)	Average max. temp (°C)	Average wind speed (mph)	Average precipitation at night (mm p/h)	Sunset (range)	Sunrise (range)
25th – 31st July						
19.6	11.2	19.2	3	0	21:13 - 21:06	05:13 - 05:18
21st – 27th August						

Average temp. at sunset (°C)	Average min. temp (°C)	Average max. temp (°C)	Average wind speed (mph)	Average precipitation at night (mm p/h)	Sunset (range)	Sunrise (range)
14	13	13.8	5.4	0	20:23 - 20:14	05:56 - 06:03
24th September– 1st October						
17	14.4	17	4.2	0	19:48 - 19:38	06:23 - 06:30

2.4 Bat Call Analysis

Bat recordings from NBW and static detector surveys were analysed using Kaleidoscope Pro software[7] (version 5.1.5) (Wildlife Acoustics) using the auto identification capability (Bats of Europe 5.1.0 filter). Sound files were then manually checked by an ecologist experienced in bat analysis to confirm identification. This involved checking all non-common pipistrelle sound files, all noise files, and a sample 10% of common pipistrelle sound files. This was undertaken to ensure that bat calls were not missed, and to ensure a high level of accuracy with respect to species or genus identification.

During manual checking of bat calls various characteristics of the calls were used to ascertain the species, including call shape, peak frequency (i.e. frequency of maximum energy), start and end frequency, call duration and time between calls. The call parameters contained within Russ (2012)[8] were used for species identification. The following key parameters / assumptions were used to differentiate the following species:

- **Pipistrelle species**: quasi-constant frequency (qCF) calls with a peak frequency of more than 35kHz but less than 40kHz were assigned to Nathusius' pipistrelle (*Pipistrellus nathusii*); qCF calls with a peak frequency between 40 and 50kHz were assigned to common pipistrelle; and qCF calls with a peak frequency of more than 50kHz were assigned to soprano pipistrelle. Where it was not possible to assign to common, soprano or Nathusius' pipistrelle, the call was assigned to *Pipistrellus* species;
- ***Nyctalus* species:** calls were identified as noctule if there were two types of call of alternating frequency and the peak frequency was 21kHz or lower; calls were identified as Leisler's bat if there were calls of alternating frequency but the peak frequency was above 24kHz but below 35kHz. Where calls of alternating frequency had a peak frequency of between 21 and 24kHz, the call duration and regularity of the alternating call types was used to differentiate between noctule and Leisler's, i.e. a call duration of less than 10 milliseconds with an irregular pattern of alternating call types was assigned to Leisler's, and a call duration of more than 10 milliseconds with a regular pattern of alternating call types was assigned to noctule. Where it was not possible to assign to noctule or Leisler's bat, the call was assigned to *Nyctalus* species;
- Any calls from the ***Plecotus* genus** were assumed to be brown long-eared bat, as this is the only *Plecotus* species known to occur within the County[9]; and

[7] Kaleidoscope Pro Analysis Software | Wildlife Acoustics

[8] Russ (2012) British Bat Calls: A Guide to Species Identification, Pelagic Publishing, Exeter.

[9] Kirklees Council (n.d.) *Biodiversity and species management*. Available at: https://www.kirklees.gov.uk/beta/delivering-services/pdf/biodiversity-species.pdf (Accessed: 12 December 2024)

- Due to the similarity in call characteristics between species within the ***Myotis* genus**, bat calls from this genus were grouped together as *Myotis* sp. Bechstein's bat (Annex II) are not present within the Site (based on geographical range) and therefore the identification to species level for this genus is not critical for the purposes of the study.

A single bat pass was defined as the presence of a bat call within a 15 second time period, to allow for direct comparison of results. If two species were present within a single 15 second time period, this was counted as two bat passes.

The number of bat passes does not relate to the number of bats present in one location, but rather gives an indication of the relative level of bat activity in that location over each recording period.

The bat calls were then analysed to calculate the average number of bat passes per night, i.e. the Bat Activity Index (BAI) value, by dividing the total number of bat passes recorded at each sample location by the number of recording nights at that location.

2.5 Ecological Impact Assessment

Valuation as to the importance of roost sites, commuting and foraging routes and the assemblage of bats on Site was made in accordance with Ecological Impact Assessment (EcIA) guidance included within the Bat Mitigation Guidelines (BMG)[10] and is outlined below.

2.5.1 Regional Species Assemblage

British bat species have been assigned into different groups based on rarity, per region within the BMG and are classified as either widespread; widespread in many geographies, but not as abundant in all; rarer or restricted distribution; and rarest Annex II species. The species found within Northern England are shown in Table 2-3 below.

Table 2-3: Categorising bats in Northern England by distribution and rarity[9]

Country & Region: England, North			
[Score 4] **Rarest Annex II species and very rare**	**[Score 3]**	**[Score 2]**	**[Score 1]**
N/A	Alcathoe's bat *Myotis alcathoe* Leisler's bat Nathusius's bat	Whiskered bat *Myotis mystacinus* Brandt's bat *Myotis brandtii* Daubenton's bat *Myotis daubentonii* Natterer's bat *Myotis nattereri* Noctule	Common pipistrelle Soprano pipistrelle Brown long-eared bat

2.5.2 Importance of Roosts

The EcIA guidance included within the BMG[11] includes guidance as to the importance of bat roosts which is based on geographic location of species (Table 2-4) and type of roost identified.

[10] 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.

