Lains, Whiteparish

Bat Report

Prepared on behalf of Alex Rose

September 2023

PV PROJECTS LTD t/a PRO VISION - UK Registered Office - The Lodge, Highcroft Road, Winchester, SO22 5GU | Reg No. 03296321
Winchester: 01962 677044 | Newbury: 01635 40184 | www.pro-vision.co.uk

Lains, Whiteparish

Ecology 8341

Version 01

Prepared by:	Jake Purchase	V.01	September 2023
Authorised by:	Alex Hannam MCIEEM	V.01	September 2023

Pro Vision Ecology

The Lodge

Highcroft Road

Winchester

SO22 5GU

COPYRIGHT: The contents of this document must not be copied or reproduced in whole or in part without the prior written consent of Pro Vision Ecology.

Contents

Page

1.0 EXECUTIVE SUMMARY 1

2.0 INTRODUCTION 2

BACKGROUND 2
SITE DESCRIPTION 2
BRIEF 2
RELEVANT LEGISLATION 2

3.0 METHODOLOGIES 4

DESK STUDY 4
PRELIMINARY ROOST ASSESSMENT 4
EMERGENCE SURVEYS 5

4.0 RESULTS AND ANALYSIS 7

DESK STUDY 7
PRELIMINARY ROOST ASSESSMENT 8
EMERGENCE SURVEYS 10

5.0 REQUIREMENTS AND RECOMMENDATIONS 12

RECOMMENDATIONS 12
MEASURES TO MITIGATE AGAINST THE EFFECTS OF THE PROPOSED DEVELOPMENT 12
ENHANCEMENT 12

6.0 REFERENCES AND BIBLIOGRAPHY 14

Appendices

Appendix A: Site Location

Appendix B: Emergence Survey Results

1.0 Executive Summary

1.1 The Client is proposing to apply for planning permission to renovate the property at Lains, Whiteparish including raising the roof. Pro Vision Ecology were commissioned to provide the ecological assessment for this application.

1.2 The house recorded on site was assessed in accordance with Bat Conservation Trust (BCT) guidance (Collins, 2016). The property the building was considered to hold moderate potential to support roosting bats therefore two emergence surveys were conducted on the 2nd and the 21st of August 2023. No bats were recorded emerging from the building during either survey.

1.3 As no bats were recorded emerging or re-entering the building during the surveys, it is considered the building does not support a bat roosts. No further surveys or mitigation measures will be required to proceed. However, due to the site supporting commuting and foraging bats, recommendations for bat friendly lighting as well as enhancements in the form of bat boxes have been suggested and detailed in **Section 5.0.**

2.0 Introduction

Background

2.1 Pro Vision Ecology were commissioned in July 2023 to carry out a Preliminary Roost Assessment (PRA) and subsequent emergence bat surveys at Lains, Whiteparish, Wiltshire, SP5 2SS. For the site location refer to **Appendix A**. This report will contribute to a forthcoming planning application to be submitted by the client to Wiltshire Council with current proposals including renovating the property and raising the roof.

Site Description

Surrounding area

2.2 The application site is located to the southwest of the village of Whiteparish in Wiltshire. The site is immediately surrounded by residential properties on all sides; however, the wider area is dominated by agricultural land, with arable and pasture fields surrounding the site. Woody vegetation is limited to scattered trees and hedgerows, with the closest woodland located over 400 metres to the southeast of the site.

Development site

2.3 The site comprises one two-storey house with a detached open-faced garage, as well as front and rear gardens.

Brief

2.4 To conduct a PRA and subsequent emergence surveys of the house at Lains and to inform the Client of any ecological implications of their proposals and advise them of mitigation and enhancements.

