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BAT PRESENCE/ABSENCE SURVEYS (PAS) PRELIMINARY RESULTS

THE DOWNS and LITTLE DOWNS, TRENOWETH, ST MARY'S, ISLES OF SCILLY

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Executive Summary

Overview
Three Presence/Absence Surveys (PAS) and corresponding static detector deployments are required to meet the evidence base required by the Best Practice Guidance on The Downs and Little Downs. This interim report presents the results of the first two PAS surveys and first two static detector deployments. The results of the final surveys would be required to ensure that this report meets the requirements to determine the Planning Application and to support an EPSML.
Results
Two common pipistrelle bats were recorded emerging from roosting locations around the soffits of the property on each of the first two PAS surveys. The static deployments did not identify any flight activity within the loft space itself, indicating that the roots are likely to be associated with the fascias and wall plate of the roof, rather than within the loft space itself. These results are consistent with a non-breeding summer roost used by a small number of common pipistrelle bats. The surveys generally recorded moderate activity levels of common pipistrelle bats foraging or commuting in the vicinity of the building.
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 around the eaves; use of appropriate roofing membrane in the replacement roofing works; and the restoration of the roosting feature at the completion of works. The inclusion of roof lights within the new design would necessitate the creation of dark, secure roosting features around the eaves to ensure that roost sites remain unlit and undisturbed. This strategy is presented based on the evidence base gathered to date – it is essential that this is reviewed and amended, if required, based on the results of the final surveys. For the avoidance of doubt, the current evidence baseline is not sufficient to support determination of planning in accordance with Circular 06/05 (ODPM, 2005).

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1. Introduction

1.1. Background to Survey

The property is a two-storey residential property with a hipped roof situated in a small conurbation known as Trenoweth in the north of St Mary's, Isles of Scilly. The property known as the Downs also has a self-contained holiday let within the structure known as Little Downs.

The proposed schedule of works involve the replacement of the roof covering including battens and tiles; and the installation of rooflights within the loft space.

A Preliminary Roosting Assessment (PRA) was carried out in February 2024 - this assessment identified High Potential for use by roosting bats. The Downs is recorded as a confirmed bat roost known to support up to 4 common pipistrelle bats established through PRA and PAS surveys completed in 2019.

The PRA report stated that further PAS surveys and corresponding static detector deployments within the loft space 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 interim results of the first two recommended surveys and outlines an interim mitigation strategy. 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 Guidance[1] for a High Potential building, the structure will be subject to three PAS surveys with surveyors positioned to observe those locations where potential access or roosting features were identified.

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 first two PAS surveys were carried out on the evenings of 24th May 2024 and 18th July 2024 – scheduled over three weeks apart in accordance with Best Practice guidance.

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 (≥10°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 until the next active season in May 2025.

3. Results

3.1. Surveyor Positions

In order to ensure that the survey was comprehensive with regards to coverage and vantage points, two surveyor positions (S1 – S2) with corresponding NVAs, and an additional unmanned NVA (NVA3) 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 24th May 2024. The survey commenced at 9:02pm, approximately 15 minutes before sunset at 9:17pm. It was completed at 10:47pm.

The temperature throughout the survey was 13°c - the evening was dry and calm with 20% high cloud cover.

3.2.2. Survey Results - Emergence

The emergence survey identified two common pipistrelle bats emerging from two separate roosting sites behind fascias on the northern and eastern aspects of the property at 9:35pm and 9:45pm. These locations are indicated in Photo 01 and 02 below.

Photo 01 – showing the location where 1x common pipistrelle bat was recorded emerging from a roosting location on the northern aspect of the property at 21:35.

Photo 02 – showing the location where 1x common pipistrelle bat was recorded emerging from a roosting location on the eastern aspect of the property at 21:46.

Two further bats were recorded emerging from the single-storey roof on the eastern aspect at 9:32pm. This structure would not be impacted by the proposals.

3.2.3. Survey Results - Activity

There were moderate levels of foraging activity from the time of the recorded emergences at 9:32pm until the end of the survey by both surveyors.

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

3.3. PAS Survey 2

3.3.1. Survey Conditions

The second dusk survey was undertaken on 18th July 2024. The survey commenced at 9:10pm, approximately 15 minutes before sunset at 9:25pm. It was completed at 10:55pm.

The temperature throughout the survey was 17oc - the evening was dry and still with 60% high cloud cover.

3.3.2. Survey Results - Emergence

The emergence survey identified two common pipistrelle bats emerging from two separate roosting sites behind fascias on the northern and eastern aspects of the property at 9:28pm and 9:46pm. These locations are indicated in Photo 03 and 04 below. The roost location on the northern aspect corresponds with the location confirmed in PAS1 – the location on the eastern aspect utilised a different feature closer to the southern corner of the property.

Photo 03 – showing the location where 1x common pipistrelle bat was recorded emerging from a roosting location on the eastern aspect of the property at 21:28.

