

PRELIMINARY ECOLOGICAL APPRAISAL & PRELIMINARY BAT ROOST ASSESSMENT OF:

WESTWARD LEDGE
CHURCH ROAD
HUGH TOWN
ST MARY'S
ISLES OF SCILLY
TR21 0NA

Client: Mr Ray Jackman

Our reference: BS46-2021

Planning reference:

Report date: 5-7-21

Author: Darren Mason

Report peer reviewed: Sarah Mason

Report signed off: Sarah Mason

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

This page is intentionally blank

Contents

Non-Technical Summary	4
1.0 Introduction	5
1.1 Survey and reporting	5
1.2 The application site.....	5
1.3 Details of proposed works	6
2.0 Methodology	7
2.1 Preliminary Ecological Appraisal - Desk Study	7
2.2 Preliminary Bat Roost Assessment.....	7
2.3 Classification of building	7
2.4 Surveyor details.....	8
3. Results	10
Preliminary Ecological Appraisal	10
3.1 Pre-existing information on bat species	10
3.2 Statutory and non-statutory sites.....	10
3.3 Habitats surrounding the application site.....	11
3.4 Habitats within the application site	13
Preliminary Roost Assessment.....	13
3.5 External	13
3.6 Internal.....	14
Assessment and recommendations (excluding bats)	16
4.1 Protected sites.....	16
4.2 Nesting birds	16
4.3 Ecological features of importance.....	16
5. Assessment and recommendations (bats)	18
5.1 Survey constraints.....	18
5.2 Further survey requirements.....	18
5.3 EPS Licence requirement.....	18
5.4 Planning Recommendation(s).....	18
5.5 Recommendtaions – Further Action	19
7. Bibliography	21
APPENDIX A – SUPPLIERS	23

Non-Technical Summary

- On 5th July 2021, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of Westward Ledge, 6 Church Road, Hugh Town, St Mary's, Isles of Scilly, TR21 0NA to establish baseline conditions, determine the importance of any ecological features within and around the survey area and to establish the actual or potential use of the building by bats to help inform the determination of a forthcoming planning application.
- This report outlines the findings of the PEA and PRA assessment and provides advice based on the survey's conclusions.
- During the PRA and external/internal inspection of the building was undertaken (where accessible).
- The immediate habitat surrounding the proposed development is considered to provide limited foraging habitat for bats. The dark corridor to the east and the mature Elm copse to the north and provides opportunity for bats to commute to more favoured feeding habitats.
- Taken in combination, the characteristics of the building and the surrounding habitat suggests **negligible roost potential** for bats.
- To assist in meeting both national and local planning policy obligations for net gains in biodiversity the proposed development should undertake at least one of the suggested enhancement measures outlined in this report.
- **The recommendations of this PEA and PRA are that no further surveys or an EPS license application are required.**
- Aside from bats, no other ecological constraints are identified which require consideration to inform the determination of this planning application.
- **This report is sufficient to support a planning application.**

1.0 Introduction

1.1 Survey and reporting

This report details the results of a preliminary ecological appraisal (PEA) and a preliminary bat roost assessment (PRA) of Westward Ledge, Church Road, Hugh Town, St Mary's, Isles of Scilly, TR21 0NA. The survey was carried out on the 5th July 2021.

1.2 The application site

Westward Ledge is located on the eastern side of Hugh Town, set back off Church Road, St Mary's (National Grid Reference SV9077110480) overlooking the old power station chimney to the west. The application site is comprised of a large-detached block-built, rendered single-storey property with a front terraced garden (see Figure 1 below).