Relevant Legislation

2.5 Bats are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence, inter alia, to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb any such animal, including in particular any disturbance which is likely:
    - to impair its ability to survive, breed, or rear or nurture their young;
    - to impair its ability to hibernate or migrate;
    - to affect significantly the local distribution or abundance of that species; or

- damage or destroy a breeding site or resting place of any such animal; or
- intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

2.6 In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (*Barbastella barbastellus*);
- Greater mouse-eared bat (*Myotis myotis*).

2.7 In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

3.0 Methodologies

Desk Study

3.1 A data-gathering exercise was undertaken to obtain records of the presence of bat species post 2005 within two kilometres of the central grid reference of the site. These records were provided by Wiltshire & Swindon Biological Records Centre (WSBRC). In addition to this a search was undertaken to obtain records of granted European Protected Species Licences (EPSL's) within two kilometres of the development, using the Defra interactive website MAGIC.

Preliminary Roost Assessment

3.2 Bats use features within buildings such as stone crevices or cracks in brickwork, ridge beams, gaps between roofing materials and the main building structure, and any potential access points. An internal and external inspection of the building was conducted by Jake Purchase on 27th July 2023. There was clear sky, no wind and an ambient temperature of 18°C. During the survey any evidence of bats such as droppings, urine staining, claw marks, feeding remains or bats themselves were recorded. An assessment of the potential of the building to support roosts was then made in line with Bat Conservation Trust (BCT) guidelines (2016) shown in **Table 2** below.

Table 2: Assessment of buildings to support roosting bats

Potential	Criteria
Negligible	Negligible features on site likely to be used by bats
Low	Potential features present which may support low numbers of bats irregularly but no suitable features for regular use by large numbers of bats.
Moderate	A building with one or more potential roost features that may be used by bats due to their size, shelter, protection, condition, and habitats present. Unlikely to support a roost of high conservation value.
High	A building with one or more potential roost sites that are suitable for use by a large number of bats on a regular basis.

3.3 Any droppings recorded were collected and sent to Swift Ecology for DNA analysis. Samples were tested for multiple bat species.

Site constraints

3.4 Bats will often roost in places that are inaccessible to the surveyor, such as under tiles and crevices within structures. During the inspection of the buildings on site for bats, due regard was paid to the noting of features that have the potential to support crevice dwelling species. Consequently, it is not possible to definitively conclude that bats are absent from these areas.

Emergence Surveys

3.5 Emergence surveys were conducted in accordance with the Bat Conservation Trust Best Practice Guidelines (Collins, 2016) and Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (Bat Conservation Trust 2022). Two surveys were completed on the house on the 2nd and 21st of August 2023. Two surveyors were positioned on the southwestern and northeastern corners of the property, ensuring all potential features were in view of the cameras. A summary for the conditions of each survey are provided in **Table 3** below.

3.6 Surveys were completed by bat licenced ecologists Louisa Jones, Alex Hannam and Rebecca Oswin (licence numbers available on request).

Table 3: Phase II Bat Survey Details

Date	Start and end times and time of sunset	Structure	Equipment used	Weather Conditions
02.08.23	Start: 20:36 End: 22:21 Sunset: 20:51	House at Lains	2 x Echo meter Touch 2 Pro 2 x Canon XA11 camera, 96 LED Infra-Red Illuminator flood lights each	Start: 18°C End: 15°C 1/8 cloud cover 1/12 wind Dry
Comments: 2 surveyors undertook this survey.				
21.08.23	Start: 20:02 End: 21:47 Sunset: 20:17	House at Lains	2 x Echo meter Touch 2 Pro 1 x Canon XA11 camera, 140 LED Infra-Red Illuminator flood light 1x Nightfox Red camera	Start: 19°C End: 17°C 0/8 cloud cover 0/12 wind Dry
Comments: 2 surveyors undertook this survey.				