The roost assessment of the Site consisted of both a PRA of trees on Site and a review of the desk study for roost records. Only one tree with PRF-I is due to be removed of Site proposals and precautionary working methods (PWMs) will mitigate for this. No roosts were identified on site during fieldwork and therefore no further assessment of the importance of roosts was undertaken.

2.5.3 Importance of Commuting and Foraging Habitat

There is no matrix approach for assessing the importance of commuting and foraging bats due to the complexity of bat behaviour in a landscape and therefore a high degree of professional judgement must be applied. Broadly, the following factors should be considered:

- Relative level of bat activity indicating reliance on specific habitats on site and identification of Important Ecological Features (IEFs);
- Landscape context: i.e. distribution of suitable foraging, commuting habitat and connectivity to wider landscape;
- Species assemblage and conservation status using a feature on site;
- Presence of species on the edge of their range;
- Proximity / connectivity to roost sites;
- Species habitat preferences and landscape context.
- Application of a precautionary approach where data is inadequate or where invasive methods have been avoided or not justified based on scale of development (e.g. identification of *Myotis* bats to species level).

As per BMG the scale of changes will determine the likely significance on commuting and foraging bat populations, however this cannot be greater than the original value assigned. For example, if a habitat is of ‘district value’ then the impact of significance would be of maximum ‘district value’ if the habitat no longer supports foraging and commuting bats post-development (i.e. functionally lost). Conversely, minimal predicted impact on functionality of this habitat may result in a lesser impact (e.g. negligible or limited to site).

The original value assigned to this Site for foraging and commuting features for bats was moderate suitability as defined by BCT Guidelines.

2.5.4 Importance of Bat Assemblage

The importance of a bat assemblage provides contextual information for the site overall and is assessed when considering the three factors below:

- Species present on site (project data);
- Local species distributions;
- Regional species distributions.

To determine the maximum possible score a site can achieve a score is assigned to each species could be present and totalled (see Table 2-4), where:

- Widespread in (almost) all geographies [score 1];
- Widespread in many geographies, but not as abundant in all [score 2];
- Rarer or restricted distribution [score 3]; and
- Rarest Annex II species and very rare [score 4].

Once the maximum score is calculated, analysis of the data highlighted above will allow identification of the ‘actual’ bat species present and allow calculation of the site score for the

bat species present. This is then considered as an assemblage percentage score relative to the maximum score available:

- Assemblage score is <45% of the maximum score: not reaching County importance (site level only);
- Assemblage score meets or exceeds 45% of the maximum score: County importance;
- Assemblage score meets or exceeds 55% of the maximum score: Regional importance; and
- Assemblage score meets or exceeds 70% of the maximum score: National importance.

Table 2-4: Scoring thresholds for importance of bat assemblages in Northern England.

Importance Level	Percentage of maximal Score	Score
County Importance	≥45%	≥10
Regional Importance	≥55%	≥12
National Importance	≥70%	≥15
Maximum Score	**100%**	**22**

2.5.5 Impact Assessment

The impact assessment process involves the following steps:

1. Identifying and characterising impacts;
2. Incorporating measures to avoid and mitigate (reduce) these impacts;
3. Assessing the significance of any residual effects after mitigation;
4. Identifying appropriate compensation measures to offset significant residual effects (if required); and
5. Identifying opportunities for ecological enhancement.

Both direct and indirect impacts are considered. Direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action which affects ecological resources through effects on an intermediary ecosystem, process or feature, e.g. the installation of artificial light, in the absence of mitigation, could lead to severance of foraging and commuting routes for bats across the site.

For the purposes of this assessment, in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines,[11] a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features or receptors'.

[11] CIEEM (2020) *Guidelines for ecological impact assessment (ECIA)*. Available at: https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/ (Accessed: 12 December 2024).

2.6 Evidence of Technical Competence and Experience

The NBW surveys were undertaken by a team of SLR Consulting ecologists: Senior Ecologist Ms Lucy Sumner, Ecologist Mr Peter Wigglesworth, and Ecologist Mr Aaron Bailey.

Bioacoustics data analysis was conducted by Ecologist Ms Hannah Mercer, who has accumulated over 700 hours of experience in analysing bat acoustic data.

All surveyors have experience in bat survey and follow the CIEEM Code of Professional Conduct when undertaking ecological work. All fieldwork was carried out in accordance with best practice guidelines present at the time of survey, under the supervision of senior staff and a licensed bat ecologist.

This report was written by Mr Peter Wigglesworth and Ms Hannah Mercer.

All work is subject to internal review as part of SLR's Quality Assurance procedure. This report was reviewed by Associate Ecologist Mr Tom Redman. Tom has over seven years' experience in ecological consultancy and is a full member of CIEEM (MCIEEM). Tom holds a Class 4 Natural England bat survey licence (licence number: 2022-10876-CL20-BAT) and is a Bat Earned Recognition (BER) Consultant.

This report was also reviewed and approved by Senior Ecologist Lucy Sumner, She is an Associate member of CIEEM with over five years' experience in ecological consultancy.

2.7 Limitations

A springtime NBW was not completed due to timing of commission. In addition, no static detectors were deployed from April to June inclusive, therefore missing spring and early summer activity such as bats coming out of hibernation, maternity colonies forming and pre-maternity foraging and is therefore a constraint. No constraints were identified for the NBW or static detector surveys that were undertaken during July – October 2024. The Site was fully accessible, and the surveys were undertaken at the appropriate times in suitable weather conditions. It is acknowledged that NBW surveys are performed by qualified surveyors; however, the visibility of individual bats inherently decreases as light levels decrease as the survey proceeds.

