Isles of Scilly Wildlife Trust
Trenoweth, St Mary's, Isles of Scilly, TR21 0NS
Tel: 01720 422153
darrenhart@ios-wildlifetrust.org.uk
www.ios-wildlifetrust.org.uk

PRELIMINARY ECOLOGICAL APPRAISAL & PRELIMINARY BAT ROOST ASSESSMENT OF:

2 MATTHEWS FIELD
CHURCH ROAD
HUGH TOWN
ST MARY'S
TR21 0NA

Client: Carmen Stevens

Our reference: BS2-2018

Report date: 8th October 2018

Author: Darren Hart BSc (Hons)

Report peer reviewed: Darren Mason

Report Authorised: Sarah Mason

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

This page is intentionally blank

Contents

Non-Technical Summary

- On 5th October 2018, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of 2 Matthews Field, Church Road, Hugh Town, St Mary's, Isles of Scilly (BS2-2018), for which there is a proposal for a first floor extension over an existing ground floor fibre-glass flat roof by means of altering the pitch of the east elevation and adding a dormer. The west elevation of roof is to remain the same pitch with the addition of 2 roof-lights. 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.
- The loft was extensively searched where droppings where found on a beam and on a board. Analysis revealed that the shape and size of the droppings were similar to a pipistrelle species of bat, but could not be conclusively proved.
- The proposed development has several potential roost sites for a small number of potential opportunistic bats, in particular crevice-dwelling bats (such as Common or Soprano Pipistrelle).
- The application site is located in optimal foraging habitat for bats very locally, with good habitat connectivity to the east and the large wetland of Lower Moors SSSI.
- The bat roost potential of the site is considered to be 'moderate.' Therefore, to ascertain the likely presence or absence of bats a **further two survey visits** during the bat active season would need to be undertaken.
- One dusk emergence and a separate dawn re-entry survey to be carried out between mid-May and September, will need to be undertaken and if bats are found to be present, a mitigation strategy will need to be implemented.

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 2 Matthews Field, Church Road, Hugh Town, St Mary's. The survey, carried out on the 5th October 2018, was undertaken in order to inform proposals to the extension of the first floor area over the existing ground floor flat roof by means of altering the pitch of the east elevation of the roof and adding dormer. The west elevation of the roof is to remain the same pitch with the addition of 2 no. roof-lights. (Amended Plans)

1.2 The application site

The house is located off Church Road, St Mary's (National Grid Reference SV9078810464, Figure 1.). The application site comprises of a chalet style semi-detached house with a flat roofed extension to the rear (Photo 2), with a pitched roofed porch to the front (Photo 1). The total area of the application site is approximately 580m^2 (red area, Figure 1).

1.3 Details of proposed works

Extension of first floor area over existing ground floor flat roof by means of altering the pitch of the east elevation of the roof and adding a dormer. The west elevation of roof is to remain the same pitch with the addition of two roof-lights.

Figure 1. Site location plan

Photo 1. West elevation of 2 Matthews Field

Photo 2. East elevation of 2 Matthews Field

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, and an assessment of the surrounding habitat in terms of its suitability for commuting and foraging bats.

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 also 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 and 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.

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.

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

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*), Brown Long-eared Bat (*Plecotus auritus*) and Nathusius pipistrelle (*Pipistrellus nathusii*). Nine bat roosts are known to exist within 2km of the proposed development, three of which are within 1km.

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

2 Matthews Field lies within the Built-up Areas Boundaries[2] (2011) published by the Office for National Statistics (Geography). Immediately to the south west of the property is a small industrial area that holds the power-station for St Mary's, which is now only used in times of emergency. Further to the west lies the main conurbation of Hugh Town. To the south west of the property lies Buzza Hill, an area of open grassland and scrub and Porthcressa allotments with their mature hedgerows and cultivated plots. To the north is the old school site at Carn Thomas and also the church, which still has open field areas bounded primarily by Elm copse. The application site is therefore located in optimal foraging habitat for bats very locally with good habitat connectivity to the east and the large wetland of Lower Moors SSSI.

3.4 Habitats within the application site

2 Matthews Field is a semi-detached property that has large well maintained lawns in both the front and rear gardens. There's a well maintained hedgerow of predominantly Pittosporum (*Pittosporum crassifolium*) running the full length of the property's southern boundary. In the rear garden there are a few mature shrubs including Aoenium (*Aoenium cuneatum*), Bear's-breech (*Acanthus mollis*), Honeysuckle (*Lonicera periclymenum*), Ginger Lily (*Hedychium sp.*), Castor-oil plant (*Ricinus comminis*), Echium (*Echium pininana*) and Giant Herb-Robert (*Geranium Maderense*) amongst others. In the front garden at the western boundary there are mature Pampas grass (*Cortaderia selloana*). Along the path and in the borders in front of the house (western aspect) there are Cape daisy (*Osteopermum ecklonis*), Verbena sp., Hydrangea (*Hydrangea macrophylla*), African Lily (*Agapanthus praecox ssp.*) and an Agave sp. amongst others.