3.7 The surveyors were equipped with Echo Meter Touch 2 Pro detectors and Canon XA11 Cameras with LED Infra-Red Illuminator flood lights and a Nightfox Red Camera as Night Vision Aids (NVAs). **Figures 1 to 2** shows the coverage of the cameras during the survey. Cameras were positioned next to the surveyors watching the building, once it became too dark to see the building the surveyors viewed the building through the camera display. Post survey any emergences or suspected emergences were then reviewed using a computer and VLC media player with the motion detector filter activated to aid footage review. Where necessary footage was slowed down and reviewed frame by frame.

3.8 Bat sound analysis was undertaken using Kaleidoscope software to confirm the identity of the species recorded.



Figure 1: Still from infra-red camera facing the Western elevation.



Figure 2: Still from infra-red camera facing the Eastern elevation.

Survey Constraints

3.9 Due to large similarities between their calls, bats in the *Plecotus* and *Myotis* genus are difficult to identify to species level using sound analysis alone. Therefore, these bats were identified to genus level only.

4.0 Results and Analysis

Desk Study

4.1 The WSBRC data search returned 72 records, of which 41 records were for known roost sites, within two kilometres of the site for the following bat species:

- Western Barbastelle (*Barbastella barbastellus*)
- Serotine (*Eptesicus serotinus*)
- Myotis species (*Myotis* sp.)
- Natterer's bat (*Myotis nattereri*)
- Noctule (*Nyctalus noctula*)
- Noctule species (*Nyctalus sp*.)
- Common pipistrelle (*Pipistrellus pipistrellus*)
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Pipistrelle species (*Pipistrellus sp.*)
- Brown long-eared bat (*Plecotus auritus*)
- Long-eared species (*Plecotus sp.*)

EPS Species Licences

4.2 The Defra run website, MAGIC, was searched for a list of granted EPSL's. Two records of granted EPSL's within one kilometre of the site were recorded, with one licence granted for the destruction of a breeding site for common pipistrelle, soprano pipistrelle and brown long-eared bats, granted in 2010.

4.3 The presence of bat roosts in the area indicate that bats might use the site for foraging, commuting and roosting if suitable habitat and roosting locations are present.

Preliminary Roost Assessment

External inspection

4.4 The building is a two-storey detached house comprising red brick and white render walls supporting a pitched roof with clay roof and ridge tiles. Two internal chimneys are present as well as single storey extension on the western elevation **(Figure 3**). A small single storey extension is located on the northern elevation of the building **(Figure 4).**

4.5 Areas of lifted and damage roof tiles present near the verges of the roof **(Figure 3-6)**. There are also gaps present between the wooden soffit boards and the wall, located on the southern and northern elevations **(Figure 4 and 6)**.





Figures 3 and 4. Western and northern elevations, with lifted roof tiles and gap behind soffit board respectively.





Figures 5 and 6. Eastern and southern elevations with lifted tiles and gap behind soffit boards respectively.

Internal inspection

4.6 The building has a roof void that measures approximately 6 metres wide by 10 metres long and 1.75 metres high at the apex. The void is warm, dry and is insulated with fibreglass insulation. The void is uncluttered, with only a water tank and related pipework located at the northern end of the void **(Figure 7).**

4.7 The roof structure comprises of wooden rafters, ridge beam and trusses. The roof is lined with bitumen felt membrane, all of which appear to be in good condition **(Figure 8).**





Figures 7 and 8. Northern and southern halves of the roof void respectively.

4.8 A single suspected bat dropping was recorded on top some insulation at the northern end of the loft void **(Figure 9).** The sample was sent to Swift Ecology Ltd to be analysed to confirm the identity of the species. The results of the analysis were inconclusive. Although only one dropping was available to be tested previous samples sent to the lab were able to be determined. Therefore, it is considered likely the dropping does not belong to a bat species.

4.9 Sunlight could be seen from a gap where the roof and wall meet around the chimney on the northern end of the loft void, above where the suspected bat dropping was found **(Figure 10).**





Figures 9 and 10. Location of a suspected bat dropping, and sunlight visible from gap around chimney on northern elevation, respectively.