This report is valid for 12 months from the date of the last survey (until 24th September 2025), in line with best practice guidance[12], and should be reviewed after this date.

[12] Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

3.0 Results

3.1 Preliminary Roost Assessment

The PRA identified three trees within the Site as having PRF-I for roosting bats. The full results are provided within the Ecological Impact Assessment report[5].

3.2 Bat Activity Surveys

3.2.1 Night-time Bat Walkover (NBW) Surveys

The results of the NBW surveys are summarised in Table 3-1 below and illustrated in Drawing 1.1-1.2.

Table 3-1: Dates, Timings, Weather Conditions and Results of NBW Surveys

Date of Each NBW	Start / End & Sunset Times	Results
Summer 25/07/24	Sunset: 21:14 Start: 21:06 End: 23:17	From Position A (see Drawing 1.1), two common pipistrelle calls were heard between 21:40 (26 minutes after sunset) and 21:42 (28 minutes after sunset) one foraging and one commuting. Two noctule calls, one heard but not seen (21:26) and one commuting east-west (21:20), were recorded between 21:20 (6 minutes after sunset) and 21:26 (12 minutes after sunset). At Position B, minimal activity occurred with just a single seen commuting Leisler's bat across the north of the site from east-west was registered at 21:45 (31 minutes after sunset). At least two common pipistrelles were seen foraging around the residential buildings just off Site to the north-east at 21:46 (32 minutes after sunset) and one again at 22:33 (79 minutes after sunset). Two common pipistrelles were seen commuting along the central hedge flying east at 21:57 (43 minutes after sunset), and another was seen again along the central hedge at 22:01 (55 minutes after sunset) and two seen at 22:41-42 (87-88 minutes after sunset) at the western end of the hedge. Another common pipistrelle was seen at the western edge of the southern field at 22:14 and 22:19 (60 and 65 minutes after sunset) along the western boundary fence and again at 22:50 (96 minutes after sunset). Then another was heard in the south-east field at 22:23 (69 minutes after sunset) and 22:54 (100 minutes after sunset). One common pipistrelle was heard at the south-east corner of the central field at 22:59 (105 minutes after sunset). A noctule was again recorded at 22:06 (52 minutes after sunset) over the central field.

Autumn 24/09/24	Sunset: 18:59 Start: 18:59 End: 21:01	A common pipistrelle was heard not seen around the copse at Position A. at 19:29 (30 minutes after sunset) and again at 19:35 (35 minutes after sunset). Another common pipistrelle was seen commuting along the central hedge about 15m high heading west at 19:40 (41 minutes after sunset) and heard but not seen at 19:50. Then at 19:52 (53 minutes after sunset) another common pipistrelle was heard in the central field, and again at 20:26 (87 minutes after sunset) one common pipistrelle was seen along the southern boundary slightly west of the first pipistrelle foraging along the field just north of the boundary hedge.

In summary, the NBW surveys recorded three different bat species, common pipistrelle, Leisler's bat and noctule.

The level of activity appeared to be spread fairly evenly across the Site with activity in the north, around linear features such as the central hedge and then in the southern fields.

3.2.1.1 Common Pipistrelle

Common pipistrelle was the most frequently recorded species during each of the NBW, and the only species to have been recorded in both NBWs.

Common pipistrelle records were spread across the Site with particular activity near hedgerows and trees but with foraging activity in the fields too.

Two common pipistrelles were observed 24 minutes after sunset in July adjacent to Blacup Beck and the woodland along the beck, and one common pipistrelle was observed 30 minutes after sunset in September on the southern boundary not far from wooded areas off-Site. These times are early after sunset and consistent with the times that common pipistrelle are known to emerge from their roosts, indicating that the site may be within the core sustenance zone (CSZ) for the species indicating that a roost could be close to the Site.

Overall, the results indicate that the Site linear features are of moderate importance for foraging / commuting common pipistrelle bats.

3.2.1.2 Noctule

Noctule bats were recorded three times during the July NBW, however were not recorded during the September NBW. Noctules were recorded over the northern field and the centre of the Site. The records may be due to *Nyctalus* species being known to commute at a higher altitude and are therefore more easily detected in open habitats.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for noctule bats.

3.2.1.3 Leisler's

Leisler's bat was only recorded once during the NBWs commuting over Site. It was commuting at height from east to west. As highlighted above, Nyctalus species are known to commute at a higher altitude and are therefore more easily detected in open habitats.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for Leisler's bats.

3.2.2 Static Bat Detector Surveys

The results of the static detector surveys are summarised in Appendix A and illustrated in Drawing 2.

