

BAT PRESENCE/ABSENCE SURVEYS (PAS)

RIVIERA HOUSE, ST MARY'S, ISLES OF SCILLY



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Executive Summary

Overview

Two Presence/Absence Surveys (PAS) were initially undertaken on Riviera House. This was to provide an evidence base which meets Best Practice Guidance following the initial findings of the Preliminary Roost Assessment (PRA) report.

Following the confirmation of bats accessing a roost site within the property in the first PAS survey, a third survey targeting this location was undertaken in August 2024. This report includes the results of all three surveys.

Results

Two common pipistrelle bats were recorded entering a roosting location on the first PAS survey. The roost location is associated with gaps behind a fascia on the front of the property close to the junction with the adjacent dwelling. No emergence was recorded on the second or third PAS surveys. These results are consistent with a non-breeding, transient use by individual common pipistrelle bats.

The surveys generally recorded low activity levels of common pipistrelle bats foraging or commuting in the vicinity of the site, but not associated directly with the site itself.

Mitigation Strategy

A European Protected Species Mitigation Licence (EPSML) must be obtained before re-roofing works are undertaken. The works must then comply with the mitigation strategy outlined in the EPSML. This would include ecological oversight of roof removal on the relevant aspect; use of appropriate roofing membrane in the replacement roofing works (where applicable); and the restoration of the roosting feature at the completion of works.

It is recommended that the EPSML progresses via Site Registration under the Earned Recognition (ER) scheme as this pathway offers the benefits both of reduced cost from Natural England and a streamlined timeframe for approval. The standard EPSML application pathway would also be appropriate.

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1. Introduction

1.1. Background to Survey

The property is an end-terrace house known as Riviera House located on Lower Strand in Hugh Town on St Mary's in the Isles of Scilly.

The proposed schedule of works involve the replacement of the existing roof.

A Preliminary Roosting Assessment (PRA) was carried out in October 2023 - this assessment identified Moderate Potential for use by roosting bats.

The PRA report stated that further PAS surveys would be required to provide an evidence base sufficient to identify the status of the building with regards to bats, and inform any mitigation measures required to ensure legislative compliance. This PAS report provides the results of the recommended surveys. It should be read alongside the PRA report to provide a comprehensive assessment of the building with regards to roosting bats.

1.2. Survey Objectives

In accordance with the Best Practice Guidance¹ for a Moderate Potential building, the structure was subject to two PAS surveys with three surveyors positioned to observe those locations where potential access or roosting features were identified.

Following the confirmation of bats accessing a roost site within the property in the first PAS survey, a third survey (PAS 3) targeting this location was undertaken in August 2024 to fully characterise the use of the roost in accordance with Best Practise guidelines.

The overall objective is to provide a comprehensive ecological baseline upon which to assess the potential impact of the proposed re-roofing works to roosting bats.

¹ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition).
The Bat Conservation Trust, London

2. Survey Methodology

2.1. Surveyor Details

The surveys were led by Darren Hart. Darren has undertaken Professional Bat Licence training and is a Level 2 Licenced Bat Worker with experience in undertaking emergence, re-entry and activity surveys.

Additional surveyors are experienced in undertaking emergence and re-entry surveys and worked under the supervision of the Licenced Bat Worker.

2.2. Survey Methodology

The dusk emergence surveys were conducted following Best Practice methodology for bat surveys.

The two initial PAS surveys were carried out on the evenings of 15th May 2024 and 5th June 2024 – scheduled over three weeks apart in accordance with Best Practice guidance.

The final PAS was undertaken on 12th August 2024 approximately seven weeks after the 5th June 2024 survey.

The dusk emergence surveys commenced from approximately 15 minutes before sunset and continued until 90 minutes after sunset. The surveys were undertaken with regard for the appropriate weather conditions ($\geq 10^{\circ}\text{C}$ at sunset, no/light rain or wind).

Frequency division bat detectors were used to detect and record all bat passes. The surveyors recorded metadata including the time the pass occurred, the behaviour observed (foraging/commuting) and where possible, the species of bat observed. Results from the bat detector recordings were analysed using BatSound/Analook sonogram analysis computer software.

Night Vision Aids (NVAs) were used on all survey positions – these were three Nightfox Whisker infra-red cameras with additional infra-red torches. The footage from these NVAs was watched back to verify or update the survey results confirmed in the field.

2.3. Survey Validity and Update

Bats are transient in their use of habitats such as these, and apparently minor changes in condition or use of the building can affect suitability. However in the absence of significant changes in condition or building use, the nature and character of the site suggest that the results of the PAS surveys can be considered proportionately valid for a period of 12 months after the final survey was completed, until August 2025.

3. Results

3.1. Surveyor Positions

In order to ensure that the different elements of the buildings received a survey effort of a single bat survey for a Moderate Potential building (in line with the Best Practice Guidance), three surveyor positions were used. These are identified in Map 01 below.



Map 01 – showing surveyor positions around the buildings. See the PRA report for full details of the different structures indicated by the various colour washes.

