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PRELIMINARY ECOLOGICAL APPRAISAL & PRELIMINARY BAT ROOST ASSESSMENT OF:

PENLEE BOATHOUSE
PORTHCRESSA ROAD
ST MARY'S
TR21 0JL

Client: Mr & Mrs. T. Hicks

Our reference: BS14-2019

Report date: 11th March 2019

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Report peer reviewed: Darren Mason 14th March 2019

Report Authorised: Sarah Mason 14th March 2019

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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Contents

Non-Technical Summary

- On 11th March 2019, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of Penlee Boathouse, Porthcressa Road, Hugh Town, St Mary's, Isles of Scilly (BS14-2019), for which there is a proposal to raise the height of the roof by approximately 800mm and to introduce two pitched roof dormer windows – one to the east elevation and one to the west. This report outlines the findings of the PEA and PRA assessment and provides advice based upon the surveys' conclusions.
- During the PRA an external/ internal inspection of the building was undertaken (where accessible).
- No evidence of nesting birds was found in/on the property.
- No physical evidence of bats was found during the PRA and the characteristics of the building suggested a low roost potential.
- A number of features were found which have the potential to be used by roosting bats (see 3.5)
- The commuting and foraging habitat available from Penlee Boathouse is considered to be of moderate quality for bats (see 3.3)
- Not being able to view the entire roof of the east elevation was a survey constraint (see 5.1).
- The recommendations of this PEA and PRA together suggest that further surveys are required. One presence/absence survey should be carried out, either; one dusk emergence or one dawn re-entry survey, this must be carried out within the active bat season between May and September.
- **This report is not sufficient to accompany a planning application** as it recommends further surveys be carried out.

1.0 Introduction

1.1 Survey and reporting

This report details the results of a preliminary ecological appraisal and a preliminary bat roost assessment of Penlee Boathouse, Porthcressa Road, St Mary's, Isles of Scilly, TR21 0JL. The survey, carried out on the 11th March 2019, was undertaken in order to inform proposals to raise the height of the roof by approximately 800mm and to introduce two pitched roof dormer windows – one to the east elevation and one to the west.

1.2 The application site

The house is located off Porthcressa Road, St Mary's (National Grid Reference SV9048210487, Figure 1.). The application site comprises of a semi-detached two storey terraced town house with a slate tiled open gabled pitched roof (Photo 1). The front of the house is straight onto the road, but at the rear there is a

courtyard of medium size. The total area of the application site is approximately 128m^2 (red area, Figure 1) with the structure being 85m^2 of the total area.

1.3 Details of proposed works

It is proposed to raise the height of the roof by approximately 800mm and to introduce two pitched roof dormer windows – one to the East elevation and one to the West.

