



## Further Bat Surveys: Stables at The Alders, Chinley

## ISSUE RECORD

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The information and advice contained in this report 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.

## EXECUTIVE SUMMARY

### Background

This report has been prepared by Peak Ecology Ltd on behalf of Poulter Architects. It provides the results of Further Bat Surveys associated with the conversion of the stables at The Alders, Chinley.

### Methodology

Three bat activity surveys were carried out between August and September 2016 to confirm numbers and species of bats to inform relevant mitigation. The surveys were recommended following a Daytime Bat Inspection in July 2016, which identified two confirmed roost sites within the building.

Surveyors were positioned close to the building to observe any entry or exit points used by bats, and used hand-held bat detectors and recorders to record and identify bat calls.

### Results

Two species of bat were seen emerging from the building, with common pipistrelle bats recorded emerging from the southern gable end during Surveys 1 and 2 and a brown long-eared bat entering the roost at the northern gable end during Survey 3. Bats were also seen commuting over the site and foraging along the treeline to the west of the site.

It was concluded that the stable contains two day roosts for small numbers of non-breeding common pipistrelle and brown long-eared bats.

### Recommendations

There is a confirmed roost on site therefore a licence from Natural England will be required in order to proceed with works. As the roost is of low conservation significance, due to the number and species of bat that may be disturbed, the site may be registered under the Bat Low Impact Class Licence.

If possible, the existing crevice features should be retained however, alternative roosting opportunities should be incorporated into any extensions to enhance the site for bats.

Bird boxes should also be installed onto the western elevation or on trees close to the building to offset the loss of the existing bird nests

## CONTENTS PAGE

ISSUE RECORD .....	I
EXECUTIVE SUMMARY .....	II
1 INTRODUCTION .....	1
1.1 Introduction .....	1
1.2 Site Description .....	1
1.3 Planning / Legislative Context .....	2
2 METHODOLOGY .....	4
2.1 Emergence Surveys .....	4
2.2 Data Analysis .....	4
2.3 Limitations to Survey .....	4
3 RESULTS .....	6
3.1 Overview .....	6
3.2 Emergence / Re-Entry Surveys .....	7
3.3 Nesting Birds .....	7
4 EVALUATION AND RECOMMENDATIONS .....	8
4.1 Roosting Bats .....	8
4.2 Foraging and Commuting Activity .....	8
4.3 Licence .....	8
4.4 Mitigation .....	9
4.5 Nesting Birds .....	9
5 REFERENCES .....	10
APPENDICES .....	11
Appendix A : BAT SURVEY PLAN .....	12
Appendix B : SONOGRAMS FOR BAT SPECIES ENCOUNTERED AT THE SITE .....	13
LIST OF TABLES	
Table 1: Summary of survey dates and conditions .....	4
LIST OF FIGURES	
Figure 1: Location plan .....	2

## **1 INTRODUCTION**

### **1.1 Introduction**

This report has been prepared by Peak Ecology Ltd on behalf of Poulter Architects. It provides the results of Further Bat Surveys carried out The Alders in Chinley, associated with the conversion of a stable block into a residential dwelling. A Daytime Bat Survey carried out on 27<sup>th</sup> July 2016 found two roosting sites, one at either gable end, confirmed by bat droppings within small cavities. Three further surveys were then recommended to fully ascertain the use of the site by bats.

The purpose of this report is to:

- Confirm numbers and species of roosting bats in the building (to currently accepted standards for confidence in a negative result);
- Provide outline recommendations for mitigation and/or avoidance measures where appropriate;
- Identify any likely need for licensing by Natural England; and,
- Highlight opportunities for ecological enhancement where appropriate.

In relation to planning and development, this report should be read in conjunction with the reports for any other ecological survey work relating to the site.

The approach to this assessment follows best practice published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2015), the British Standards Institution (BSI, 2013) and The Bat Conservation Trust (Collins (ed), 2016). Details of individual survey methods and associated supporting information is provided in Section 2.

### **1.2 Site Description**

The site comprises a single storey former stable building, constructed of breeze-block with stone facing and a concrete tiled pitched roof. The site lies approximately 100m south-west of The Alders, Alders Lane, north of Chinley in Derbyshire (central grid reference: SK 046 830).