Photo 04 – showing the location where 1x common pipistrelle bat was recorded emerging from a roosting location on the northern aspect of the property at 21:46.

No other emergence activity was recorded on this survey.

3.3.3. Survey Results - Activity

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

High levels of foraging activity were recorded by common pipistrelle bats around the eastern aspect of the building – the surveyor on the western aspect recorded regular but lower intensity foraging behaviour.

3.4. PAS Survey 3

This survey is scheduled for end-August 2024 and the results of this would be required in order to confirm the assessment of the roost and the proposed mitigation strategy.

3.5. Static Deployments

The static detectors were left in the loft space to remotely record any bat passes during the following times:

- 29th June – 11th July 2024 (12 nights);
- 18th July – 29th July 2024 (11 nights).

No bat echolocation was recorded during this time. This does not conclusively preclude the potential for bats to be roosting in the loft space itself, with access gained via confirmed features in the soffits, but does indicate no active flight within the void during the timeframes in which the static detector was deployed.

This would indicate that the sheltered void of the loft space itself does not perform a functional role in the suitability of the roost.

3.6. Limitations and Constraints

3.6.1. Seasonal Timing

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

3.6.2. Survey Conditions

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

3.6.3. Visibility and Coverage

The surveys were comprehensive with regards to surveyor visibility across those aspects of the building where roosting features were identified. The southern aspect of the property did not have a manned survey position but utilised an NVA for this reason.

3.6.4. NVA Footage

The NVA camera coverage of the property was approximately 90% with minor aspects outside of the Field of View (FOV) of the cameras. The cameras were strategically positioned so that any areas of the property not covered were those where no roosting opportunities were noted; or where the surveyors had excellent visibility.

The NVA3 camera was allowed to record remotely, as the front aspect of the property had very few potential roosting features; there was no recorded emergence on this aspect in the previous 2019 surveys; and the open view allowed a comprehensive survey of this aspect. This footage was watched back to confirm the absence of emergence results.

The emergence of bats from the flat-roof extension by surveyor S2 in PAS1 was not recorded as this was outside of the FOV of the NVA. This roof would not be impacted by the works and was therefore not the focus for the NVA monitoring.

4. Mitigation Strategy

4.1. Impact Assessment

The PAS surveys completed to date confirmed behaviour consistent with the following roosts:

- A non-breeding summer roost used by two common pipistrelle bats behind the fascias on the eastern and northern aspects of the property.

The results are consistent with those recorded in 2019 when 4x and 3x bats respectively were recorded emerging from the same features indicating broad continuity of use of the building over time.

The re-roofing proposals, in the absence of mitigation, would result in the modification/destruction of the roosts and the potential to disturb, kill or injure the roosting bats.

The installation of the roof lights, in the absence of mitigation, would modify the internal conditions of the loft space which could result in the modification or destruction of the roosts depending on the precise situation of the bats at the soffits/eaves.

These impacts can be controlled through an appropriate method of working which would be secured by a European Protected Species Mitigation Licence (EPSML).

4.2. Final Survey Requirements

The results and mitigation strategy outlined to date are preliminary based on the results of the first two PAS and static deployment surveys.

The results of the outstanding surveys would be required to confirm this assessment and mitigation strategy; and to provide an evidence base suitable to support determination of a planning application.

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/destruction 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 and the strategy is contingent on the results of the final surveys:

- 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 in the grounds of the property prior to works commencing in order to ensure that there is a place where any bats encountered during works can be safely placed. This should then be retained undisturbed 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 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 locations have been fully explored and rendered unsuitable for bats, re-roofing works can proceed with distance supervision. The roof restoration 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 retention/replacement of existing soffits, or the incorporation of a cavity 100mm wide and 25mm deep behind the soffits boards in the locations of confirmed access features 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.
- 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.
- The eaves of the loft space must be boxed in with ply/chipboard or similar to create sealed, dark voids at the edges of the loft space. These should create a triangular void with a minimum apex height of 30cm to ensure access to suitable dark niches for bats accessing roosting features via gaps behind fascias.

4.4. Adjacent Features

The confirmation of a roost within the flat-roof structure would not be directly impacted by the proposed works, but there is potential for indirect impacts arising from disturbance or obstruction from scaffolding.

The design of scaffolding installation must ensure that the flat roof building is not impacted, damaged or disturbed during the works.

4.5. Planning Conditions

It is recommended that the following requirements should be incorporated into appropriate Planning Conditions if the LPA are minded to approve the application:

- A compliance condition requiring that works proceed with regards to Mitigation Strategy outlined in **Chapter 4** of this report.

Natural England cannot issue an EPSML if any pre-commencement conditions related to protected species have not been discharged. Therefore the condition should be compliance rather than pre-commencement in order to ensure there is not an impediment to seeking the EPSML upon determination.