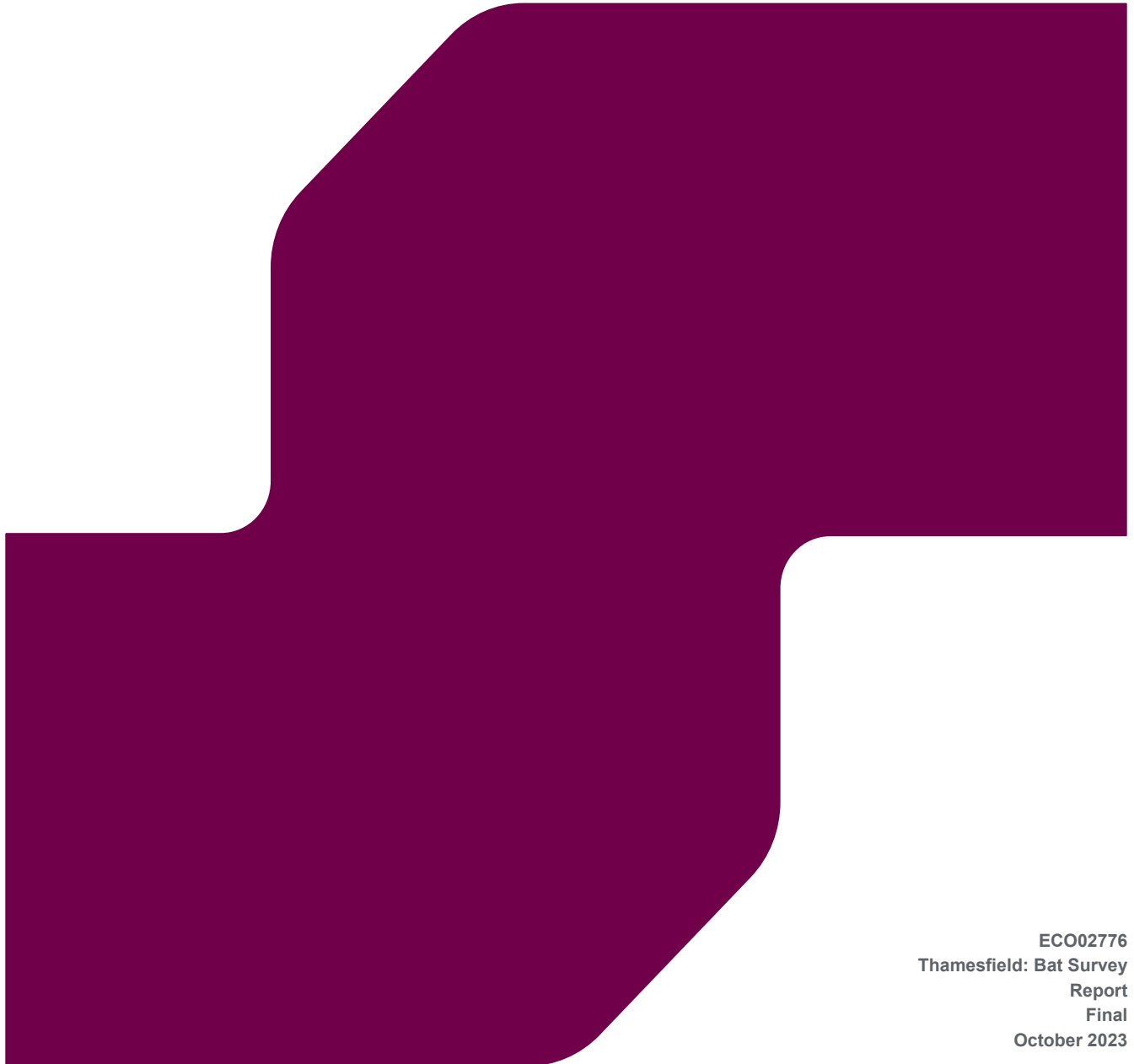


THAMESFIELD RVG, HENLEY ON THAMES

Bat Survey Report



ECO02776
Thamesfield: Bat Survey
Report
Final
October 2023

REPORT

Quality Management

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EXECUTIVE SUMMARY

RPS was commissioned by Retirement Villages Group Ltd to undertake bat emergence surveys at Thamesfield Retirement Village, Wargrave Road, Henley on Thames RG9 2LX.