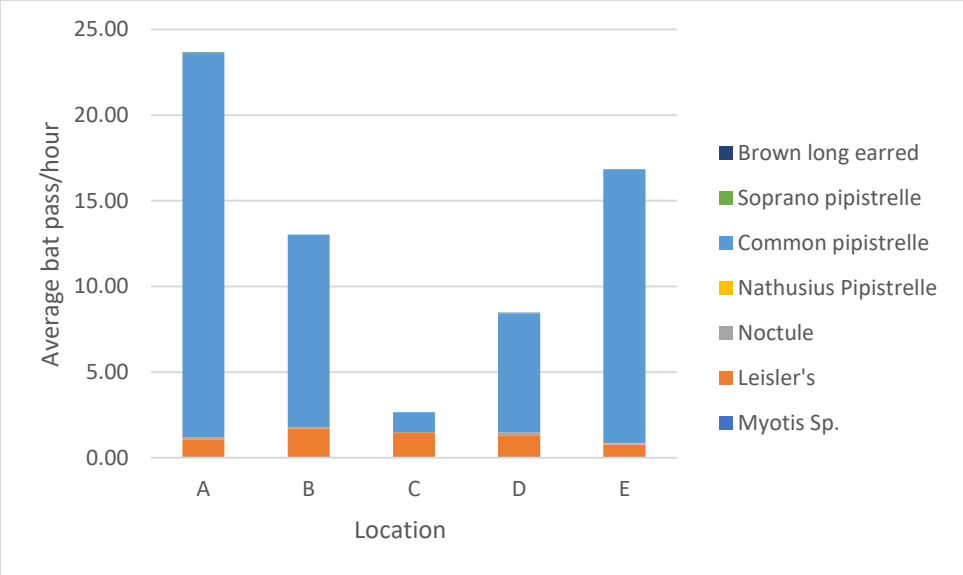


Figure 3-1: Average bat passes per hour (averaged from all four surveys)

Bat activity levels were greatest during the July survey period with an average of 22.69 recorded bat passes per hour across the five static locations. August had recorded an average of 18.7 bat passes per hour, and September 6.32 bat passes per hour and October had the lowest activity with an average of only 4 bat passes per hour.

The static detectors recorded seven different bat species / species groups; in order of the most common to least common these were: common pipistrelle, accounting for 89.6% of bat calls recorded; Leisler's 9.68%, noctule 0.72%, soprano pipistrelle 0.12%, Nathusius' pipistrelle 0.1%, *Myotis* sp. 0.06% and brown long eared 0.06%.

The greatest number of bat passes were recorded at Location A (located on the northern boundary of the field adjacent to off-site woodland and beck to the north-west). The woodland is therefore considered to be an Important Ecological Feature (IEF), with an average of 23.67 bat passes per hour across the three surveys. This was followed by Location E, (within a central copse of trees (west facing) at southern extent of south field) with an average of 16.82 passes per hour; followed by Location B (within the hedge (north facing) at the southern end of the northern field) with an average of 13.02 bat passes per hour; Location D (at northern end on the central fence line within the southern field) with 8.46 passes and, Location C (located within modified grassland in the centre of the central field) with 2.65 average bat passes per hour.

3.2.2.1 Common Pipistrelle

Common pipistrelle was the most frequently recorded species and was identified in all Locations A - E across the Site.

The most important habitat features for common pipistrelle bats were at Location A (located on the northern boundary of the field adjacent to off-site woodland and beck to the north-west), Location E, (within a central copse of trees (west facing) at southern extent of south field) and Location B (within the hedge (north facing) at the southern end of the northern field).

Overall, the results indicate that the Site boundaries particularly those close to woodland and the central hedge are of moderate importance for foraging / commuting common pipistrelle bats.

3.2.2.2 *Leisler's bat*

Leisler's bat were recorded occasionally across the Site at all Locations A-E in similar numbers, with a higher number recorded at Location B (within the hedge (north facing) at the southern end of the northern field) and a lower number recorded at Location E (within a central copse of trees (west facing) at southern extent of south field). This may be due to *Nyctalus* species being known to commute at a higher altitude, and detector A was adjacent on the edge of the woodland which may have obscured calls from higher altitudes.

Overall, the results indicate that the Site is of a moderate importance for commuting Leisler's bats but does not represent important foraging habitat.

3.2.3 Noctule

Noctule were recorded rarely across the Site at all Locations A-E in similar numbers, with similarly low levels between 0.04 – 0.16 bat passes per hour across all five locations.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for noctule.

3.2.3.1 Soprano Pipistrelle

Soprano pipistrelle were recorded rarely across the Site at all locations except C (located within modified grassland in the centre of the central field). Activity was of similarly low levels across the remaining five locations from 0.01 – 0.04 average passes per hour.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for soprano pipistrelle bats.

3.2.3.2 Nathusius Pipistrelle

Nathusius' pipistrelle were recorded only at Location E (on the southern boundary on the western edge of the copse of trees), with 0.06 average bat passes per hour.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for Nathusius' pipistrelle bats.

3.2.3.3 *Myotis* sp

Myotis bats were recorded rarely at Location C, D and E, however were not recorded at Location A (located on the northern boundary adjacent to off-site woodland to the north-west) or B (the hedge within the southern end of the field). Levels of activity at the remaining three locations were low ranging from 0.01 – 0.02 bat passes per hour.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for *Myotis* species.

3.2.3.4 Brown long-eared bat

Brown long-eared bats were recorded occasionally at Location A, D and E, however, were not recorded at Location B (the hedge within the southern end of the field) or C (located within modified grassland in the centre of the central field). The low number of records may be due to brown-long eared bats echolocating at quiet frequencies with faint calls, which are more difficult to detect than other bat species.

Overall, the results indicate that the Site does not represent important foraging or commuting habitat for brown long-eared bats.

3.2.4 Importance Valuation

A summary of the importance of the assemblage of bats present on Site and the value of the resources available to them is summarised in Table 3-2.