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

Primary Roost Assessment

3.5 External

2 Matthews Field is a double storey semi-detached chalet style house, with two flat roof extensions at the rear and a pitched roofed porch at the front. The house is finished with a blue render apart from the gable end of the porch which has a small area of UPVC cladding (see photo 1). The house sits towards the top of Church Road and is fully exposed to the weather from most directions. The roof of the main building is open gable ended with an equal pitch of approximately 50^0. The main roof and that of the porch is laid with fibre cement tiles capped with rounded clay ridge tiles. The two extensions have flat fibre glass roofs.

2 Matthews Field has several potential roost sites for a small number of potential opportunistic bats, in particular crevice-dwelling bats (such as Common or Soprano Pipistrelle), these include:

- At the northern gable end where the roof terminates and ties into the neighbouring property there is a gap under the flashing and soffit (see photo 1).
- At the north-western corner there is a gap behind the soffit junction (see photo 2).
- Where the cable for the artificial light, at the north-western corner, runs behind the soffit, there is a gap (see photo 3).
- There is a gap underneath the roof tiles overhanging the valley between the porch and the main roof (see photo 4a & 4b). Also gap under final ridge tile of southern aspect of porch (see photo 4b).
- There are gaps under two lifted tiles around an area of new tiles on the main roof, where the new tiles tie into the old (see photo 5).
- There is a gap under the terminal ridge tile, where the mortar is missing, on the southern gable end (see photo 6.)
- There are gaps behind the fascias on the eastern aspect of the flat roofed extension towards the south eastern corner (see photo 7).
- A void has been created where the battens do not meet at the north east corner (see photo 8) of the flat roofed extension.
- There is a gap under the flashing where the neighbours roof ties into eastern aspect of main roof (see photo 9).

Photo 1. Gap in flashing and under soffit

Photo 2. Gap at North western corner

Photo 3. Gap behind the soffit where the cable runs,

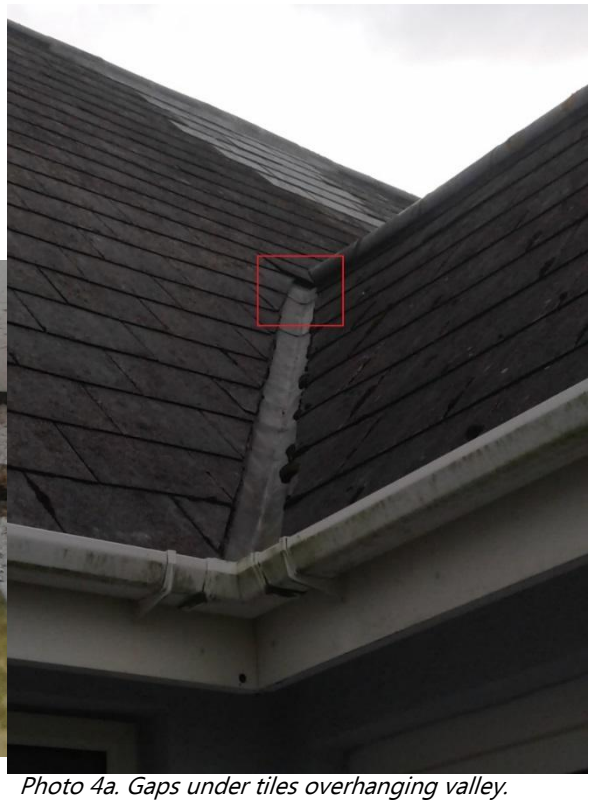

Photo 4a. Gaps under tiles overhanging valley.

Photo 4b. Gaps under tiles overhanging valley and under final ridge tile.

Photo 5. Raised roof tiles on main roof (western aspect)

Photo 6. Gap under the ridge tile

Photo 7. Gaps behind fascias

Photo 8. Gap between battens

Photo 9. Gap in flashing

3.6 Internal

2 Matthews Field has one main loft space encompassing the pitched roof space only. The roof is a timber closed coupled roof (see photo 10). The roof is still lined with the original fibre/felt which has many tears in it. The loft was sparsely boarded, but access was gained across the beams. The loft had insulation between the beams but not the rafters and there were a lot of thick cobwebs with accumulated dust. The loft was extensively searched and mammal droppings where found on a beam and board near the loft hatch entrance (see photo 11a & 11b).

Photo 10. Loft space showing wooden rafters.

Photo 11a. Mammal dropping.