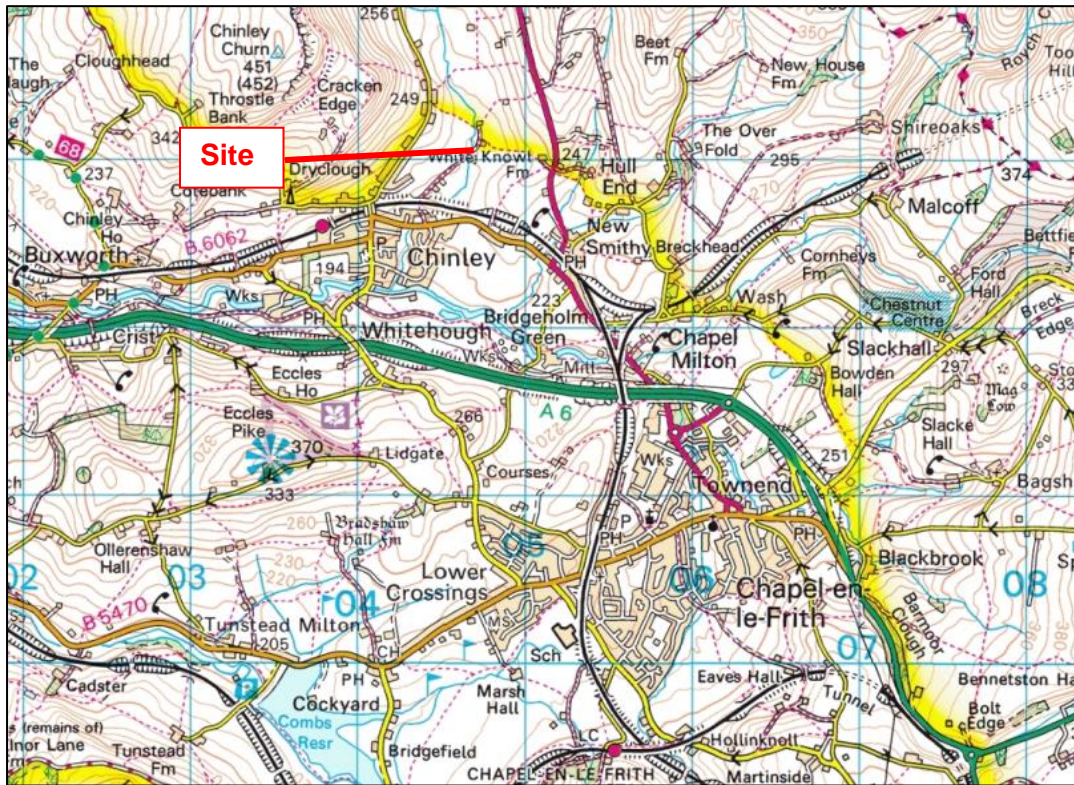
The habitat immediately to the west of the stable is woodland, with a small brook running adjacent to the building. The remainder of the surrounding land use comprises unmanaged grassland to the north, east and south.

Accessed through separate glass and timber doors (behind the original stable doors), the eastern half of the building is split into two workshop/storage rooms. The western half, accessed through double doors in the northern elevation, comprises a garage, open to the rafters.

The site location is illustrated overleaf.



**Figure 1: Location plan**



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### 1.3 Planning / Legislative Context

All British bat species are European Protected Species under The Conservation of Habitats and Species Regulations 2010 (as amended). They are also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are protected by Parts 4(b), 4(c) and 5 of Section 9 of that Act.

In net effect, it is an offence to:

- Deliberately capture, injure or kill bats;
- Intentionally or recklessly disturb bats in a place of shelter (roost);
- Intentionally or recklessly damage, destroy or obscure access to a breeding site or resting place (roost);
- Possess, control, transport, sell or exchange a bat or any part of a bat, unless acquired legally.

NB. Because bats use roosts at different times of year and typically return to the same roosts annually, it is a legal opinion that a roost is protected whether bats are in occupancy at the time or not.

Under the National Planning Policy Framework (NPPF) 2012 the presence of a European protected species such as bats is a material planning consideration. When assessing a planning application, in order to satisfy the three Habitats Directive tests the Local Planning Authority (LPA) requires sufficient information about impacts on the species that are likely to result from the proposals as well as any necessary mitigation or compensatory measures. The test relevant to this report is that which relates to the Favourable Conservation Status of the species.

In addition to this, county and borough/district councils typically have biodiversity policies within their Local Development Frameworks that they must also comply with.