Summary

4.10 The house at Lains is considered to hold moderate potential to support roosting bats with a lack of evidence supporting the use of the building as a maternity roost and potential roost features limited to the roof void and a number of potential crevice roosting opportunities. Further surveys were completed on the house which are detailed below.

Emergence Surveys

Two emergence surveys were conducted on the house, the results are provided in **Appendix B** and summarised below.

2nd August Dusk Emergence

4.11 No emergences were recorded during this survey.

4.12 Very low levels of bat activity were recorded, with two Noctule (*Nyctalus noctula*) passes at 21:07 and 21:09, as well as three common pipistrelle (*Pipistrellus pipistrellus*) passes at 21:04, 21:35 and 22:12. One pipistrelle was commuting in a southerly direction of the rear garden, and another was seen flying around the northeastern corner of the building.

4.13 A single brief and faint call from a long-eared bat (*Plecotus spp.)* was recorded at 22:00.

21st August Dusk Emergence

4.14 No emergences were recorded during this survey.

4.15 Very low levels of bat activity were recorded, with a common pipistrelle heard but not seen at 20:45, 21:44 and 21:45, with social calls recorded towards the end of the survey. A long-eared bat was seen but not heard flying northwards over the rear garden before returning south at 20:55. A soprano pipistrelle was seen commuting southwards along the eastern elevation of the building,

with brief, faint calls recorded at 21:17, a soprano pipistrelle was then heard but not seen a minute later at 21:18.

4.16 A single serotine (*Eptesicus serotinus*) and a single myotis (suspected Natterer's (*Myotis nattereri.)* were heard but not seen commuting at 21:20 and 21:22 respectively.

Summary

4.17 No bats were recorded emerging from the building during the emergence surveys. The evidence of roosting bats was inconclusive. Although only one dropping was available to be tested previous samples sent to the lab were able to be determined. Therefore, it is considered likely the dropping does not belong to a bat species. Therefore, it is considered this building does not support a bat roost and no further surveys will be required.

4.18 Recommendations have been provided in the unlikely event a roosting bat is encountered and mitigation measures for foraging and commuting bats are provided in **Section 5.0**.

5.0 Requirements and Recommendations

Recommendations

5.1 No bats were recorded emerging from the building during the emergence surveys. The evidence of roosting bats was inconclusive therefore it is considered this building does not support a bat roost. In the unlikely event a roosting bat is encountered during works all works will stop, the roosting feature re-instated if possible, without harming the bat and a licenced ecologist contacted for advice which may include obtaining a licence from Natural England if appropriate.

Measures to Mitigate against the effects of the proposed development

Lighting

5.2 The site is situated in a rural area which supports foraging and commuting bats in the landscape, the emergence surveys also recorded low levels of bat activity, suggesting that bats are roosting nearby. The proposals will require the inclusion of lighting to adhere to the following guidelines (ILP, 2023):

- Not result in an increase of 1-3 lux on the boundary features.
- LED luminaires should be used of a warm white spectrum (<2700 Kelvin) which will feature peak wavelengths higher than 550 nm.
- Internal luminaires should be recessed to reduce light spill outside the property.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors and set to as short as possible.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Enhancement

5.3 In accordance with the Natural Planning Policy Framework (NPPF, 2021), development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

5.4 The development should look to incorporate features such as bat boxes, with integral boxes being preferred. The bat box should be placed at least 3 metres from the ground and face suitable habitat such as the line of trees to the south of the site, or to the east where there is ample flight space.

5.5 The existing boundary hedgerows should be retained, and any planting should incorporate native species which will increase prey availability for foraging and commuting bats.

6.0 References and Bibliography

Collins, J (Ed) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed.). Bat Conservation Trust, London.

ILP (2023) *Guidance note 08/23 Bats and Artificial Lighting at Night*

JNCC (2004). Bat Workers Manual 3rd Edition. JNCC.