Table 3-2: Importance valuation for roosts, foraging and commuting and assemblage

Species	Importance of roosts (summary of justification only)	Importance of commuting and foraging habitat (summary of justification only)	Importance of assemblage (summary of justification only)
Widespread Common pipistrelle Soprano pipistrelle Brown long-eared bat	No roosts identified within the Site. The closest roost was of unspecified species and recorded in 2017, 450 m northwest of the Site.	The habitats within the Site were classified as 'moderate suitability' habitat for bats overall. The area holds local importance due to offsite woodland and beck. • Common pipistrelle were most common species during NBW and static monitoring. • Moderate levels of Leisler's were recorded during the NBW and during static acoustic monitoring • Low levels of noctule activity were recorded during NBW and during static monitoring. • Low levels of brown-long-eared activity were recorded during static monitoring. • *Myotis* sp. were not recorded during NBW surveys. • Nathusius pipistrelle were not recorded during NBW surveys. • *Myotis sp.* were recorded at very low levels during static monitoring. • Nathusius' pipistrelle were recorded at very low levels during static monitoring • Low levels of soprano pipistrelle were recorded during static monitoring • Soprano pipistrelle were not recorded during the NBW surveys. • Activity levels were highest at boundary features adjacent to woodland. These habitats	*1 point per species* Score 3 for this part of the assemblage (of a maximum 3).
Widespread but not as abundant in all geographies Whiskered bat Brandt's bat Daubenton's bat Natterer's bat Noctule Leisler's bat	No roosts identified within the Site. No records of roosts within 500m of Site. Three records of Leisler's bat maternity roosts were reported within 2 km of the site, the closest maternity roost was recorded in 2007, 820 m northwest of the Site.		*2 points per species* Score at least 6, possibly 12 for this part of the assemblage (of a maximum of 12).
Rare or restricted distribution Alcathoe's bat	No roosts identified within the Site. No records of roosts within 500 m of Site.		*3 points per species* Score of a possible 0 to 3 for this part of the assemblage (of a maximum of 9).
Rarest Annex 2 species and very rare N/A	N/A		*N/A*

		are considered of local importance.	
The assemblage score is at least 9 (41% - not reaching County importance) and up to 18 (81 % - national importance) (because the *Myotis* species were not identified to species level). In relation to the *Myotis* bats it is considered highly unlikely that Alcathoe's bat is present on Site as it is a highly geographically constrained species. Therefore, a revised range of at least 9 (41% - not reaching count importance) and up to 15 (68% - regional importance) is considered appropriate. Given the low levels of *Myotis* activity, using an application of professional judgement, it is likely that the Site is used by at most one or two *Myotis* species (although it is acknowledged that this genus haven't been identified to species level). Based on the habitats present and the low levels of activity, the assemblage is likely of local importance at most.			

4.0 Impact Assessment

4.1 Potential Impacts

In the absence of mitigation, the scheme has the potential to affect foraging and commuting bats at a local level. The NBW and static bat detector surveys have shown that the IEF for bats are the Site boundary habitats that were adjacent to the off-site woodland and beck to the north-west, the southern boundary by the western edge of the copse of trees and the hedge within the southern end of the northern field. These habitats are the most frequently used by common and widespread species i.e. common pipistrelle, which are considered of local importance only. These IEF should be retained and protected where possible, with particular attention to the off-site woodland and beck that should have a minimum buffer of 15 m from works activities and indirect effects during operational phase.

The residential development will result in the loss of one tree assessed as PRF-I (TN7, Appendix C of the EcIA)[14]. All other trees with roosting features will be retained. There is potential for temporary indirect impacts during construction for noise and light disturbance. The Site has been designed to maintain a buffer area around retained vegetation, such as to the north of the Site along Blacup Beck, north of the central access track and south of the Public Open Space (POS).

In the absence of mitigation, artificial lighting, particularly ultra-violet (UV) lighting, can affect the foraging and commuting behaviour of bats, for example slower flying broad winged species, such as brown long eared bats and *Myotis* species have been shown to avoid routes illuminated with a variety of different street luminaires, which puts them at a competitive disadvantage, reducing their fitness and breeding success[13].

4.2 Proposed Mitigation

The oak tree, of PRF-I that is to be lost will be subject to soft fell measures to minimise harm to any potential roosting bats during the removal of the tree. Any features suitable for bats should first be subject to a full inspection by torchlight and endoscope and once cleared of bats, should be ideally subject to an immediate soft fell. This includes:

- Sectional felling of potential roost features;
- Lowering of potential roost features to the ground by rope; and
- Potential roost features left on the ground facing upwards for a minimum of 48 hours to allow any remaining bats to disperse prior to disposal of the section.

One bat box shall be installed on the retained tree to the south of the Site to mitigate for the loss of the potential roosting resource within this tree.

Tree protection measures as outlined in Section **Error! Reference source not found.** of the EcIA [5] shall be implemented. Noise and light disturbance shall be minimised wherever possible with works undertaken in daylight hours. Should lighting be necessary during construction, this shall be kept to a minimum and avoid illuminating retained vegetation through the use of hoods and cowls to direct light away from bat habitat and minimise light spill.

[13] Guidance Note 8 Bats and Artificial Lighting | Institution of Lighting Professionals (theilp.org.uk)

A lighting strategy would be designed to limit artificial light disturbance on the on-Site boundary woodland and treelines, in accordance with BCT's artificial lighting guidance note[11].