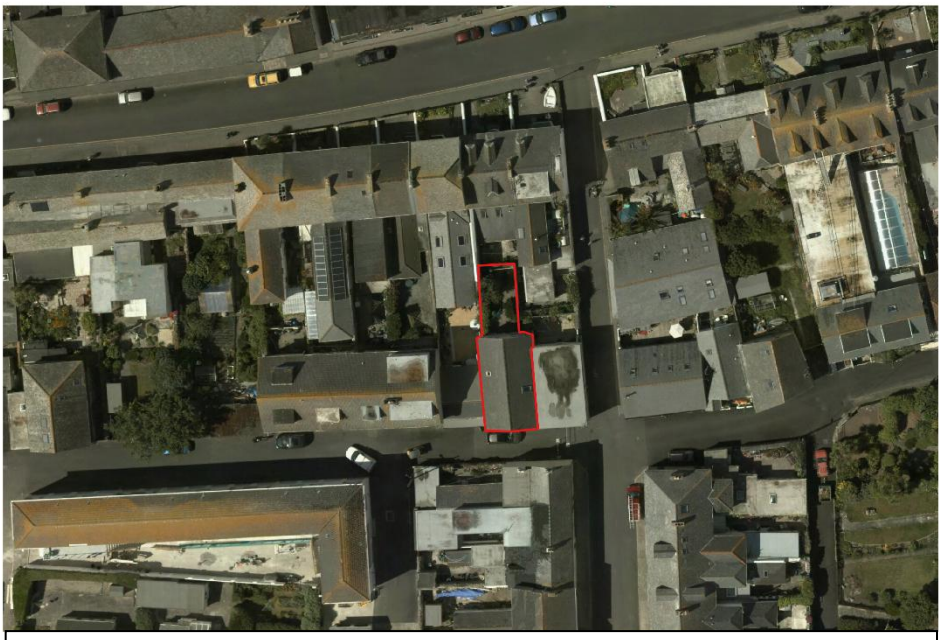

Figure 1. Site location plan

Photo 1. Penlee Boathouse south and west elevations.

2.0 Methodology

2.1 Preliminary Ecological Appraisal - Desk Study

A desk study data search was undertaken. This involved carrying out a review of the Local Records Centres (LRC) available records for bat species and publicly available datasets and citations of statutory designated sites of importance for nature conservation for sites within the zone of influence (ZOI) of the survey area (considered to be a maximum of 2km in this case). The desk study was also undertaken to identify habitats and features that are likely to be important for bats and assess their connectivity through the use of aerial photographs.

2.2 Preliminary Bat Roost Assessment

The Preliminary Bat Roost Assessment comprised a survey of the building for bats, signs of bats and features potentially suitable for use by roosting bats. An assessment of the suitability of the surrounding habitat for commuting and foraging bats is also included.

The survey consisted of a ground based inspection and a detailed search of the interior and exterior of the buildings (from ground level), looking for bats and/or evidence of bats including droppings (on walls and windowsills and in roof and loft spaces), rub or scratch marks, staining at potential roosts and exit holes, live or dead bats and features, such as raised or missing tiles, potentially suitable for use by roosting bats. Binoculars, a ladder and a high-powered torch were used as required.

2.3 Classification of building

The building was classified according its suitability for use by roosting bats. The classification was dependent on a number of factors including:

- Bats and/or signs of bats;
- External and internal features potentially suitable for use by roosting bats (e.g. raised or missing tiles, gaps behind fascia boards etc);
- Setting;
- Night time light levels;
- Disturbance levels;
- Proximity of suitable foraging habitat and commuting routes (e.g. ponds, streams, woodland, large gardens, hedgerows).

The categories used to classify buildings and the survey effort required to determine the presence or absence of bats (as per the Bat Conservation Trust's Bat Survey Guidelines[1], referred to by Natural England in their standing advice to planning officers) are described in Table 1.

2.4 Surveyor details

The survey was undertaken by Darren Hart BSc & Darren Mason BSc of the Isles of Scilly Wildlife Trust. Both have undertaken professional Bat Licence Training to permit them to undertake professional surveys. They are currently gathering sufficient 'working hours' to achieve a Natural England Class Level 1 licence.

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

Table 1 – Description of the categories used to classify a building's bat roost potential and the survey effort required to determine the likely presence or absence of bats

	Roost status	Description	Survey effort required to determine the likely presence or absence of bats
Bat Roost Potential	High	Numerous features potentially suitable for use by roosting bats, optimal or good quality bat foraging habitat nearby and good habitat connectivity. Alternatively, a building with fewer features potentially suitable for use by roosting bats and optimal foraging habitat nearby.	Three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August. Two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey.
	Moderate	More than a few features potentially suitable for use by roosting bats, good foraging habitat nearby and limited habitat connectivity. Alternatively, a building with a few features potentially suitable for use by roosting bats but optimal foraging habitat nearby.	Two or three dusk emergence and/or pre-dawn re-entry surveys between May and September (but only if features will be affected by the proposals).
	Low	Only a few features potentially suitable for use by roosting bats but good bat foraging habitat nearby. Alternatively, a building with more than a few features potentially suitable for use by roosting bats but sub-optimal foraging habitat nearby and limited habitat connectivity.	One or two dusk emergence and/or pre-dawn re-entry surveys between May and September (but only if features will be affected by the proposals).
	Negligible	Very few features potentially suitable for use by roosting bats and / or in an area (such as a densely populated urban area) which has limited habitat connectivity and poor foraging habitat.	No further surveys required.

