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PRELIMINARY ECOLOGICAL APPRAISAL & PRELIMINARY BAT ROOST ASSESSMENT OF:

THE HUMP
ST AGNES
ISLES OF SCILLY
TR22 0PL

RECEIVED BY THE
PLANNING DEPARTMENT

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REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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Non-Technical Summary

- On 3rd June 2019, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of The Hump, Higher Town, St Agnes, Isles of Scilly, TR22 0PL (BS16-2019), for which there is a proposal to replace the existing main roof and the roof of the bathroom extension with a double roman pantile clay tiled roof.
- 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.
- Evidence of nesting birds was found in/on the property.
- No physical evidence of bats was found during the PRA.
- Characteristics of the property suggested a 'low' roost potential for bats (see 3.3).
- A survey constraint was that we were unable to inspect the entire loft space due to safety reasons (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 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**

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 The Hump, Higher Town, St Agnes, Isles of Scilly TR22 0PL (photo 1). The survey, carried out on 3rd June 2019, was undertaken in order to inform proposals to replace the existing main roof and the roof of the bathroom extension with a double roman pantile clay tiled roof.

1.2 The application site

The Hump is a single story granite cottage with a pitched roof (photo 1) and an extension built onto the southern aspect, this contains the bathroom and water tank. The structure is located in Higher Town, St Agnes on the eastern side of the island (National Grid Reference SV 88391 08317, Figure 1.). The application site footprint is approximately 343m².

1.3 Details of proposed works

The proposal is to replace the existing main roof and the roof of the bathroom extension with a double roman pantile clay tiled roof.



Photo 1.

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 suitability of the surrounding habitat 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.

2.3 Classification of building

The building was classified according to 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.

2.4 Surveyor details

The survey was undertaken by Darren Mason BSc and Darren Hart BSc of the Isles of Scilly Wildlife Trust. Both have undertaken professional Bat Licence Training to permit him to undertake professional surveys and 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
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.

Bat Roost Potential

3.0 Results

3.1 Preliminary Ecological Appraisal

3.1.1 Pre-existing information on bat species

The desk study showed that no species of bat had previously been recorded within the property. 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 Brown Long-eared Bat (*Plecotus auritus*), which is a UK Biodiversity Action Plan (BAP) priority species, and Common Pipistrelle (*Pipistrellus pipistrellus*). There is a known bat roost within 1km ZOI of the proposed development.

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. **Gugh SSSI** – Located approximately 300m east, Gugh is a small inhabited island connected to the east side of St Agnes by The Bar, a sandy tombolo. The island is only 1 km long, rising to 34 m at Kittern Hill and underlain by Hercynian granite forming shallow podzolic soils on the higher land with deeper soils on the lower slopes. Wind pruned, 'waved' maritime heath dominated by heather (*Calluna vulgaris*), bell heather (*Erica cinerea*) and Western gorse (*Ulex gallii*) covers much of the high ground on The Gugh. Other areas contain the nationally rare Orange bird's-foot (*Ornithopus pinnatus*) growing in heathland rich in rare lichen species including *Lobaria pulmonaria* and *Teloschistes flavicans*. The nationally rare Early meadow-grass (*Poa infirma*), the uncommon Western clover (*Trifolium occidentale*) and the Adder's-tongue (*Ophioglossum azoricum*) are found, as well as a large population of the nationally rare Balm-leaved figwort (*Scrophularia scorodonia*).
- II. **Big Pool & Browarth Point SSSI** – Only approximately 488m north-west of the site. Big Pool is located on the north side of the island of St Agnes. This and the adjacent Little Pool are the only areas of open water on the island, they are mesotrophic freshwater habitats; separated from the sea by narrow, mobile shingle and boulder beaches which are occasionally overtopped during winter gales. The adjacent short wet grassland contains a rich and diverse flora including Western clover (*Trifolium occidentale*), Suffocated clover (*T. suffocatum*) and Small adder's-tongue (*Ophioglossum Azoricum*). Adder's-tongue (*O. vulgatum*) also occurs here in the short turf with Chamomile (*Chamaemelum nobile*), Autumn lady's tresses (*Spiranthes spiralis*), Bristle club-rush (*Isolepis*

Setacea) and Subterranean clover (*Trifolium subterraneum*). The nationally rare Early meadow-grass (*Poa infirma*) grows in the drier grassland on the trackway in the south of the site.