A Preliminary Bat Roost Assessment (PBRA) undertaken by RPS in September 2022 (RPS, 2022) identified that the separate sections of Thamesfield Retirement Village had varying potential to support roosting bats. Four buildings were found to have high potential to support roosting bats (B1, B2, B3 and B6), one building (B5) had low potential and one building (B4) with negligible potential. Bat droppings were collected beneath external features located on B3 and B6.

The proposed development works will only affect part of B2 (Features H, I, J and J) and B3 (Feature K), therefore three bat emergence surveys were undertaken between June and July 2023. Feature I was no longer present and therefore not surveyed in June 2023.

The emergence surveys confirmed a soprano roost within B3, Feature K. Foraging and commuting activity was recorded within the surrounding survey areas.

Redevelopment and renovation work proposed for B3, and the surrounds should be undertaken under a Natural England European Protected Species Mitigation bat licence. Recommendations have also been made to enhance the site for bats, including the provision of bat boxes and a sensitive lighting scheme.

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1 INTRODUCTION

Purpose and Scope of this Report

- 1.1.1 RPS was commissioned by Retirement Villages group Ltd to undertake further bat emergence surveys at Thamesfield Retirement Village, Wargrave Road, Henley on Thames RG9 2LX.
- 1.1.2 A Preliminary Bat Roost Assessment (PBRA) undertaken by RPS in September 2022 (RPS, 2022) identified that the sections of Thamesfield Retirement Village had varying potential to support roosting bats. The proposed development works would only affect part of B2 (Features H, I, J and J) and B3 (Feature K), therefore further bat emergence surveys were recommended on these buildings/features.
- 1.1.3 The walkway between B4 and B5 is being removed. One low potential bat feature (Feature L) was recorded on the northern aspect of B5. As the proposed works would only affect the southern area of B5, the potential bat roost feature L was not included in the survey scope.
- 1.1.4 During the PBRA, bat droppings were collected beneath external features located on B3 (Feature K) and B6 (Feature O). The results of these are also provided within this report.
- 1.1.5 The objectives of the bat emergence surveys were to determine the current use of the building by bats, to inform the proposed works, by establishing:
- Whether any bats were roosting in the building;
 - Which bat species were using the roost;
 - An approximate number of each species of bat using the roost; and
 - The best course of action to minimise the impacts of the proposed works on the local bat population.
- 1.1.6 This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RPS.
- 1.1.7 The surveys and desk-based assessments undertaken as part of this review and subsequent report including the Ecological Appraisal Notes are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

Site Description

- 1.1.2 The site was east of the River Thames on the edge of Henley on Thames. The building surveyed comprised a retirement home on the bank of the River Thames. The site comprised of buildings, hardstanding and amenity grassland with some woodland and scattered trees.
- 1.1.1 The surrounding landscape was largely residential plots to the west, with mainly grassland and woodland (namely Remenham Wood) on the eastern side. The River Thames was prominent in the area, running directly adjacent to the west of the site.

Legislation

- 1.1.2 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. All British bats are also included on Schedule 2 of The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 as European Protected Species. It is an offence to:
- Intentionally or recklessly kill, injure, or capture bats;
 - Deliberately or recklessly disturb bats (whether in a roost or not); and/or
 - Damage, destroy or obstruct access to bat roosts.

- 1.1.3 A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, it is considered within the legal opinion that a roost is protected whether or not bats are present at the time of the survey.
- 1.1.4 A licence will therefore be required by those who carry out any operation that would otherwise result in offences being committed.
- 1.1.5 The following bat species are listed as being of principal importance for the conservation of biodiversity in England, (commonly referred to as UK Biodiversity Action Plan Priority species): barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum* and lesser horseshoe *Rhinolophus hipposideros*.