3.0 Results

Primary Ecological Appraisal

3.1 Pre-existing information on bat species

The desk study showed that no species of bat have previously been recorded within the building. A data search of LRC records for bats revealed information on 4 species of bat recorded within the 2km ZOI of the site. Species conclusively identified were Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (Pipistrellus pygmaeus) and Brown Long-eared Bat (*Plecotus auritus*), both UK BAP priority species and the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Several bat roosts are known to exist within 2km of the proposed development, but only 1 known roost within 500m of the property.

3.2 Statutory and non-statutory sites

In addition, the desk study revealed the presence of the following statutory designated sites within the 2Km ZOI of the site:

i.) **Peninnis Head SSSI –** The SSSI designation is primarily for its maritime heathland, maritime grassland and scrub habitats together with populations of a number of rare plant and lichen species, in addition to its significant quaternary geomorphology.

ii.) **Porthloo SSSI –** The SSSI designation of Porthloo is for its geology, particularly for the Quaternary sediments in the cliffs that show changes in the climates and environments of the Quaternary period.

iii.) **Lower Moors SSSI –** The SSSI is a topogenous mire that has a range of wetland habitats supporting a diverse range of wetland wildflower species, including the Nationally Scarce Tubular Water-dropwort (*Oenanthe fistulosa*). The site also holds locally important populations of Royal Fern (*Osmunda reglis*) and Southern Marsh Orchid (*Dactylhoriza praetermissa*) and is particularly important feeding for passage and wintering birds including Corncrake (*Crex crex*) and Spotted Crake (*Porzana porzana*).

iv.) **Higher Moors & Porth Hellick Pool SSSI –** A topogenous mire designated for several rare and notable plant species including; Bog pimpernel (*Anagallis tenella*), Star Sedge (*Carex echinata*) and Marsh St John's-wort (*Hypericum elodes*).

3.3 Habitats surrounding the application site

Penlee Boathouse lies within the main conurbation of Hugh Town within the Built-up Areas Boundaries[2] (2011) published by the Office for National Statistics (Geography). South of the property is Porthcressa, a sandy beach which provides a foraging opportunity particularly for Common Pipistrelle (Pipistrellus pipistrellus), as it has been shown that this species will often exploit coastal habitats, including the strandline along beaches[3]. To the east are larger properties with gardens containing numerous shrubs and trees, which back onto Buzza Hill, an area of open grassland and scrub. Porthcressa allotments with their mature hedgerows and cultivated plots are immediately south of Buzza Hill. To the east there is good connectivity with private gardens, mature hedgerows and mature trees all the way to the large riparian habitat of Lower Moors SSSI and the surrounding small fields of cattle pasture. It has been shown that bats use tree lines, hedgerows and other linear features for both commuting and foraging[4,8]. Soprano pipistrelles (Pipistrellus pygmaeus) are known to preferentially forage in riparian habitats, over water and in adjacent riparian woodland[4,5,6]. Common pipistrelle (Pipistrellus pipistrellus), however, has been recorded foraging over a wider range of habitats, including riparian, woodland and cattle pasture[4,5,6]. There is connectivity to the woodland and open fields on the Garrison to the west, all be it limited. The commuting and foraging habitat available from Penlee Boathouse is considered to be of a moderate quality for bats.

3.4 Habitats within the application site

Penlee Boathouse has a medium sized walled courtyard to the rear (north elevation) which is having paving laid. The rest is gravel and dirt (photo2). There is a small amount of Ivy (*Hedera hibernica*) on one part of the wall and some potted shrubs. The front of the property is straight onto the road.

2 Citation: COMMISSION REGULATION (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services

Photo 2. – walled courtyard to the rear.

