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PRELIMINARY ECOLOGICAL APPRAISAL & PRIMARY BAT ROOST ASSESSMENT OF:

THE WENDY HOUSE
McFARLANDS DOWN
ST MARY'S
ISLES OF SCILLY
TR21 0NS

Client: Mr Clive Sibley

Our reference: BS3-2018

Report date: 15th August 2018

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Report peer reviewed: Darren Hart; 17th August

Report signed off: Sarah Mason 17th August

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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1.0 Introduction

Survey and reporting

This report details the results of a primary ecological appraisal and a preliminary bat roost assessment of The Wendy House (Salt Whistle), McFarlands Down, St Mary's, Isles of Scilly TR21 0NS. The survey, carried out on the 15th August 2018, was undertaken in order to inform proposals for a rear and front single-storey extension, a change of roof style to the garage from flat to mono-pitch and a proposed dormer window extension to the 1st floor (north elevation).

The application site

The house is located at McFarlands Down, St Mary's (National Grid Reference SV9125012315, Figure 1). The application site is comprised of a detached dormer dwelling, with adjoining garage (Photos 1 & 2). The footprint of the main dwelling is approximately 170m² (including the garage) with the sites total footprint (including garden) approximately 645m² (red area, Figure 1).

Details of proposed works

It is proposed to create a single-storey rear and front extension, with a change of roof style to the garage from flat to mono-pitch and provide a dormer window extension to the 1st floor (north elevation).



Figure 1. Location of the Wendy House



Photo 1. East elevation of the Wendy House



Photo 2. West elevation of the Wendy House

2.0 Methodology

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.

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 building (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.

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 Guidelines¹, referred to by Natural England in their standing advice to planning officers) are described in Table 1.

Surveyor details

The survey was undertaken by Darren Mason BSc and Darren Hart BSc of the Isles of Scilly Wildlife Trust. Both staff members have undertaken professional Bat Licence Training to permit them to undertake professional surveys. They are both 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

Bat Roost Potential	Roost status	Description	Survey effort required to determine the likely presence or absence of bats
	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

3.1.1 Pre-existing information on bat species

The desk study showed that no species of bat have previously been recorded within the building. But, a data search of LRC records for bats revealed information on 2 species of bat recorded within the 2km ZOI of the site. The species conclusively identified were Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*).

3.1.2 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. **Watermill Cove SSSI** – Lying 875m due east of the Wendy House, Watermill Cove SSSI is designated for its cliff exposures of Quaternary sediments, that clearly show the sequence of changes in the climate and environment during the Quaternary period.
- ii. **Porthloo SSSI** – Situated 1.1km south-west of the Wendy House, Porthloo SSSI is designated 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** – 1.5km due south of the Wendy House, this SSSI a topogenous mire 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 regalis*) and Southern Marsh Orchid (*Dactylorhiza 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** – 1.5km to the south-east of the Wendy House is Higher Moors and Porth Hellick Pool SSSI. A topogenous mire that has a range of wetland habitats, but, is designated primarily for several rare and notable plant species including; Bog pimpernel (*Anagallis tenella*), Star Sedge (*Carex echinata*) and Marsh St John's-wort (*Hypericum elodes*).

3.1.3 Habitats surrounding the application site

The Wendy House (Salt Whistle) is situated towards the northern tip of St Mary's and is set centrally within a small linear development of detached dwellings at McFarlands Down. All the houses within the development are bounded by hedgerows, some with mature trees. The land immediately to the west is comprised of a very large, open field of semi-natural grassland, which backs onto open, conservation-grazed coastal headlands, which also extend to the south-west. Immediately to the north lies the coastline of St Mary's, consisting of relatively rocky beaches and sparsely vegetated very low-lying cliffs. Immediately to the east and backing onto the rear gardens of the houses opposite the Wendy House is a small shelterbelt consisting primarily of Monterey Pine (*Pinus radiata*), which links into the surrounding farmland. Here and continuing further south and east the habitat is well connected with many small fields bounded by hedgerows of Pittosporum (*Pittosporum tenuifolium*), small copses of English Elm (*Ulmus procera*), or small country lanes bounded by mature hedgerows. This habitat connectivity to the south and east is continuous for at least 2km, reaching as far as both wetland SSSIs.

3.1.4 Habitats within the application site

The Wendy house is bounded by well maintained hedgerows of Pittosporum to the north and Coprosma (*Coprosma repens*) to the south. The rear of the garden is open and backs on to a large field of semi-natural grassland. The rear of the garden is split into thirds; one third lawn, a third to patio and the final third to decking. Around the edge of the lawn there are individual plants of Agapanthus (*Agapanthus africanus*) and Castor oil plant (*Ricinus communis*).