3.2. PAS Survey 1

3.2.1. Survey Conditions

The first dusk survey was undertaken on 15th May 2024. The survey commenced at 8:50pm, approximately 15 minutes before sunset at 9:05pm. It was completed at 10:35pm.

The temperature throughout the survey was 13°C - the evening was dry and overcast with a light south-easterly breeze and 75% high cloud cover.

3.2.2. Survey Results - Emergence

The emergence survey identified two common pipistrelle bats entering a roosting site behind the fascia on the front of the property at the location identified in Photo 01 below. This entry behaviour during a dusk survey has been observed on previous surveys undertaken in Hugh Town.



Photo 01 – showing the location where 2x common pipistrelle bats were recorded entering a roosting site behind the fascia board.

The two bats entered the roosting opportunity beneath the fascia behind the gutter hopper towards the southern end of the western aspect of the property at 9:36 and 9:39pm respectively. The NV camera field of view (FOV) on this occasion did not cover this aspect at the junction between Riviera House and the adjoined property to the south; however the following factors in the absence of NV confirmation allow confidence in this assessment:

- There is a street light which illuminates the northern end of this aspect providing excellent visibility for the surveyor;
- The time of entry was only 30 minutes after sunset while there was still ambient light from the recently set sun along with the illumination from the street light;
- Two individual bats were confirmed to enter the location in swift succession; and were not observed to re-emerge from the location for the remainder of the survey;
- The echolocation recorded during the approach flight ceased upon the observed entry;
- The bats were not recorded appearing on the opposite side of the roof by the surveyor in position S3 (confirmed on the S3 NV), ruling out the residual potential of the bats flying up and over the roof rather than entering at the observed location;

- The location where the entry was observed corresponds with a clear potential roosting feature in the form of a gap behind the fascia.

No other emergence activity was recorded elsewhere on the property.

3.2.3. Survey Results - Activity

No species other than common pipistrelle bats were recorded during the survey.

Aside from the observed re-entry behaviour, there was little additional bat activity recorded in the vicinity of the building. The first bat which was observed re-entering the building by Surveyor S1 at 9:36pm was also recorded on the approach by surveyors S2 and S3 flying over the building east-west before turning south along the front of the property to enter the roost location.

The surveyor in position S1 also recorded brief common pipistrelle passes at 9:54pm and 9:56pm – the former of these was also recorded by surveyor in position S3. The last recording of a bat was at 10:01pm by Surveyor S3.

3.3. PAS Survey 2

3.3.1. Survey Conditions

The second dusk survey was undertaken on 5th June 2024. The survey commenced at 9:14pm, approximately 15 minutes before sunset at 9:29pm. It was completed at 10:59pm.

The temperature throughout the survey was 12°C - the evening was dry and overcast with a gentle westerly breezy and 100% high cloud cover.

3.3.2. Survey Results - Emergence

No emergence activity was recorded during this survey.

3.3.3. Survey Results - Activity

No species other than common pipistrelle bats were recorded during the survey.

The first bat pass was recorded by the surveyor in position S3 when a common pipistrelle was observed to fly over the property from north-south at 9:37pm. Further passes were recorded by the surveyors in positions S1 and S2 between 9:56pm and 10:38pm but these were intermittent and brief encounters associated with the environs of the property rather than the building itself.

3.4. PAS Survey 3

3.4.1. Survey Conditions

The final dusk survey was undertaken on 12th August 2024. The survey commenced at 8:33pm, approximately 15 minutes before sunset at 8:48pm. It was completed at 10:18pm.

The temperature at the beginning of the survey was 18°C falling to 17°C by the end - the evening was dry and calm with a gentle south-westerly breeze and 30% high cloud cover.

Only the survey position S1 was used to watch the aspect and feature where the emergence was confirmed on the initial PAS 1 survey.

3.4.2. Survey Results - Emergence

No emergence activity was recorded during this survey.

3.4.3. Survey Results - Activity

No species other than common pipistrelle bats were recorded during the survey.

The first bat pass was recorded by the surveyor in position S1 when a common pipistrelle was observed to fly across the front of the property at 9:15pm. A second bat was seen to fly over the roof of the property from east to west at 9:16pm with brief further foraging at 9:20pm. After this, no other bats were heard or seen until 10:11pm when a brief bat pass was recorded.

3.5. Limitations and Constraints

3.5.1. Seasonal Timing

The surveys were undertaken within the main active season in 2024 and each were spaced more than three weeks apart – this conforms with the recommended survey timings within the Good Practice Guidelines.

3.5.2. Survey Conditions

The weather conditions were optimal with no precipitation or other adverse conditions which might be expected to affect bat behaviour.

3.5.3. Visibility and Coverage

The surveys were comprehensive with regards to surveyor visibility.

3.5.4. NVA Footage

The NV camera FOV could not fully cover all aspects of the buildings due to the presence of intervening or obstructing features around surveyor position S3 in both surveys. However the coverage of the other side of this roof pitch by surveyor position S2; and inspection of the recorded bat activity by surveyor

position S3 allow the results to be confirmed with confidence in spite of this constraint.