## 2 **METHODOLOGY**

### 2.1 **Emergence Surveys**

Dusk emergence surveys were carried out on the 17<sup>th</sup> and 31<sup>st</sup> August 2016 and 13<sup>th</sup> September 2016. Surveys lasted for 1.5 to 2 hours, commencing approximately 15 minutes before sunset and covering the usual emergence times of UK bat species.

Two surveyors were equipped with hand-held heterodyne bat detectors (Batbox Duet) with Anabat recorders, and were positioned at opposite corners of the building (Appendix A) to observe any bats entering or exiting the structure.

All surveyors were trained and competent for their assigned tasks and, where relevant, registered by Natural England to use a class licence to survey for bats.

**Table 1: Summary of survey dates and conditions**

Date	Sunrise / Sunset Time	Start Time	End Time	Weather Conditions	Surveyors/Class Licence Registration Number
17.08.16	Sunset: 20:33	20:15	21:45	Start temp: 15.4 °C End temp: 14.4 °C Still, dry with no cloud	Jessica Eades MCIEEM 2015-16543-CLS-CLS (level 2) Charlotte Haylock
31.08.16	Sunset: 19:59	19:45	21:00	Start temp: 24 °C End temp: 20.9 °C Still, cloudy	Katie Hadwin ACIEEM Charlotte Haylock
13.09.16	Sunset: 19:27	19:20	20:45	Start temp: 18 °C End temp: 18 °C Cloudy following a thunderstorm	Jessica Eades MCIEEM 2015-16543-CLS-CLS (level 2) Charlotte Haylock

### 2.2 **Data Analysis**

Recordings from the activity surveys were analysed using Analook sound analysis software, published by Titley Scientific or Bat Sound.

Based on characteristics such as peak frequency and call duration, each recorded call was assigned to the relevant bat species, or to family level such as *Myotis sp.* and *Nyctalus sp.* where calls were not distinct enough to have confidence to actual species level. A sample of sonograms produced from the survey data is provided in Appendix A to illustrate the species found to be using / roosting at the site.

### 2.3 **Limitations to Survey**

#### 2.3.1 **Survey Method**

Some species such as brown long-eared *Plecotus auritus* echolocate very quietly and therefore are difficult to detect. This species also typically emerges after dark when it is more difficult for surveyors to see them, however, surveyors were positioned close to the building to maximise the chances of hearing all species.



Early emerging species such as pipistrelles *Pipistrellus sp.* may not echolocate when leaving a roost if there is sufficient light for them to see, which can make species identification more difficult.

### **2.3.2 Survey Equipment**

Anabat detectors typically pick up bat calls over a range of approximately 20m. Range for detecting species that echolocate quietly such as brown long-eared may be less and conversely species such as noctule *Nyctalus noctula* that have loud calls may be detected at greater distances.

### **2.3.3 Fieldwork**

The site was fully accessible for each survey. There was a short rain shower during the second dusk survey however this occurred towards the end of the survey, over an hour after sunset, well after bats had emerged and therefore was unlikely to influence any emergence behaviour.

Survey 3 was delayed by approximately 15 minutes due to a thunderstorm with showers of heavy rain. This caused the levels of light to drop significantly prior to sunset, however surveyors were in position to record bat activity as the storm cleared.

For sites with a confirmed bat roost, guidelines recommend a proportion of the surveys are to be carried out between May and August. Two of the three dusk surveys were conducted in August and the third in September, which was considered sufficient in order to confirm the nature of the roost and the species present.

### **2.3.4 Lifespan of Data**

The results and recommendations contained within this report are considered to be valid for up to two years from the date of survey. After that period, an update may be required in order to inform ecological constraints to development proposals and/or accompany a planning submission.

### 3 RESULTS

#### 3.1 Overview

Two roosting sites were identified during the daytime inspection, with multiple bat access points and droppings noted at each gable end of the building. A maximum of three common pipistrelles were seen emerging from the southern roosting site and one brown long-eared entered the northern roosting site.



**Photograph 1: Flight path of brown long-eared bat entering roost on northern gable end**



**Photograph 2: Emergence points and flight paths of pipistrelle bats from northern gable end**

The habitat surrounding the building offered excellent foraging and commuting opportunities for bats.

### **3.2 Emergence / Re-Entry Surveys**

#### **3.2.1 17<sup>th</sup> August 2016 (Dusk Emergence)**

Three common pipistrelles *Pipistrellus pipistrellus* were seen emerging from the ventilation gap at the southern gable end of the building and flying around the building along the woodland edge. The bats emerged in quick succession at 20:57, approximately half an hour after sunset, which is the typical emergence time for this species.