National Planning Policy Framework (2021). *National Planning Policy Framework.* Ministry of Housing, Communities and Local Government, London.

Wiltshire & Swindon Biological Records Centre. Data request Ref: 20230811-4_PV

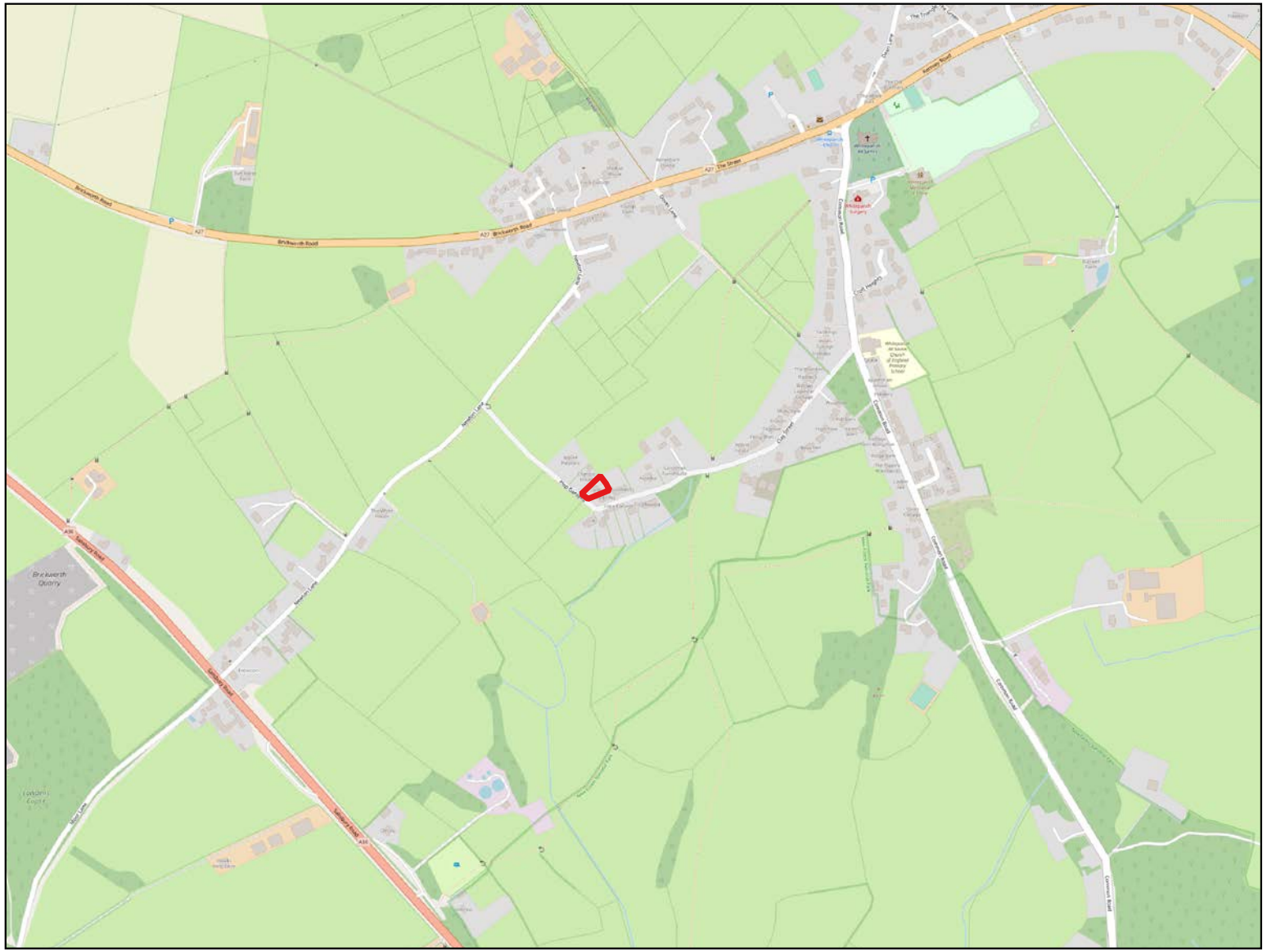
Appendices

Appendix A: Site Location

© The copyright of this drawing remains with Pro Vision and may not be reproduced in any form without prior written consent. Contains public sector information licensed under the Open Government Licence v3.0.