Consideration should be given to the following measures:

Sensitive Site Design

- Where possible, minimise the number of windows overlooking the woodland boundary, to limit light spill;
- Consider specifying good quality downward-directional external light fittings on houses for security at front entrances (or those not adjacent to the woodland boundaries), to avoid poor quality and poorly controlled lighting to be fitted by residents at a later date; and
- Light spill should be successfully screened through landscaping and the installation of boundary fences.

Construction Phase

- Night-time working should be avoided between the months of April to October inclusive (during the bat active season), where possible; and
- If security lighting is necessary, lights which are triggered by motion sensors should be used and their coverage kept to a minimum (e.g. through use of lighting cowls).
- Lighting during the construction phase must be carefully managed to avoid any spillage onto the PRI-I trees.

Operational Phase

- Street lighting should be kept within the centre of the Site where possible, adjacent to the central access road;
- If possible, street lighting should be carefully managed to avoid any spillage onto the PRF-I trees T1 and T5.
- Lights should be as low to the ground as possible (specifically not above 8 m);
- Hoods and lamp angle should be designed to reduce light spill on the off-Site boundary woodland and treelines, as well as on the eastern POS area;
- Directional lighting, with hoods / cowls to direct light below the horizontal plane (ideally at an angle less than 70 degrees);
- Use of LED lighting, which emits low UV light, and can be programmed to switch off, or dimmed at certain times (metal halide or other compact fluorescent sources should be avoided);
- The LED lamps should have a low colour correlated temperature – preferably below 2700 K (warm white);
- Light sources should feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats[14]; and
- Minimising hours of lighting to those necessary for safety and security purposes - lights should be switched off at certain times of night, particularly during the months of April to October inclusive (during the bat active season) where possible, or at least motion censored, and avoided or dimmed at key periods of bat activity e.g. sunrise and sunset.

There will be additional tree and hedgerow planting across the Site to compensate for the loss of commuting and foraging habitats.

[14] Stone, E.L., Jones, G., Harris, S. (2012). Impacts of artificial lighting on bats: A review of challenges and solutions. *Mammal Biology*, 80.

4.3 Proposed Enhancements

In addition to the sensitive lighting scheme described above, in order to enhance the Site for roosting bats, further bat boxes will be fitted externally to 27 dwellings totalling to 15% of the houses. The bat boxes shall target roosting provision for the following species, based on the desk study data: common pipistrelle, soprano pipistrelle, brown long-eared and noctule.

4.4 Significance of Residual Effects

The above mitigation and enhancements are in line with the Kirklees Local Plan Policy LP30[15], in particular to the sections on:

Habitats and Species of Principal Importance: *"Proposals will be required to protect Habitats and Species of Principal Importance unless the benefits of the development clearly outweigh the importance of the biodiversity interest, in which case long term compensatory measures will need to be secured."*

And Biodiversity and Development *"result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement".*

With the above measures in place, no contravention of relevant wildlife legislation is anticipated, and impacts upon bats are considered to be non-significant.

There are few roosting opportunities for bats within the existing Site (with the exception of the three PRF-I trees which have low potential for roosting bats) therefore the above enhancements shall result in an overall gain in the potential bat roosting resource.

[15] Kirklees Local Plan Strategy and Policies

Drawing 1.1 – 1.2 Results of Walked Bat Transect Surveys

Bat Activity Surveys Report

Lower Blacup Farm, Cleckheaton

Newett Homes

SLR Project No.: 424.065278.00002

8 January 2025

418400 418500 418600 418700 418800

424900 424800 424700

Quaker Lane
Ashbourne Drive
Ashbourne Avenue
Ashbourne Way
Quaker Lane
Ashbourne Gardens
Ashbourne View
Ashbourne Croft
Penn Drive
Hightown Road

N

21:40
21:46
21:42
21:20
21:26
22:01
21:57
22:42
22:06
23:59
22:14
22:33

0 50 100
Metres

LEGEND

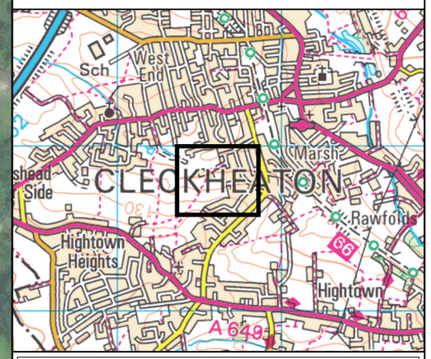
- Site Boundary
- Bat Activity Walkover Survey Route
- Walkover Route Starting Point

Species Record

- Common Pipistrelle
- Noctule

Species Flight Line

- Common Pipistrelle
- Noctule



NEWETT HOMES

SLR

LOWER BLACUP FARM, CLECKHEATON

BAT REPORT

BAT WALKOVER SURVEY RESULTS: 25/07/2024

DRAWING 1.1

Scale 1:1,500 @ A3

Date DECEMBER 2024

424.065278.00001.0002.0 Bat Walkover Survey

418400 418500 418600 418700 418800

424900

424800

424700

Quaker Lane
Ashbourne Drive
Ashbourne Way
Quaker Lane
Ashbourne Avenue
Ashbourne Gardens
Ashbourne View
Ashbourne Croft
Penn Drive
Hightown Road