- III. **Wingletang Down SSSI** – Lying approximately 460m south. Wingletang Down forms an extensive area of low lying unenclosed heathland, dune grassland and rocky coast on the south side of St Agnes. Wind pruned ‘waved’ maritime heath is found over much of Wingletang Down dominated by Common heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*) and Western Gorse (*Ulex gallii*). In places the open heathland is being invaded by European gorse (*Ulex europaeus*) scrub and Bracken (*Pteridium aquilinum*). The heathland is particularly important for the occurrence of a number of nationally rare plants including the Least adder’s-tongue (*Ophioglossum lusitanicum*), a species restricted in Britain to this site and the Channel Isles, and Orange birds-foot (*Ornithopus pinnatus*). Other notable plants include another Adder’s-tongue (*Ophioglossum azoricum*) and Western clover (*Trifolium occidentale*).
- IV. **Annet SSSI** – Situated approximately 1.8km west. Annet is the largest uninhabited island on the western side of the Isles of Scilly archipelago. It is located 1 km west of St Agnes, the nearest inhabited island. Thrift (*Armeria maritima*) occurs in abundance, forming a continuous hummocky turf over most of the northern end of the island where it represents one of the best developed examples of thrift turf in the British Isles. The exposed granite carns and boulder beaches support a variety of rare maritime lichen species including *Roccella fuciformis*. Annet is of outstanding importance as a seabird colony supporting some 12 species of breeding seabirds. Two species, Storm petrel (*Hydrobates pelagicus*) and Lesser black-backed gull (*Larus fuscus*) reach nationally important breeding populations.

3.1.3 Habitats surrounding the application site

The Hump is situated on a hill top on the north-eastern edge of Higher Town, towards the eastern side of St Agnes overlooking the island of Gugh. Higher Town consists of approximately 20 dwellings, mature gardens and associated outbuildings. South west of the property is another dwelling whose mature garden backs onto the property. The Hump has suitable immediate bat foraging habitat including cattle pasture with associated granite stone walls, mature Monterey Pine (*Pinus radiata*) trees to the north and mature hedgerows to the east. Common pipistrelle (*Pipistrellus pipistrellus*), have been found to forage over a wide range of habitats, including woodland and cattle pasture^{2, 3, 4}. East of the property is the

coastline which provides further foraging opportunities particularly for Common Pipistrelle (*Pipistrellus pipistrellus*); as it has been shown that this species will often exploit coastal habitats, including the strandline along beaches⁵. To the north, west and south there is optimal continuous bat habitat connected to the wider landscape with private gardens, mature hedgerows with a small woodland copse near to the school. It has been shown that bats use tree lines, hedgerows and other linear features for both commuting and foraging^{3, 6}. This optimal bat habitat covers approximately .5km² of the whole of the central part of the island, before breaking down quite rapidly into the large open, exposed headlands of Wingletang SSSI to the south, Castella Down to the west and Big Pool and Browarth SSSI to the north.

However, though the Hump is connected to the vast majority of this optimal habitat, its location on a fairly exposed hill, could at times reduce its suitability for roosting bats, as it has been shown how important wind protected areas are for Common pipistrelle bats^{7,8}, especially within a windy climate.

3.1.4 Habitats within the application site

The Hump has a garden on its southern and eastern aspects. The garden is predominantly laid to lawn bordered by a granite stone wall, in-front of which are rows of Agapanthus (*Agapanthus spp.*). Other plants noted were Bracken (*Pteridium aquilinum*), Cat's ear (*Hypochaeris radicata*) and Smaller-tree Mallow (*Malva pseudolavatera*).

3.2 Preliminary Roost Assessment

3.2.1 External

The Hump is a single story granite cottage with a pitched roof of approximately 30°, with an almost flat roofed extension built onto the western aspect containing the bathroom and water tank. The main roof is comprised of corrugated fibre cement sheets throughout, with fibre cement ridge tiles apart from part of the northern aspect, where the western half of the roof has had fibre cement tiles laid over the sheets. The entire roof has also been finished with a skin of concrete over the top of the sheets. At the eastern open gable end the apex of the roof is timber clad, as far as could be surveyed, with wooden barge boards, as is the remaining fascia. The windows frames are a combination of the original wooden frames, with single-glazing and UPVC double glazed windows. All guttering is plastic.