The front garden is split fifty-fifty between a gravel drive and a small lawn area. At the front of the garden is a small granite dry-stone wall with one small individual Pittosporum shrub. Climbing over the wall is the succulent Pale Dewplant (*Drosanthemum floribundum*). The front garden also has the occasional shrub including Agapanthus, Hydrangea (*Hydrangea macrophylla*), Quince (*Cydonia oblonga*) and Stinking Iris (*Iris foetidissima*).

Primary Roost Assessment

3.2.1 External

The Wendy House is a detached two storey, chalet style house, with open gable ends, with a single-storey extension on its eastern aspect. Both roofs are laid with slate, capped with what appears to be concrete ridge tiles and have a north/south aspect, with a pitch of approximately 30°. On the southern roof of the main building there are three velux windows. On the northern roof of the main building there is a single velux. There is also an attached single-storey garage and utility room with a flat, fibre-glass roof to the north. The whole of the house is rendered, the fascias, soffit boards, windows and doors are wood and the guttering is UPVC. There is also a single skin, ship lap shed adjacent to garage.

The Wendy House has a limited number of features potentially suitable for roosting bats including:

- Large missing piece of soffit board on the northern aspect of the single storey extension (see photo 3).
- Small hole in soffit board on the southern aspect of the single storey extension (see photo 4.)
- 4 vents in southern aspect soffit board, along its full length (see photos 5 and 5a)
- Gap in fascia and soffit board of northern aspect where western aspect of garage roof joins the building (see photos 6 and 6a).



Photo 3. Piece of soffit missing in north aspect of single-storey extension



Photo 4. Small hole in soffit in south aspect of single storey extension



Photo 5. Close-up of vent in southern aspect soffit board



Photo 5a. Location of vents in southern aspect soffit board



Photo 6. Gap in fascia and soffit where garage joins the northern aspect of the main dwelling



Photo 6a. Gap behind fascia taken from above garage roof

Evidence of bat activity around The Wendy House was also recorded with bat droppings found (see photo 7) on the window-sill of the double window on the dwellings southern aspect. This was found directly-under one of the



Photo 7. Evidence of bat activity

soffit board vents (see photo 8). Inspection of the vent did not reveal any obvious scratch, or grease marks on the fins of the vent. The dropping was taken back for examination. The length of the dropping and its smooth outline are consistent with the droppings from a *Pipistrelle* species of bat.



Photo 8. Location of where bat dropping was found

3.2.2 Internal

The open plan interior and the chalet style of the Wendy House meant that no loft space was present on the first floor. However, access to the roof space above the ground floor single-storey extension was possible. The interior of the roof space was clad in breathable membrane and the construction appeared to be that of a Queen post roof (see photo 9). The floor was boarded centrally, but exposed towards the eaves. The floor space was insulated with fibreglass (Rockwool). The items and the floor of the loft space were clear of debris apart from the occasional mouse dropping (*Mus* sp.). Investigation of the small tears in the breathable membrane (see photo 10) and the joints of rafters and queen posts revealed no evidence of bat activity.