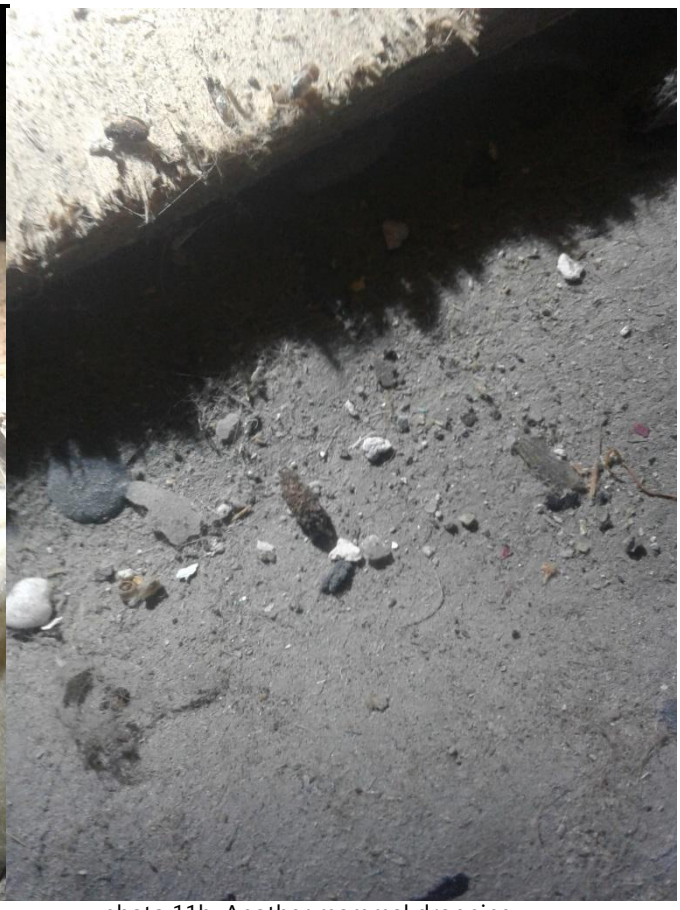

photo 11b. Another mammal dropping.

4. Assessment and recommendations (excluding bats)

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 and Countryside Act 1981 (as amended). Section 1 of this Act makes it an offence to kill, injure or take 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 this survey, no evidence was found of nests, or breeding birds. However, if works on the roof(s) are to commence between the months of March and August inclusive, then the site would need to be checked first for nesting birds and, if any nests are found, works that would disturb the nest must be postponed until all young have fledged the nest and it is no longer in use.

5. Assessment and recommendations (bats)

5.1 Survey constraints

The survey was undertaken at a time of year suitable for undertaking preliminary bat roost assessments. A number of the potential roost features were unable to be inspected due to inaccessibility. 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 'medium' (see Table 1). This assessment is based on the occurrence of the following features within or immediately adjacent to the site:

- A number of potential opportunistic roost sites for a small number of bats
- A garden with limited foraging opportunities, but good habitat connectivity to foraging areas, particularly further to the north and east.
- Matthews Field lies within the foraging distance of Lower Moors SSSI – a riparian habitat known to be used by species such as Soprano Pipistrelle[3].
- The roof within the loft space is still lined with the original fibre/felt.

- The presence of small mammal droppings which are similar in size and shape to a pipistrelle species of bat.
- Several of the potential roost features that were unable to be inspected would be directly affected by the works, these being; The gaps under two lifted tiles, around an area of new tiles on main roof, where the new tiles tie into the old (see photo 5) would be compromised by the installation of the roof-lights; the gap under the terminal ridge tile, where the mortar is missing, on the southern gable end (see photo 6) would be compromised by the proposed roof works and eaves extension and the gap under the flashing where the neighbours roof ties into the eastern aspect of the main roof (see photo 9) would also be compromised by the elevation of the roof on the eastern aspect.

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 Guidelines[1] (referred to by Natural England in their advice to planning officers) state that buildings with 'medium' bat suitability require one dusk emergence and 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 surveys, 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. Summary

2 Matthews Field has several potential roost sites for a small number of bats, in particular crevice-dwelling bats (such as Common or Soprano Pipistrelle). To assess whether bats roost in the building, two surveys are required; one dusk survey and one separate dawn survey should be carried out between mid-May and mid-September. If bats are found to be roosting in the dwelling then the status of the roost(s) will need to be identified. Further surveys, will then be required to inform a mitigation strategy which would need to be implemented.

Other than bats, if the recommendations given in this report regarding nesting birds are adhered to, there should be no further ecological constraints to the proposals.

---

3. Nicholls, B. & Racey, P.A. (2006). Contrasting home-range size and spatial partitioning in cryptic and sympatric pipistrelle bats. Behav. Ecol Sociobiol 61: p131-142