3.5 External

Penlee Boathouse is a semi-detached two storey terraced town house with a slate tiled open gable-ended pitched roof of approximately 45^0. The house is of cavity block construction with a smooth-rendered finish. The guttering, windows and external doors throughout are uPVC with the fascia, soffit and barge boards appearing to be wooden.

The house has a limited number of features potentially suitable for roosting bats, including:

- On the north elevation towards the north east corner there is gapping behind the barge board/ soffit (photo 3).
- On the north elevation towards the apex of the roof there is gapping behind the soffit/ barge board (photo 4).
- On the east elevation there is gapping under one of the central ridge tiles (photo 5).
- At the north east corner where the property ties into the neighbours property, there is gapping behind the flashing (photo 6).
- On the western elevation there are holes in the soffit where the vent casing is missing (photo 7).
- On the south elevation there is gapping behind the bargeboard at the apex of the gable end (photo 8).

Photo 3.

Photo 4.

Photo 5.

Photo 6.

Photo 7.

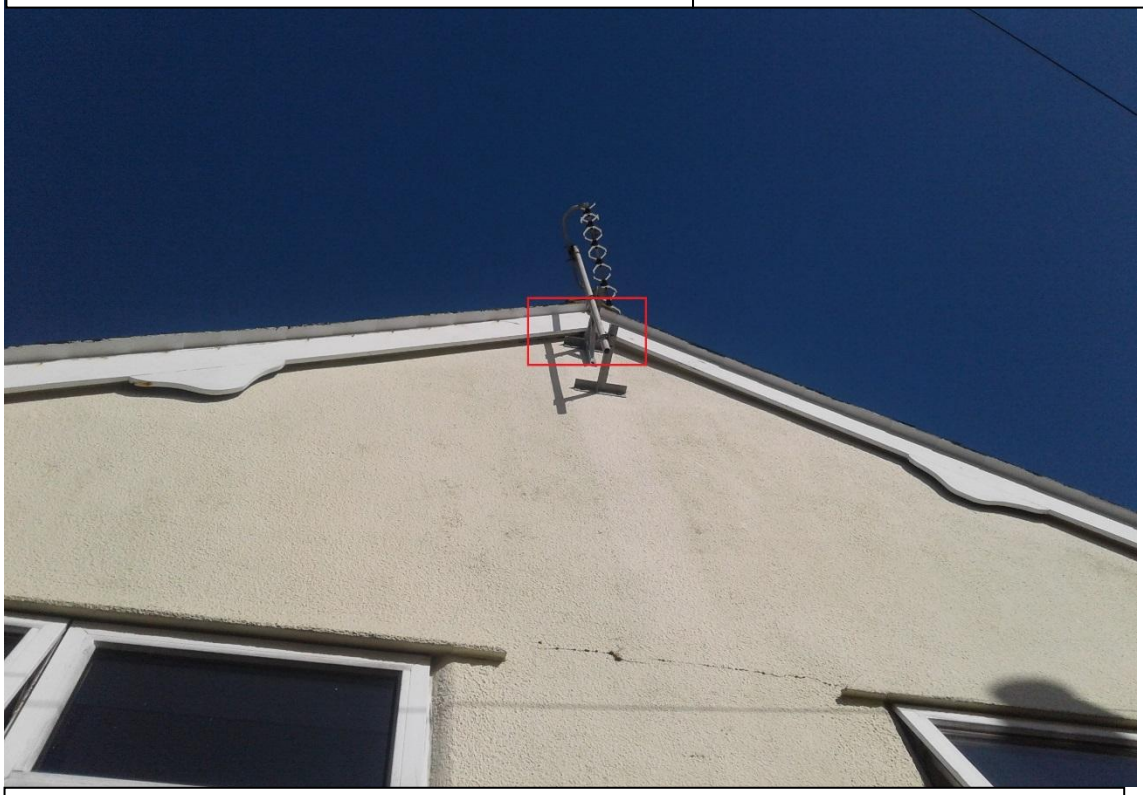

Photo 8.