Continuous foraging was recorded by both surveyors for the remainder of the survey, around the building and along the stream. Most of the bat calls recorded were common pipistrelles, however a brown long-eared was seen foraging above the tree line. Sonograms of echolocation calls recorded during this survey are included in Appendix B.

#### **3.2.2 31<sup>st</sup> August 2016 (Dusk Emergence)**

Two common pipistrelles were seen emerging from the southern gable end during the second survey. The first bat emerged from beneath the bargeboard, left of the apex, at 20:12, and the second from a gap between the roofing felt and tiles, to the right of the apex, at 20:19. Both bats flew towards the stream and proceeded to forage close to the building, with continuous activity until 20:41.

Both surveyors recorded social calls and foraging passes throughout the survey of common pipistrelles and occasional *Myotis* species. No other bats were seen to emerge from the building.

#### **3.2.3 13<sup>th</sup> September 2016 (Dusk Emergence)**

No bats emerged from the building during this survey.

A single brown long-eared bat was seen circling the roost entrance at the northern gable end before entering at the apex at 19:56. This was approximately 30 minutes after sunset, however, due to the weather conditions the site was already in near darkness.

Bat activity was generally low for the duration of the survey with less than ten bat passes recorded all evening. Both common and soprano pipistrelles were recorded, foraging around the building and across the adjacent field, and commuting along the tree line.

### **3.3 Nesting Birds**

A number of old bird nests were recorded within the main storage section of the building, however, no birds were seen during either the daytime or activity surveys and the nests were considered inactive.

## **4 EVALUATION AND RECOMMENDATIONS**

### **4.1 Roosting Bats**

Two roost sites were initially identified during the daytime inspection, and both were found to be in use by bats during the activity surveys. Common pipistrelles were seen emerging from the roost at the southern gable end during Survey 1 and 2, and a brown long-eared entered the roost at the northern gable end during Survey 3. It is considered that the building is used by small numbers of non-breeding opportunistic bats that change roost sites regularly throughout the active season. This explains the difference in the number of bats and bat activity during each survey.

The building is therefore considered to be of low conservation significance; however, conversion of this building may result in the following (potential) impacts on bats, all of which would be an offence under current legislation:

- Disturbance of bats within a place of shelter;
- Modification or destruction of a bat roost; and
- Risk of causing harm to individual bats.

### **4.2 Foraging and Commuting Activity**

Throughout each survey foraging activity was observed around the building and adjacent habitat, and along the stream to the west. Due to the small scale of the development, the impacts on foraging bats are considered minimal, providing sensitive lighting is considered. Further details are provided below.

### **4.3 Licence**

As the bat activity surveys confirmed the presence of roosting bats within the building and if impacts to the roosts cannot be avoided, upon receipt of planning permission a licence will be required from Natural England before works can commence.

It is considered that sufficient survey effort has been carried out in order to inform the licence and that the building is considered to be of low conservation significance. Roosts recorded on site were found to be occasional day roosts for small numbers of non-breeding common pipistrelle and brown long-eared bats. This allows the site to be registered under the Bat Low Impact Class Licence (BLICL), issued by Natural England. Jessica Eades MCIEEM is a registered consultant who is able to apply for this type of site specific licence.

Though the level of detail required remains the same for a full European Protected Species development licence application, Natural England aim to register sites under the low impact scheme within a much shorter timeframe\*, thus reducing costly delays.

The site registration form (which is used by the registered consultant (Jessica Eades) to register the site with Natural England under the terms of the Class Licence WML-CL21) includes information as follows:

- Application form;
- Survey details and species, roost type and impacts;
- Mitigation/compensation under the licence
- Reasoned statement – statements supporting the ‘Purpose Test’ (regulation 53(2)(e)), the ‘No Satisfactory Alternative’ test (regulation 53(9)(a)); and
- Licence declarations.

\*Natural England aim to process EPS licence applications within 30 working days of receipt, however, during busy periods this review period may be extended. The Bat Low Impact Class Licence process aims to have a turnaround of 10 working days upon submitting the site registration form.

#### **4.4 Mitigation**

The licence will require supervision of any dismantling of sensitive areas (roof tiles and stonework around bat roosts) by hand and although no specific mitigation or compensation would form a part of the BLICL, enhancement of the site for bats would be seen as favourable from a planning perspective.