N

19:50
19:40
19:52
20:26
19:29

0 50 100
Metres

LEGEND

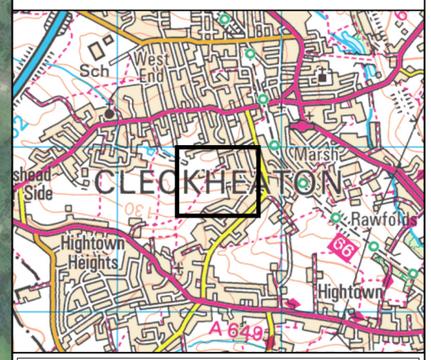
- Site Boundary
- Bat Activity Walkover Survey Route
- Walkover Route Starting Point

Species Record

- Common Pipistrelle

Species Flight Line

- Common Pipistrelle



NEWETT HOMES

SLR

LOWER BLACUP FARM, CLECKHEATON

BAT REPORT

BAT WALKOVER SURVEY RESULTS: 24/09/2024

DRAWING 1.2

Scale 1:1,500 @ A3

Date DECEMBER 2024

424.065278.00001.0002.0 Bat Walkover Survey

Drawing 2 Results of Static Bat Detector Surveys

Bat Activity Surveys Report

Lower Blacup Farm, Cleckheaton

Newett Homes

SLR Project No.: 424.065278.00002

8 January 2025

418400 418500 418600 418700 418800

424900 424800 424700

A B C D E

Quaker Lane Ashbourne Drive Ashbourne Avenue Ashbourne Way Quaker Lane Ashbourne Gardens Ashbourne View Ashbourne Croft Penn Drive Hightown Road

N

Hightown Road

0 50 100

Metres

LEGEND

Site Boundary

Bat Static Detector Location

Bat Static Detector Survey Results

Myotis Species

Leislers Bat

Noctule Bat

Nathusius Pipistrelle

Common Pipistrelle

Soprano Pipistrelle

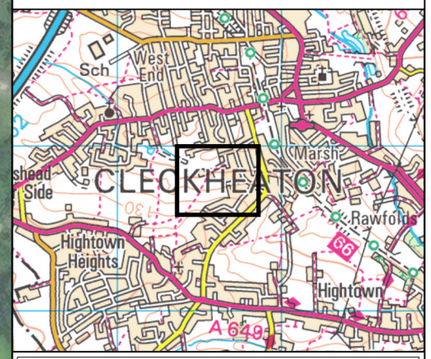
Brown Long-eared Bat

Total Passes per Hour

13

7.7

2.6



NEWETT HOMES

SLR

LOWER BLACUP FARM, CLECKHEATON

BAT REPORT

BAT WALKOVER SURVEY RESULTS:

DRAWING 2

Scale 1:1,500 @ A3

Date DECEMBER 2024

ID	Myotis Species	Leisler Bat	Noctule Bat	Nathusius Pipistrelle	Common Pipistrelle	Soprano Pipistrelle	Brown Long-eared Bat	Total Passes per Hour
A	0	1.06	0.13	0	22.43	0.02	0.03	23.67
B	0	1.71	0.08	0	11.22	0.01	0	13.02
C	0.01	1.43	0.06	0	1.15	0	0	2.65
D	0.01	1.3	0.16	0	6.94	0.04	0.01	8.46
E	0.02	0.74	0.04	0.06	15.94	0.01	0.01	16.82

424.065278.00001.0003.0 Bat Static Survey Results

Appendix A Bat Activity Surveys: Tables of Results

Bat Activity Surveys Report

Lower Blacup Farm, Cleckheaton

Newett Homes

SLR Project No.: 424.065278.00002

8 January 2025

A.1 Static Bat Detector Survey Results

Summary of results of static bat detector surveys, conducted between July, August, September and October 2024.

All static bat detector surveys combined: Average bat passes per hour

Location	Myotis Sp.	Leislers	Noctule	Nathusius Pipistrelle	Common pipistrelle	Soprano pipistrelle	Brown long eared	Total
A	0.00	1.06	0.13	0.00	22.43	0.02	0.03	23.67
B	0.00	1.71	0.08	0.00	11.22	0.01	0.00	13.02
C	0.01	1.43	0.06	0.00	1.15	0.00	0.00	2.65
D	0.01	1.30	0.16	0.00	6.94	0.04	0.01	8.46
E	0.02	0.74	0.04	0.06	15.94	0.01	0.01	16.82
Total	0.04	6.25	0.46	0.07	57.69	0.08	0.04	64.63

July static bat detector survey: Average bat passes per hour

Location	Myotis Sp.	Leislers	Noctule	Nathusius Pipistrelle	Common pipistrelle	Soprano pipistrelle	Brown long earred	Total
A	0.00	4.05	0.50	0.00	27.95	0.08	0.10	32.68
B	0.00	6.43	0.28	0.00	7.75	0.03	0.00	14.48
C	0.03	5.65	0.15	0.00	2.25	0.00	0.00	8.08
D	0.00	5.15	0.60	0.00	15.25	0.10	0.03	21.13
E	0.00	2.85	0.15	0.25	33.80	0.00	0.03	37.08
Total	0.03	24.13	1.68	0.25	87.00	0.20	0.15	113.43