The structure overall offers some features that are potentially suitable for roosting bats, these include:

- On the southern aspect there are gaps behind the wooden fascia, not continuous, but along the whole length (photo 1 & 2).
- On the eastern aspect there's space behind the barge board, accessible where the mortar has come away, below the roof sheet (photo 3 & 4).
- On the northern aspect there are gaps behind the wooden fascia, not continuous, but along the whole length (photo 5 & 6).
- The final ridge roof tile on the western end of the main roof, there's a manufactured raised section that creates a gap underneath (photo 7).
- Large gap around pipe (photo 8) and gap under roof (photo 9) allow access into the almost flat roofed extension housing the water tank.



Photo 1.



Photo 2.

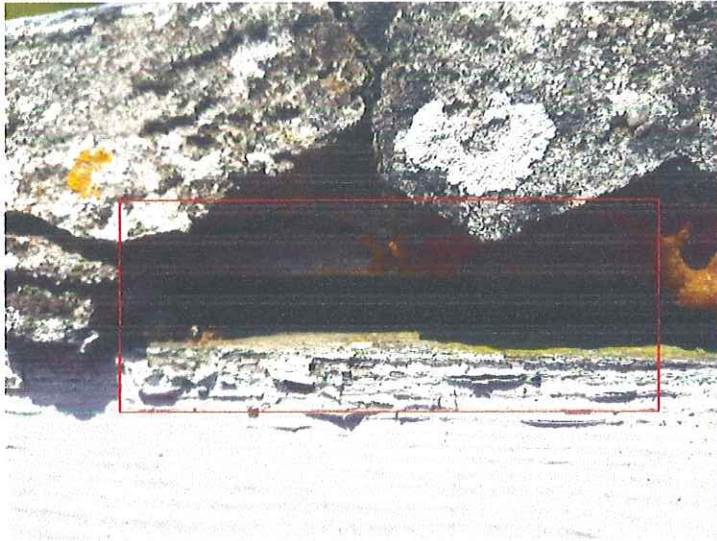


Photo 3.



Photo 4.

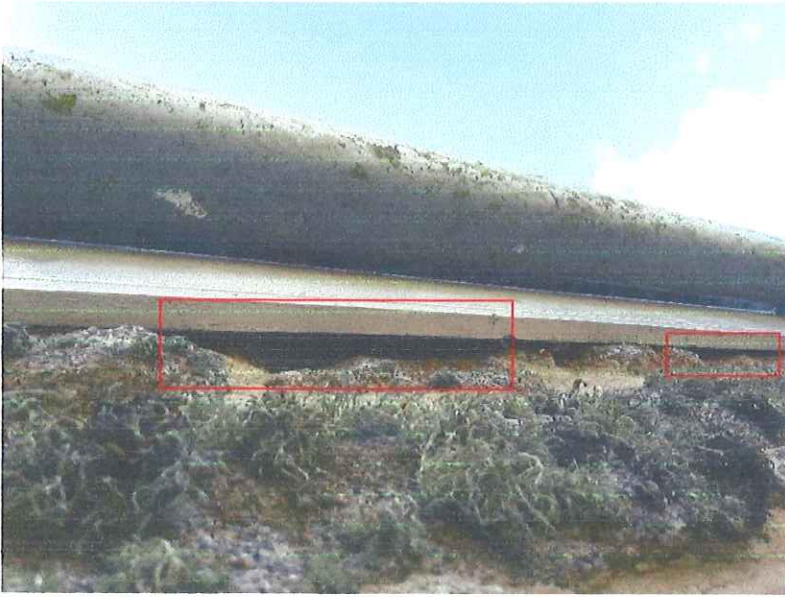


Photo 5.



Photo 6.