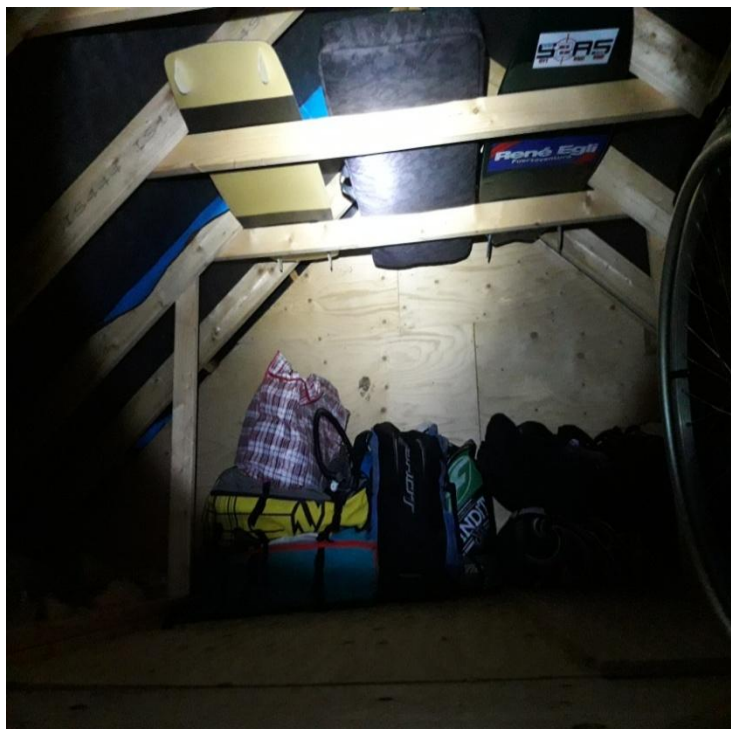


Photo 9. Breathable membrane and construction of roof space

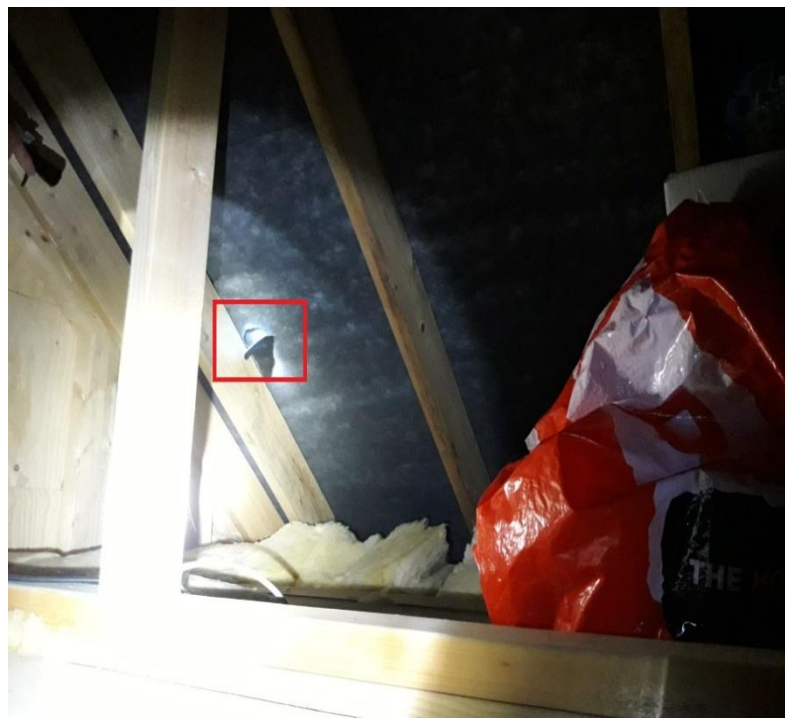


Photo 10. Small tears in breathable membrane in the roof space

4. Assessment and recommendations (excluding bats)

4.1.1 Protected sites

The proposed development does not fall into the SSSI Impact Risk Zones² of any of the SSSIs within the search area. 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). Therefore the development is not likely to have any impact on the surrounding SSSIs.

4.1.2 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. However, due to the very narrow space between the north and south aspects of the building and the adjoining properties, the inspection of the main roof was limited to the field to the west (approximately 30m away) using binoculars. The southern roof of the single-storey extension could not be viewed at all. These limitations have been taken into consideration in the assessment and recommendations given below.

2. Taken from: www.magic.defra.gov.uk

5.1.1 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:

- Evidence of a single bat dropping on the window sill below a vent in soffit board of the southern aspect
- Limited potential opportunistic roost sites for a small number of bats
- Use of breathable roofing underlay (membrane) throughout the construction
- A garden with limited foraging opportunities
- Good habitat connectivity to foraging areas, particularly further to the east and south

Therefore, to confirm whether or not the house hosts roosting bats further surveys (see below) carried out during the bat active season would need to be undertaken.

5.1.2 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 dawn re-entry survey between May and August. In this case, as evidence of bat has been recorded it is recommended to carry-out one dusk emergence survey, immediately followed by a dawn re-entry survey (classed as one visit in one twenty-four hour period as per Bat Conservation Trust Bat Survey Guidelines¹).

The surveys should take place in the period from the 1st May to the 30th September and in optimum weather conditions, in order to maximise the likelihood of recording bats, with dusk air temperatures exceeding 10°C and not rain or strong wind.

Dusk emergence surveys should commence 30 minutes before sunset and continue for up to three hours after sunset. A pre-dawn re-entry survey should commence 90 minutes before sunrise and continue until 15 minutes after sunrise.

Sufficient surveyors should be used on each survey so that all aspects of the building can be viewed at one time, therefore the building 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.

5.1.3 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

The Wendy House has limited 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 one dusk emergence, with an immediate dawn re-entry survey carried out between mid-May and September is recommended. 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.