August static bat detector survey: Average bat passes per hour

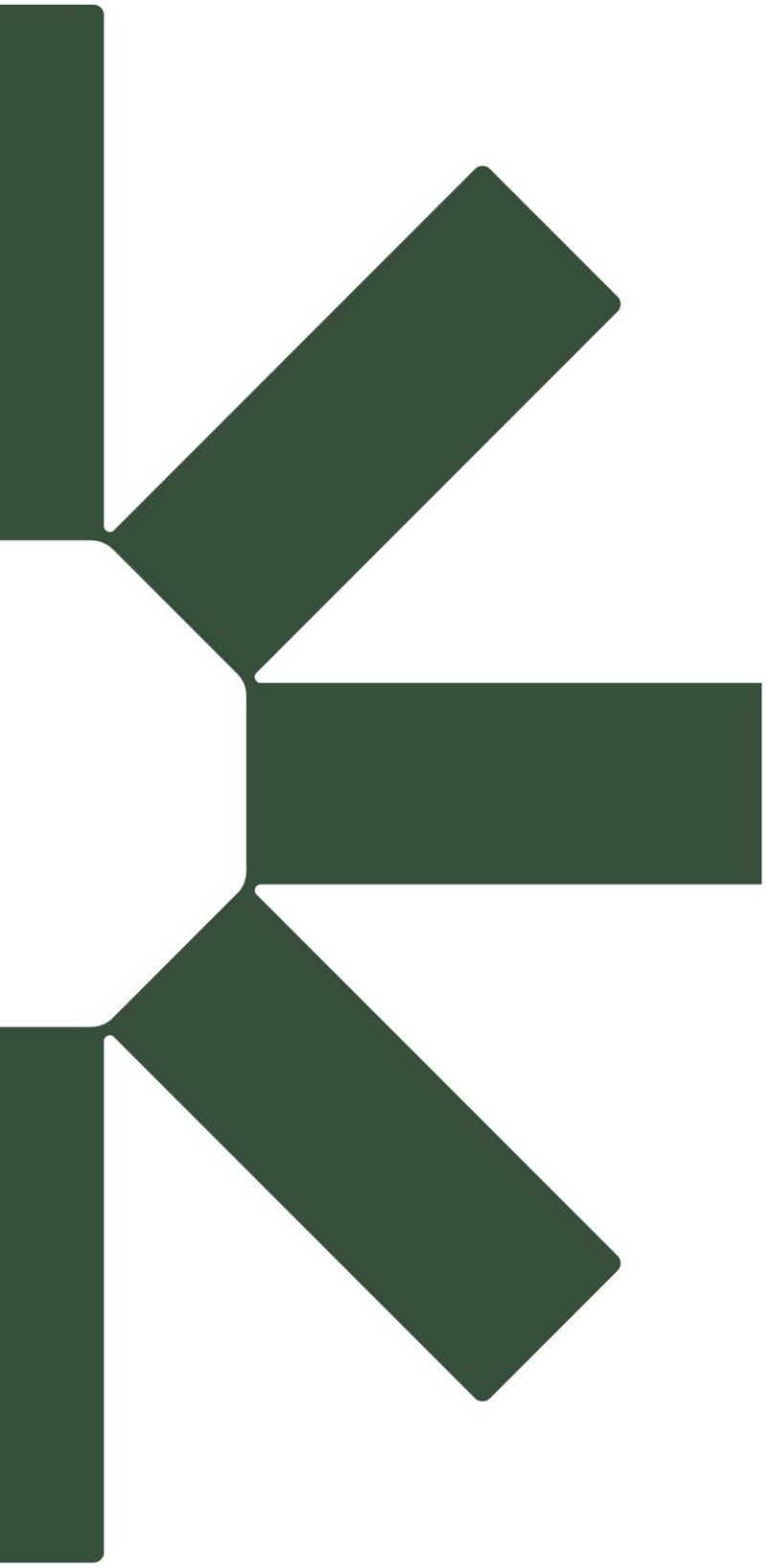
Location	Myotis Sp.	Leislers	Noctule	Nathusius Pipistrelle	Common pipistrelle	Soprano pipistrelle	Brown long earred	Total
A	0.00	0.21	0.00	0.00	30.37	0.02	0.00	30.60
B	0.00	0.06	0.04	0.00	36.31	0.02	0.00	36.44
C	0.00	0.08	0.08	0.00	1.93	0.00	0.00	2.09
D	0.00	0.04	0.02	0.00	9.45	0.02	0.00	9.53
E	0.00	0.13	0.02	0.00	14.66	0.02	0.00	14.83
Total	0.00	0.52	0.17	0.00	92.71	0.08	0.00	93.49

September static bat detector survey: Average bat passes per hour

Location	Myotis Sp.	Leislers	Noctule	Nathusius Pipistrelle	Common pipistrelle	Soprano pipistrelle	Brown long earred	Total
A	0.00	0.00	0.00	0.00	18.07	0.00	0.00	18.07
B	0.00	0.02	0.00	0.00	0.47	0.00	0.00	0.49
C	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.19
D	0.06	0.00	0.00	0.00	2.27	0.04	0.00	2.36
E	0.08	0.00	0.00	0.00	10.40	0.00	0.00	10.47
Total	0.13	0.02	0.00	0.00	31.40	0.04	0.00	31.59

October static bat detector survey: Average bat passes per hour

Location	Myotis Sp.	Leislers	Noctule	Nathusius Pipistrelle	Common pipistrelle	Soprano pipistrelle	Brown long earred	Total
A	0.00	0.00	0.00	0.01	13.33	0.00	0.00	13.35
B	0.00	0.34	0.01	0.00	0.34	0.00	0.00	0.69
C	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
D	0.00	0.01	0.00	0.00	0.82	0.00	0.00	0.83
E	0.00	0.00	0.00	0.00	4.89	0.00	0.00	4.89
Total	0.00	0.35	0.01	0.01	19.63	0.00	0.00	20.01



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