2 METHODS

Emergence Surveys

- 2.1.1 The bat emergence surveys were undertaken in accordance with the latest best practice guidelines and recommendations published by the Bat Conservation Trust in Bat Survey: Good Practice Guidelines (BCT, 2016).
- 2.1.2 As recommended by the BCT guidance, three dusk emergence surveys were undertaken on buildings identified as having high potential.
- 2.1.3 The dusk emergence surveys commenced 15 minutes before sunset and continued for at least 1.5 hours after sunset.
- 2.1.4 During each survey visit the buildings were continuously surveyed by a team of up to four experienced RPS ecologists, Which included at least one NE bat licenced ecologist. Visual observations were made of where bats emerged from the buildings (if relevant) and in what direction they were flying to/from.
- 2.1.5 In addition, infra-red cameras, paired with static detectors, were positioned in multiple locations to ensure features suitable for roosting bats were covered in all locations.
- 2.1.6 Behavioural observations were also recorded for any bats encountered on site or within the vicinity, including direction of flight and activity observed (e.g., foraging and commuting).
- 2.1.7 Elekon Batlogger bat detectors were used to detect echolocation calls which were subsequently analysed using BatExplorer software to identify the species present. Camera data were analysed by a team of experienced ecologists using Windows Media Player.
- 2.1.8 The surveys were undertaken in appropriate conditions (i.e., not during heavy rain, strong wind or if the air temperature dropped below 10°C).
- 2.1.9 Survey details from the bat emergence surveys undertaken between June and July 2023 are detailed in Table 2.1 below. The positions of surveyors and IR cameras used during the surveys are shown on Figure 3.1.

Table 2.1: Bat emergence survey dates, times and weather conditions

Survey date	Start time	End Time	Sunset Time	Weather
05/06/2023	21:00	22:45	21:15	Temp: 16°C, Cloud: 1/8; Wind: 2/8; Rain: Clear
19/06/2023	21:09	22:54	21:24	Temp: 23°C, Cloud: 4/8; Wind: 0/8; Rain: Clear
19/07/2023	21:55	22:40	21:10	Temp: 24°C, Cloud: 4/8. Wind: 0/8. Rain: Clear

Limitations

- 2.1.10 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.
- 2.1.11 It should be noted that bats are difficult to locate in large structures, with many potential roosting areas, and finding the exact roosting site can be difficult, especially for male/single bat roosting sites.
- 2.1.12 Bats exhibit seasonal use of buildings and built structures and being so mobile, may arrive and start using a site after it has been surveyed, or be roosting somewhere else during the period it was surveyed. Additionally, bats can forage in different areas and preferentially commute along different

routes in response to several changing physical and environmental factors. Therefore, it should be noted that this survey provides a snapshot of ecological constraints found to be present at the time and should not be relied upon as evidence of presence/absence for periods longer than one year.

- 2.1.13 Species identification by sonogram is limited to a certain extent by similarities in call structure parameters for certain species. All bats modulate their calls according to the habitats they are navigating and their behaviour. This imposes limitations on reliable identification of bats to species level for species of the same genus, and specifically for *Plecotus*, *Myotis* and *Nyctalus* bats.
- 2.1.14 Due to the location of the site and known range of *Plecotus* bats, every *Plecotus* bat recorded was assumed to be brown long-eared bat. *Nyctalus* species (noctule and Leisler's bat) were separated where possible but grouped where call parameters overlapped and prevented reliable identification to species.

Accurate Lifespan of Ecological Data

- 2.1.15 The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for up to one year, assuming no significant considerable changes to the site conditions.

3 RESULTS

Building Description

- 3.1.1 The section of B2 surveyed comprised of a two-storey building with some areas of single-story; rotten window frames were present on the south western elevation (Feature H). Along the eastern elevation was some minor lead flashing (Feature J) and lifted roof tiles (Feature J). In September 2022 some large, vertical cracks were present in the stonework along the south western elevation at ground level (Feature I), these were no longer present in June 2023.
- 3.1.2 B3 was noted to have a single feature on the southern elevation, comprising a broken / missing panel in the soffit (Feature K). This led to a hollow within, which could extend around the length of the building. Two bat droppings were noted beneath the feature.
- 3.1.3 The bat droppings collected during the PBRA were sent off for analysis by the EcoWarwicker Ecological Forensics. The results confirmed that the samples collected from B3 (Feature K) and B6 (Feature O) were soprano pipistrelle. These results are provided in Appendix A.

Bat Emergence Surveys

- 3.1.4 Results from the bat emergence surveys undertaken between June and July 2023 are detailed in Table 3.1 below.

Table 3.1: Bat emergence results

Visit Number	Survey Date	Emergences recorded	Notes
1	05/06/23	None	Activity recorded in the area- noctule, common, soprano and Nathusius' pipistrelle
2	19/06/23	None	Activity recorded in the area- noctule, common and soprano pipistrelle
3	19/07/23	Building B3	Soprano pipistrelle, Feature K. Activity recorded in the area-noctule common, soprano and nathusius' pipistrelle

- 3.1.5 An individual bat emerged from B3 (Feature K) at 9.39pm on 19 July 2023. The bat was confirmed as a soprano pipistrelle from data analysis. This feature was also surveyed with the use of one of the Infra-red cameras (paired with static detector). A screenshot of the emergence is provided within Appendix B.
- 3.1.6 Generally, common, and soprano pipistrelle accounted for the highest levels of foraging and commuting activity recorded during the surveys. A few nathusius' pipistrelle calls were recorded on visits 1 and 3. Noctule bats were also recorded commuting and foraging in the area.
- 3.1.7 Commuting and foraging activity was recorded adjacent to the buildings and surrounding vegetation/treelines, and along the river.