The FOV of the camera in surveyor position S1 did not encompass the roost location point which is at the boundary of the property in PAS 1. This was rectified and the full span of the building as well as a portion of the adjacent property were included in the FOV during PAS 2. The final PAS 3 survey was targeted specifically at this aspect to provide further confidence in the results.

The positioning of the cameras was designed to maximise coverage; whilst also ensuring that comparison between different surveyor cameras would allow any missed emergence to be inferred for example through their absence on one camera and their presence on another indicating emergence within the intervening space.

4. Mitigation Strategy

4.1. Impact Assessment

The PAS surveys confirmed behaviour consistent with the following roosts:

- A transient non-breeding summer roost used by two common pipistrelle bats behind the fascia on the front of the property.

The re-roofing proposals, in the absence of mitigation, would result in the modification/destruction of the roost and the potential to disturb, kill or injure the roosting bats. This can be controlled through appropriate method of working which would be secured by an European Protected Species Mitigation Licence (EPSML).

4.2. Additional Survey Requirements

It is considered that the baseline data gathered and presented in this report is appropriate to support a planning application and an EPSML.

4.3. European Protected Species Mitigation Licence (EPSML)

4.3.1. Overview

The re-roofing works undertaken on the property must be completed under an EPSML which would need to be in place prior to works commencing. The works must then proceed in accordance with the requirements of the EPSML.

An EPSML is a derogation licence which allows an otherwise-unlawful act to be undertaken – in this case the modification of a bat roost and the disturbance of roosting bats. The method of working would ensure avoidance of impacts such as roost destruction or the killing/injuring of bats. The EPSML would include mitigation measures and other commitments which must be met in order for the licence to be valid.

The EPSML can be applied for either under the standard EPSML application process; or the streamlined Site Registration under the ER programme. It is recommended that the latter option is selected as this comes with a reduced cost and a shorter decision timeframe, typically 15 days after application.

Planning Permission must be secured prior to application for Natural England for the EPSML derogation.

Works must adhere to the methodology and measures outlined in the EPSML.

4.3.2. Mitigation Measures

The following conditions and caveats would be included within the EPSML and must be strictly adhered to during the works in order to ensure legislative

compliance. Please note this is not necessarily comprehensive. Additional minor constraints or requirements may be necessary in the final EPSML document.

- Works can proceed during the transitional or winter periods from mid-September to end-April inclusive;
- Prior to the commencement of licenced works, the Licenced Bat Worker would provide a Toolbox Talk to contractors to ensure they understand the locations where bats may be found; the methodology which would minimise the risk of harm to bats; and the protocol to follow if a bat is identified.
- Installation of a bat box in a suitable location to ensure that there is a place where any bats encountered during works can be safely placed. This should then be retained in perpetuity.
- Key elements of the works should be undertaken under a 'soft strip' methodology whereby the fascia boards are removed by hand, as well as tiles within 1m of the eaves (if required) under the ecological oversight of a Licensed Bat Worker. If bats are identified, they would be captured by hand and moved to a place of safety.
- Once the soft-strip has been completed, and the Licenced Bat Worker is satisfied that the roosting location has been fully explored and rendered unsuitable for bats, re-roofing works can proceed with distance supervision. These works should be completed as soon as possible to minimise the duration of time when bats would not have access to the roost.
- Following completion of the works, the roost would be restored in situ. This would involve the incorporation of a cavity 100mm wide and 25mm deep behind the fascia board to permit continued access for bats. This would be completed under the direction of the Licensed Bat Worker who would confirm and sign off the restored roosting feature at the end of works.
- Any replacement of woodwork in locations where bats may access should ensure that wood treatments are safe for bats – a list of approved treatments will be provided by the Licenced Bat Worker.
- If the soft-strip methodology identified current or future access to the roof itself; then a bitumen membrane or bat-safe breathable roofing membrane (BRM) must be specified rather than standard BRM which can cause entanglement and death to roosting bats as well as deterioration of the BRM resulting in poor material performance.

Appendix 1 – NVA Screenshots



Surveyor S1 – showing footage from the Nightfox Whisker at surveyor position S1. Note the artificial light on the LHS of the image which provides an elevated level of visibility for the surveyor watching this aspect. The roost site is in the location indicated with the arrow – this illustrative image is taken from the PAS2 survey – the FOV clipped this feature (at the junction between Riviera and the adjacent property) from the recording in PAS1.



Surveyor S2 – showing footage from the Nightfox Whisker on surveyor position S2. No potential access features were identified associated with the gable on the RHS of the image – it is also illuminated by the artificial light which provides the surveyor with excellent visibility without requiring IR and NVA; therefore this camera position was focussed on the potential features within the portion of the building on which the camera and IR is focussed.



Surveyor S3 – showing footage from the Nightfox Whisker on surveyor position S3. The small size of the courtyard restricts the FOV from covering the pitch of the roof on the RHS of the image; this constraint was addressed through positioning of surveyors (including indirect observation by surveyor S2) and careful review and cross-reference of results between surveyors.