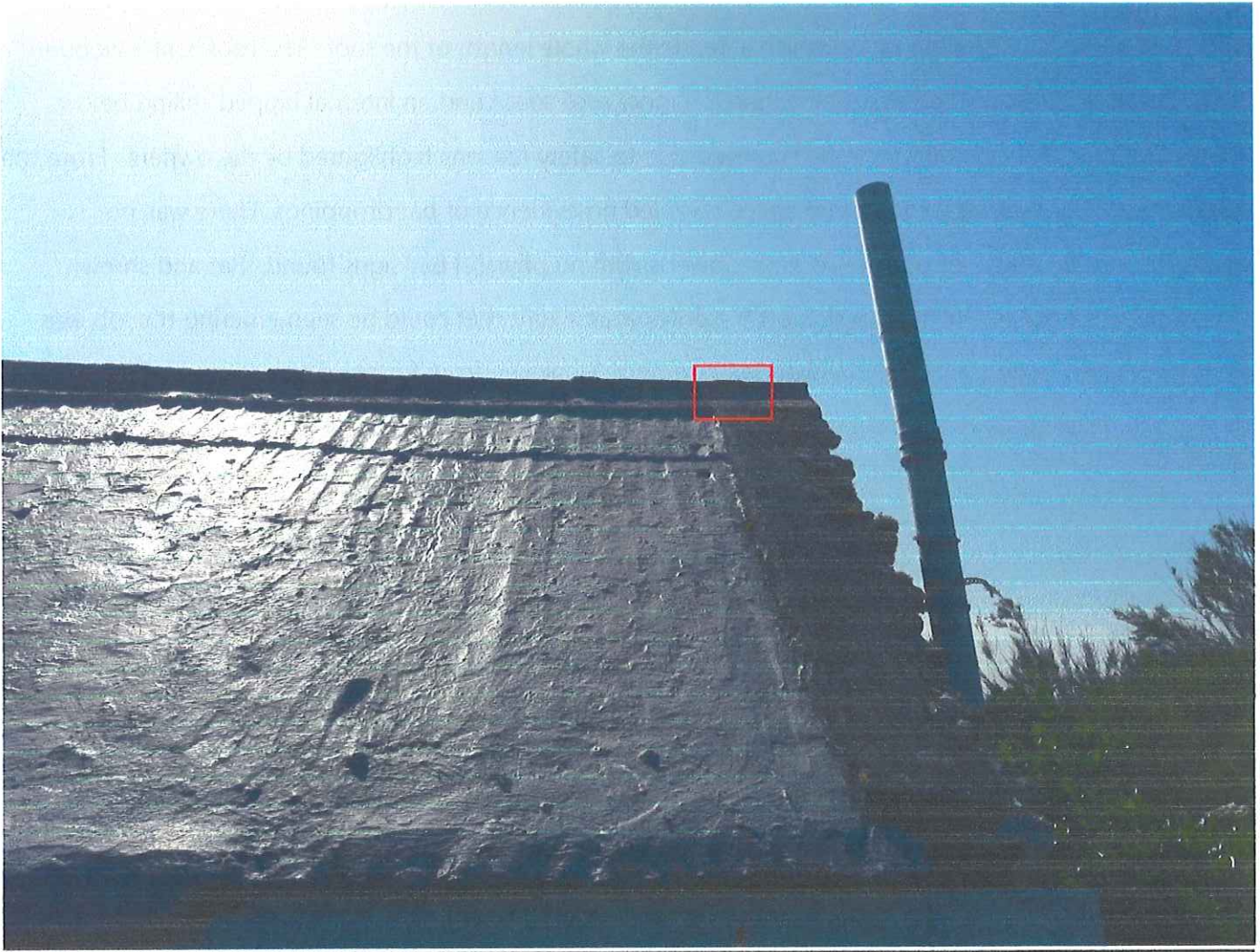


Photo 7.



Photo 8.



Photo 9.

3.2.2 Internal

Internally, there is a large loft space which extends the whole length of the roof. The roof is of a wooden collar beam construction (photo 10) creating a narrow roof space and an internal hipped ceiling below. The entire loft space was unable to be surveyed due to safety reasons highlighted by the owners. From the top of the ladder looking into the roof space revealed no evidence of bat droppings. There was no insulation, no felt and a lot of detritus and cobwebs with no physical bat signs found. Rat and shrew droppings were noted. With the lights off the only natural light that could be seen entering the loft was from the eastern aspect through the wooden cladding. However, from further external inspection it was deemed that the access wasn't large enough to permit entry into the loft space by a bat.