3.6 Internal

Penlee Boathouse has one main loft space (photo 9). The roof is non-trussed, but has collar beams, with queen posts which the purlins sit on. The roof is lined with the original fibre/felt which is in good condition. The loft is part boarded (centrally). The loft is partially insulated. Inspection of the top of the water tank and the boxes in the loft space revealed no evidence of bat droppings. Inspection of the insulation also revealed no evidence of bat droppings. Inspection of the gable ends of the roof revealed a lot of cobwebs and the winged remains of invertebrates but no bat sign (photo 10).

With the lights off the only light that you could see was coming through the vents towards the north of the east elevation, which wouldn't permit access into the loft space by bat.

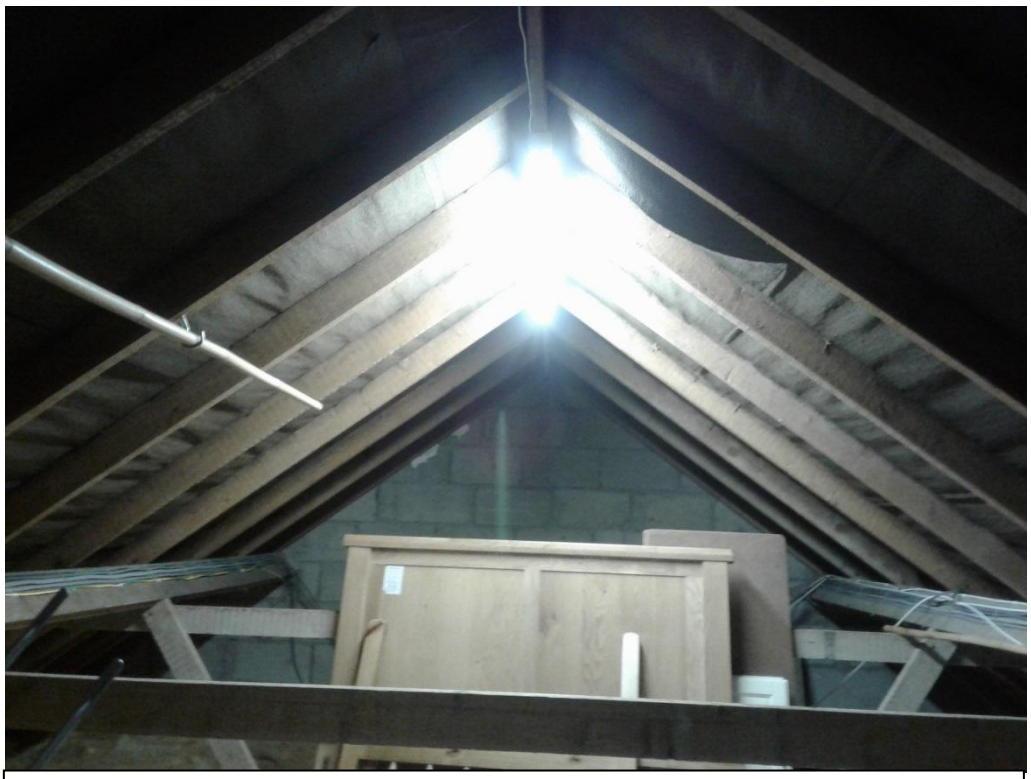

Photo 9.

Photo 10.

4.0 Assessment and recommendations

4.1 Protected Sites

The proposed development falls into the SSSI Impact Risk Zones of Porthloo, Peninnis Head Lower and Higher Moors SSSI respectively. Impact zones are used in the assessment of planning applications for likely impacts on SSSI's, Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar Sites (England). However, the impact in these zones is for large-scale residential developments and therefore the site is not likely to impact on the surrounding SSSIs.

4.2 Nesting Birds

All wild birds are protected under the Wildlife & Countryside Act 1981 (as amended). Section 1 of this Act makes it an offence to kill, injure or take away any wild bird, or intentionally to take, damage or destroy the nest of any wild bird while that nest is in use or being built. During the survey no evidence of nesting birds was found. If breeding birds are found during any stage of the works, then all work must stop until the last bird has fledged and left the structure and the structure is no longer being used, so as not to contravene the Wildlife & Countryside Act 1981 (as amended).