Figure 3.1: Bat survey locations map



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Notes

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Legend

 Survey Locations

 Survey area

Rev	Description	By	CB	Date



MAKING
COMPLEX
EASY

A TETRA TECH COMPANY

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Client Retirement Village Group

Project Thamesfield

Title Bat survey locations map

Status Draft	Drawn By OW	PM/Checked By EW
Project Number ECO02776	Scale @ A3 1:750	Date Created 01/09/23
Figure Number 3.1		Rev 04

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4 EVALUATION, MITIGATION AND ENHANCEMENT

- 4.1.1 A PBRA undertaken in September 2022 identified that sections of Thamesfield Retirement Village had varying potential to support roosting bats. The proposed development works would only affect part of B2 (Features H, I, J and J) and B3 (Feature K), therefore further bat emergence surveys were undertaken on these buildings/features. Feature I was no longer present and therefore not surveyed in June 2023.
- 4.1.2 During the third survey visit on 19th July 2023 a soprano pipistrelle emerged from B3, feature K. Bat droppings previously collected beneath Feature K confirmed a soprano pipistrelle roost.
- 4.1.3 Foraging and commuting activity were also recorded during the survey within the surrounding area with noctule, soprano, common and nathusius' pipistrelles recorded.

Bat Mitigation Licence

- 4.1.4 Redevelopment and renovation work proposed for B3, and the surrounds should be undertaken under a NE EPS Mitigation bat licence.
- 4.1.5 When a licence to undertake work or demolition on a building is required, an application form, method statement, work schedule and charge screening form will all need to be completed. There is also the need to provide a reasoned statement to show that the activity fits with the criteria for a mitigation licence and that there is no satisfactory alternative.
- 4.1.6 As the application is for a development, a master plan and habitat management and maintenance plan would be required.
- 4.1.7 All of these would be sent to Natural England who will determine whether to issue a licence within 30 working days.
- 4.1.8 Before the building is demolished, appropriate mitigation measures and alternative roosting opportunities would need to be created on site.
- 4.1.9 The building should be demolished when bats are least vulnerable, in September or October, as this avoids bat maternity and hibernation seasons.

Lighting

- 4.1.10 Any additional lighting to be installed as part of the proposed renovation works should be in line with Guidance Note 08/18 Bats and Artificial Lighting in the UK as follows:
- LED lighting should be used, and light levels should be kept as low as possible. Metal halide, fluorescent sources should not be used;
 - Lighting should be directed to where it is needed (away from vegetation and mature trees on site);
 - Only luminaires with an upward light ratio of 0% and with good optical control should be used, luminaires should always be mounted on the horizontal, i.e., no upward tilt; and
 - Light sources should emit minimal ultra-violet light and be of a warm white spectrum (ideally <2700 Kelvin).

Bat Boxes

- 4.1.11 It is recommended that the site is further enhanced for roosting bats through the incorporation of bat bricks within the design of the buildings and bat boxes on retained trees to mitigate the loss of the potential bat roosting sites and to provide enhancements.