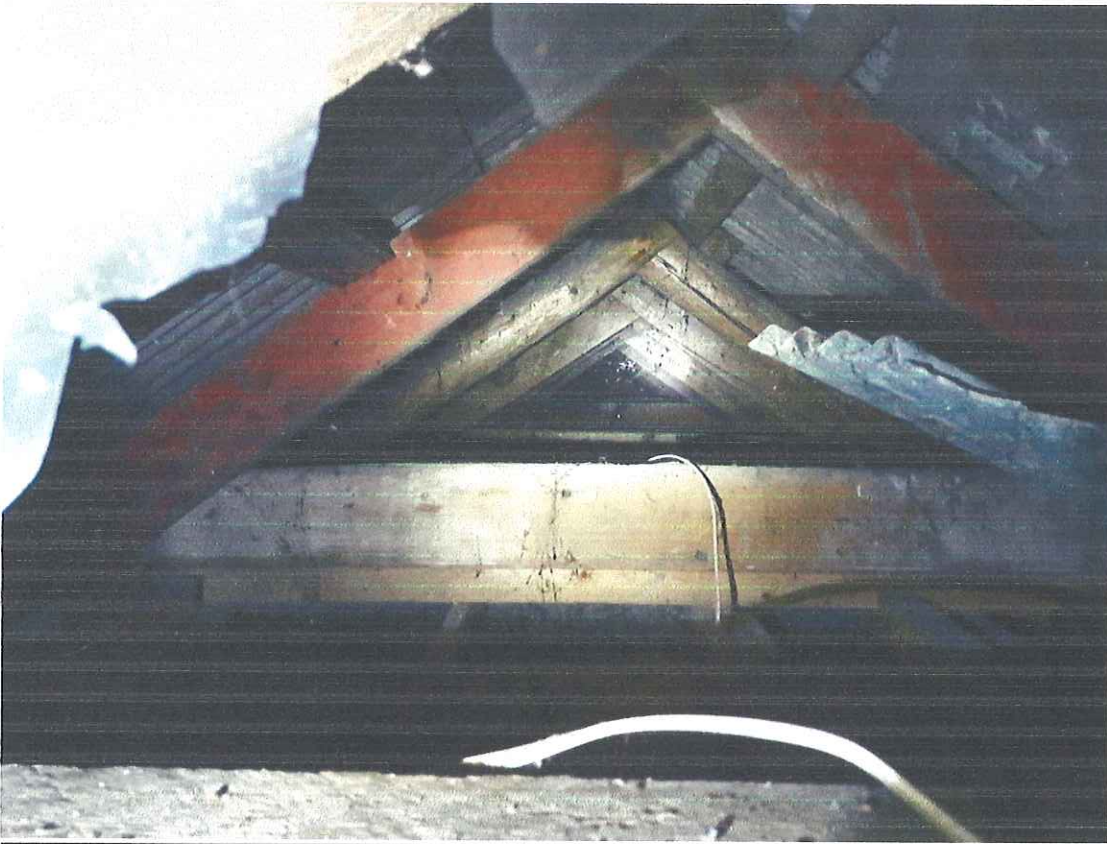


Photo 10.

4. Assessments and recommendations

4.1 Protected sites

The proposed development falls into the SSSI Impact Risk Zones of Gugh, Big Pool & Browarth Point, Wingletang Down and Annet SSSIs. 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 this zone is for large-scale residential developments and therefore the development 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 take, damage or destroy the nest of any wild bird while that nest is in use or being built. During the survey the remains of a dead bird was found in a space behind the fascia on the southern aspect (photo 11). 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).



Photo 11.

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 interior loft space were accessible due to safety reasons. This limitation has been taken into consideration in the assessment and recommendations given below.

5.2 Further survey requirements

The value of the property 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 small number of potential opportunistic roost features for a small number of bats.
- Good bat habitat, for a generalist species of bat, connected to the wider landscape.
- The property being on a fairly exposed setting on a hill.
- Being unable to search the entire loft space means any real or potential roosting features could have been missed.

Therefore, to confirm whether or not the house hosts roosting bats, a further survey visit (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°C 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

The Hump has a small number of potential opportunistic roost features for a small number of bats and is connected to optimal commuting and foraging habitat for a generalist species of bat. Being unable to search the entire loft space means any real or potential roosting features could have been missed. The property being on a fairly exposed location has been noted and taken into consideration.

The value of the property for bats is considered to be 'low'. Therefore to confirm whether or not the property hosts roosting bats, **a further survey visit 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. Bibliography

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