The plan shown here is for the purpose of supporting a planning application only. Only scale from this drawing for the purposes of determining a planning application. Do not scale from this drawing for construction purposes.

The proposal presented here is subject to review by specialist consultants, and is to be read in conjunction with all relevant specialist's drawings and information where available. Any discrepancies between this and any other consultant's drawings and information should be reported to Pro Vision immediately.



Legend

Site Boundary

0 100 200 300 400 500 m

N

ISSUE	DATE	DESCRIPTION	DRAWN	CHECKED
v1	06.09.23	First Issue	JP	AH
v2	08.09.23	Ammended base map	AH	AH

CLIENT:	**Alex Rose**	
PROJECT:	**Lains**	
DRAWING:	**Site Location**	**1:10000**
NUMBER:	**8341-XX-E0-01**	**A4**
ISSUE:	**v2**	**08.09.23**

PRO VISION
PLANNING | ARCHITECTURE | URBAN DESIGN | ECOLOGY

www.pro-vision.co.uk

Appendix B: Emergence survey results

© The copyright of this drawing remains with Pro Vision and may not be reproduced in any form without prior written consent. Contains public sector information licensed under the Open Government Licence v3.0.

The plan shown here is for the purpose of supporting a planning application only. Only scale from this drawing for the purposes of determining a planning application. Do not scale from this drawing for construction purposes.

The proposal presented here is subject to review by specialist consultants, and is to be read in conjunction with all relevant specialist's drawings and information where available. Any discrepancies between this and any other consultant's drawings and information should be reported to Pro Vision immediately.



Legend

- Site Boundary
- Surveyor and camera location

10 0 10

N

ISSUE	DATE	DESCRIPTION	DRAWN	CHECKED
v1	06.09.23	First Issue	JP	AH
v2	08.09.23	Amended base map	AH	AH

CLIENT:	**Alex Rose**	
PROJECT:	**Lains**	
DRAWING:	**Emergence Survey Results**	**1:500**
NUMBER:	**8341-XX-E0-02**	**A4**
ISSUE:	**v2**	**08.09.23**

PRO VISION
PLANNING | ARCHITECTURE | URBAN DESIGN | ECOLOGY

www.pro-vision.co.uk

02/08/23

Date:	02.08.23	Surveyors:	Louisa Jones, Alex Hannam
Time	**Species**	**Description**	
21:07	Noctule	Heard not seen, faint call	
21:09	Noctule	Heard not seen, faint call	
21:24	common pipistrelle	Commuting, north to south over rear garden	
21:35	Common pipistrelle	Flew around the northeast corner of the building from trees on the northern site boundary	
22:00	Long-eared bat	Heard not seen, faint call	
22:12	Common pipistrelle	brief pass	

21/08/23

Date:	21.08.23	Surveyors:	Alex Hannam, Becca Oswin
Time	**Species**	**Description**	
20:45	Common Pipistrelle	Heard not seen, faint call	
20:55	Long-eared bat	Flew northwards before turning back south, seen not heard	
21:16	Soprano pipistrelle	Commuting – southwards along the eastern elevation	
21:18	Common pipistrelle	Foraging – Heard not seen	
21:20	Serotine	Commuting - Heard not seen	
21:22	Myotis bat	Commuting – Heard not seen	
21:44	Common pipistrelle	Commuting – Heard not seen	
21:46	Common pipistrelle	Commuting – social calling, heard not seen	