5.0 Assessment and recommendations - bats

5.1 Survey constraints

The survey was undertaken at a time of year suitable for undertaking preliminary bat roost assessments. However, not all areas of the exterior were viewable, in particular sections of the east elevation of the roof and the valley between the proposed development and the adjoining neighbour's property.

These limitations have been taken into consideration in the assessment and recommendations given below.

5.2 Further survey requirements

The value of the house for bats is considered to be 'low' (see Table 1). This assessment is based on the occurrence of the following features within or immediately adjacent to the site:

- A limited number of potential opportunistic roost features for a small number of bats.
- Good foraging areas for a generalist species of bat, particularly further to the east.
- Penlee Boathouse lies within the foraging distance of Lower Moors SSSI – a riparian habitat known to be used by species such as Soprano Pipistrelle[4] and Nathusius Pipistrelle[7].
- The roof within the loft space is lined with the original felt which is not hazardous to bats.
- Being unable to see the entire roof and the valley of the east elevation due to the neighbouring flat-rooved property obscuring any real or potential roosting features.

Therefore, to confirm whether or not the house hosts roosting bats, further survey visits (see section 5.3 below) would need to be undertaken during the bat active season.

5.3 Presence/absence surveys

The Bat Conservation Trust's Bat Survey Guidelines1 (referred to by Natural England in their advice to planning officers) state that buildings with 'low' bat suitability require one dusk emergence or one dawn re-entry survey between May and September.

The surveys should take place in the period from the 1st May to mid - September and in optimum weather conditions, in order to maximise the likelihood of recording bats, with dusk air temperatures exceeding 10^0C and not rain or strong wind.

Dusk emergence surveys should commence 15 minutes before sunset and continue for up to 2 hours after sunset.

Sufficient surveyors should be used on each survey so that all aspects of the building can be viewed at one time, therefore the area should be adequately surveyed by two surveyors. Surveyors should be positioned no more than 50m away from the buildings with an awareness of the likely exit/access points and potential roost locations. Each surveyor should be equipped with a bat detector and recording equipment and should count and note bats and their activity in a defined area.

If no roosts are found during the presence or likely absence survey, then no further surveys would be required.

5.4 Mitigation

In order to comply with planning policy and wildlife legislation (both domestic and European) it will be necessary to ensure that following the development the "favourable conservation status" of bats will be maintained. This means that, where a roost will be lost, appropriate mitigation needs to be provided.

If roosts are found a detailed roost characterisation survey would be required to establish how bats use the roost, the intensity of use and what features and characteristics of the roost and the surroundings are important. The information gained would allow an accurate assessment of the potential impacts of the development on bats and inform the requirement of a European Protected Species Mitigation licence, to be considered and issued by Natural England prior to the works commencing.

If roosts are found, then a data search will be required to support the European Protected Species Mitigation licence if an application is required. Information should be obtained in relation to bat roost sites or any sites of nature conservation importance designated for their bat interest within or near to the proposed development site. When requesting information, a minimum search radius of 2km from the site should be applied.

6.0 Summary

Penlee Boathouse has a limited number of potential opportunistic roost features for a small number of bats and is located close to good foraging areas for a generalist species of bat and is within the foraging distance of Lower Moors SSSI – a riparian habitat that could readily be utilised by Soprano Pipistrelle a UK BAP priority species and the rare Nathusius Pipistrelle.

The value of the house for bats is considered to be 'low'. Therefore to confirm whether or not the house hosts roosting bats, further survey visits would need to be undertaken during the bat active season.

The Bat Conservation Trust's Bat Survey Guidelines state that buildings with 'low' bat suitability require one dusk emergence or one dawn re-entry survey between May and September. If bats are found in the structure, the status of the roost(s) will then need to be identified. Further surveys would then be required to inform a mitigation strategy which would need to be implemented.

If no roosts are found during the presence or likely absence survey, then no further surveys would be required.

7.0 Bibliography

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