Due to the nature of the building and proposed development it should be possible to retain existing crevice features, or features very similar in nature to those currently used. If the building is to be extended or altered, however, it is recommended that crevice features are incorporated in a similar location, with dimensions of 1.5-1.8cm x 5-10cm at the entrance and approximately 15-20cm deep.

Alternative roosting opportunities for pipistrelle and brown long-eared bats could also be provided by installing bat boxes on the building or trees close to the site to offset the impacts on the existing roosts.

The entrances to any roosts (both existing roosts and any new bat boxes or crevices) must not be directly illuminated as this will reduce their suitability for use by bats, particularly in the case of brown long-eared bats. Lighting should also be directed downward and away from the treeline to minimise disturbance to foraging bats.

#### **4.5 Nesting Birds**

A number of old bird nests were recorded under the eaves of the building along the western elevation. Although these nests were disused for the duration of the survey period, it is recommended that works commence outside the bird nesting season (March to August, inclusive). If work must take place close to this period, a check for nesting birds must take place by an ecologist prior to the commencement of works. If active nests are discovered, these must not be disturbed until all chicks have fledged.

It is recommended that bird boxes, suitable for species such as blackbird *Turdus merula* and wren *Troglodytes troglodytes*, are installed on the western elevation to compensate for the loss of nesting opportunities as a result of the conversion.



## 5 **REFERENCES**

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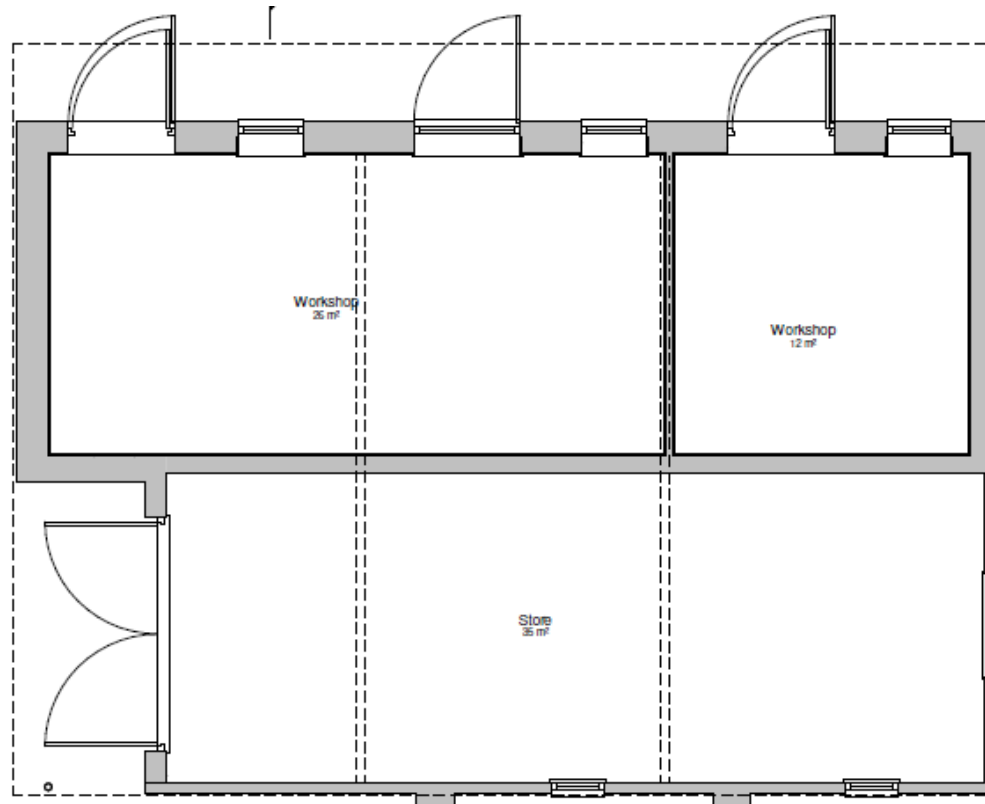
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## APPENDICES