REFERENCES

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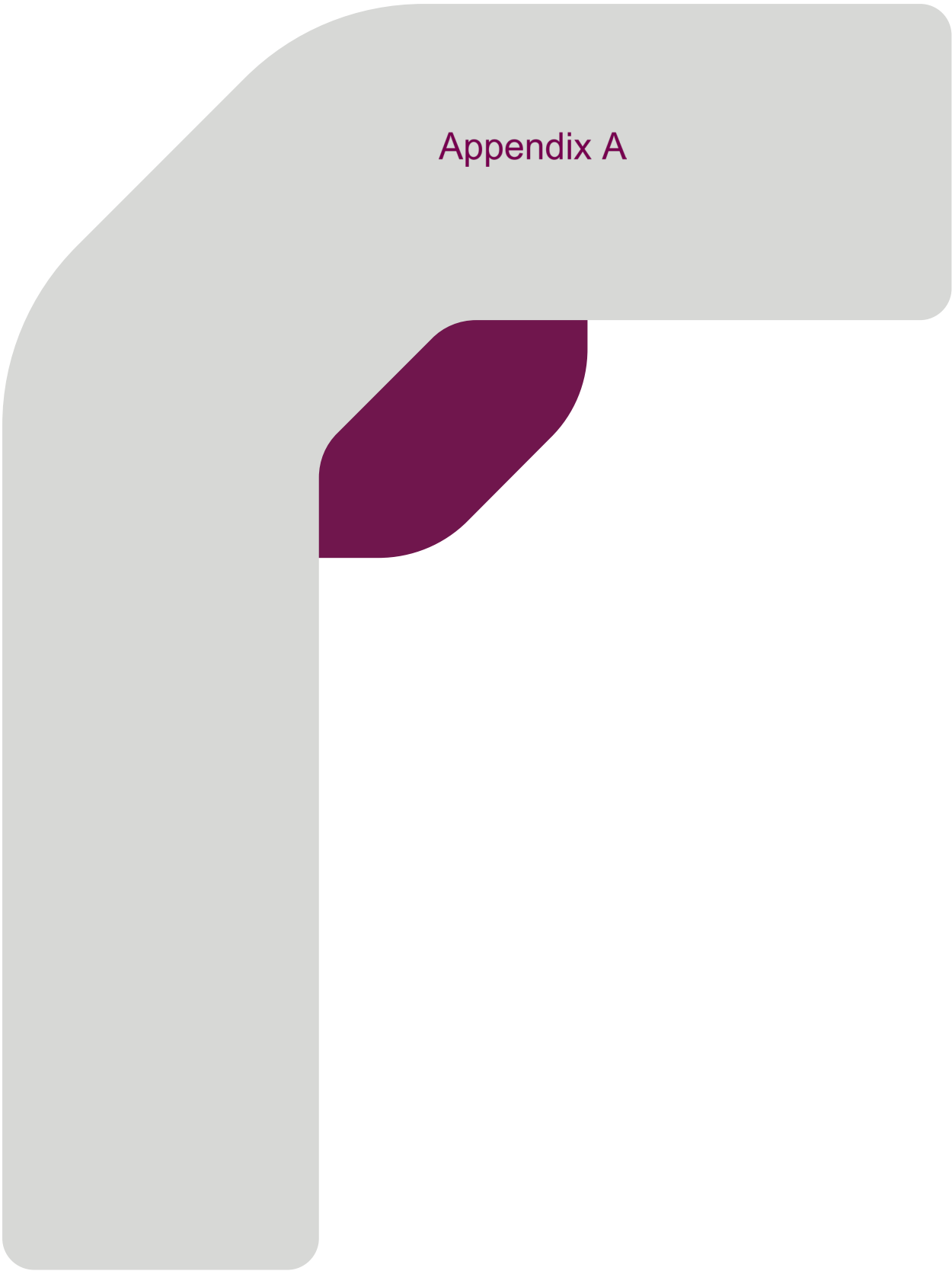
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A large, light gray, rounded rectangular shape with a diagonal cutout on the left side. Inside the cutout, there is a smaller, dark purple, rounded rectangular shape.

Appendix A

Appendix A: Bat Droppings Results



24 February 23

Re: Identification Results for Katy Thomas, RPS Consulting Services Ltd.

Job number 19345, received 10 February 2023

Sample labelled: ECO02776 B3

PCR amplification successful. DNA sequence:

ATGACAAACATTTCGAAAGTCCCATCCCCTAATCAAAATTATTAACAGCTCATTATTG
ACCTACCAGCTCCATCAAACATCTCAGCATGATGGAATTTGGATCCCTATTAGGC

Phylogenetic analysis identification: *Pipistrellus pygmaeus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

Professor Robin Allaby

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24 February 23

Re: Identification Results for Katy Thomas, RPS Consulting Services Ltd.

Job number 19346, received 10 February 2023

Sample labelled: ECO02776 B6

PCR amplification successful. DNA sequence:

ATGACAAACATTTCGAAAGTCCCATCCCCTAATCAAATTATTACAGCTCATTTCATTG
ACCTACCAGCTCCATCAAACATCTCAGCATGATGGAATTTTGGATCC

Phylogenetic analysis identification: *Pipistrellus pygmaeus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

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Appendix B: Camera Footage

19.07.2023 - Thamesfield Dusk – Camera 1