Appendix A : BAT SURVEY PLAN .....	12
Appendix B : SONOGRAMS FOR BAT SPECIES ENCOUNTERED AT THE SITE.....	13

## APPENDIX A : BAT SURVEY PLAN

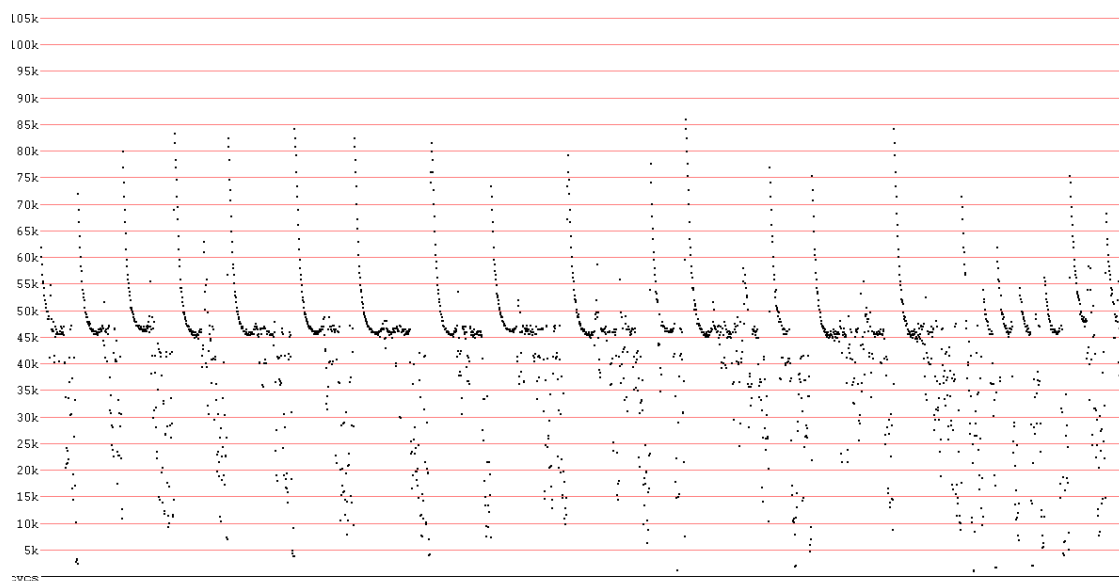
Surveyor 1



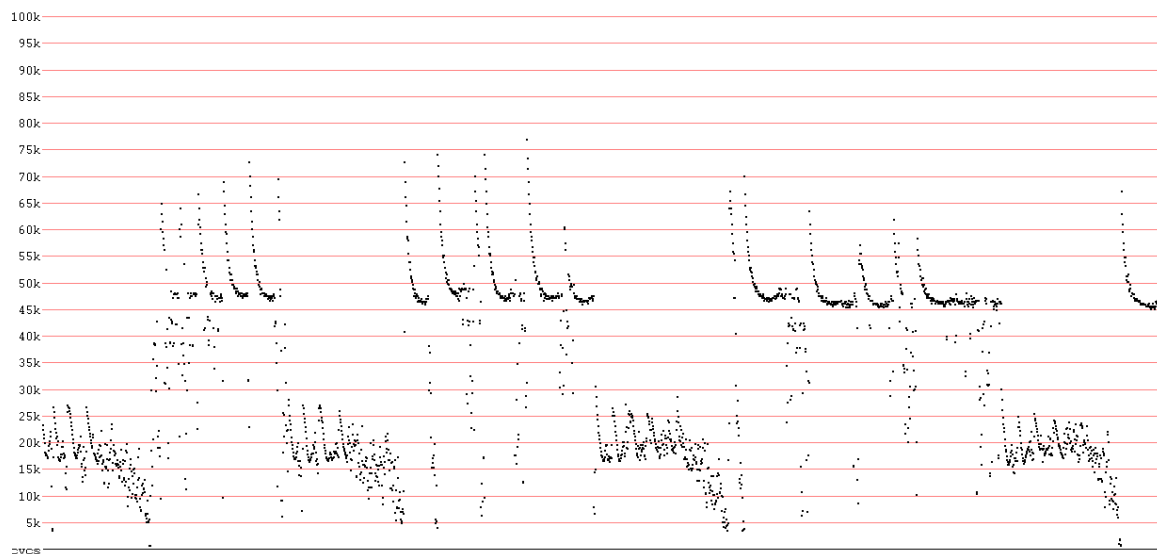
Surveyor 2

## APPENDIX B : SONOGRAMS FOR BAT SPECIES ENCOUNTERED AT THE SITE

### **Sonogram 1: Echolocation calls of common pipistrelles recorded during Survey 1**



### **Sonogram 2: Echolocation and social calls of common pipistrelles recorded during Survey 1**



Calls recorded using Anabat Express detector, sonogram generated using Analook (view: peak frequency only)