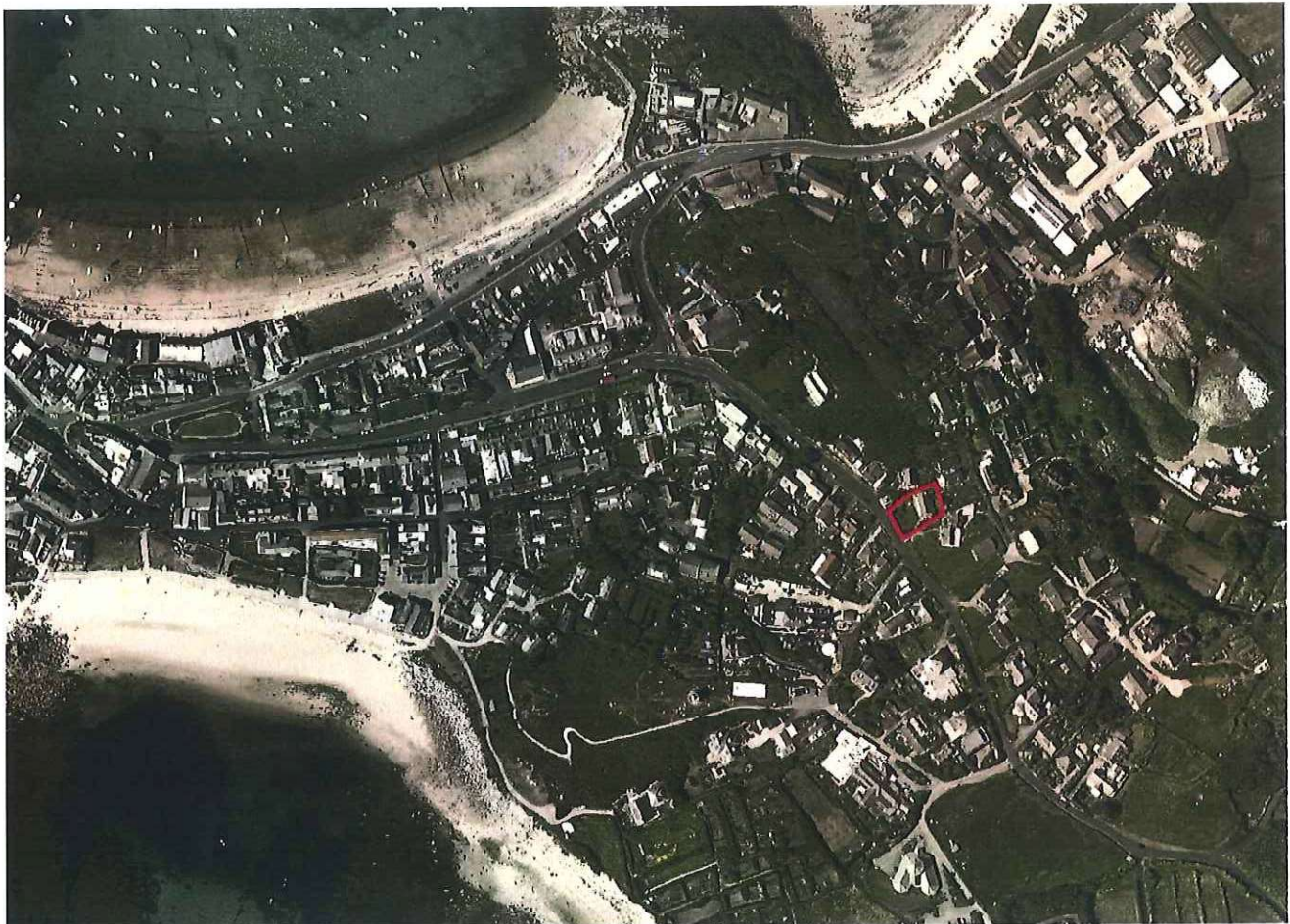


Figure 1. Westward Ledge general location

1.3 Details of proposed works

This report relates to work associated with a future planning application and the focus of descriptions and results is concentrated on the elements of the property to be affected by the proposals.

The proposed planning application concerns works to the fabric and structure of the existing single-storey residential components only. The application outlines the installation of 2 new dormer windows above the existing north and south double-glazed fenestration and a central velux window on the roof of the western aspect (see Photo 1. of western aspect).



Photo 1. West elevation

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 using 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 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 several factors including (but not limited to):

- 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 (see below).

2.4 Surveyor details

The survey was undertaken by Darren Mason BSc (Hons) of the Isles of Scilly Wildlife Trust. Darren has undertaken professional Bat Licence Training and holds a Natural England WML-A34-Level 2 (Class 2 License); registration number: 2020-46277-CLS-CLS which permits him to survey bats using artificial light and endoscopes and capture bats using hand and hand-held static nets.

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 Potential	Description	Survey effort required to determine the likely presence or absence of bats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.	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	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat.	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	A structure with one or more potential roost sites that could be used by individual bats opportunistically. But these sites do not provide appropriate conditions or surrounding habitat to be used on a regular basis or by larger number of bats.	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	Negligible habitat features on site likely to be used by roosting, commuting or foraging bats.	No further surveys required.

Table 1. Categorising and classifying a building’s bat roost potential.

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

3. Results

Preliminary Ecological Appraisal

3.1 Pre-existing information on bat species

The desk study showed that no species of bat had previously been recorded within the building. A data search of LRC records for bats revealed information on 6 species of bat recorded within the 2km ZOI of the site. The species conclusively identified were Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-eared Bat (*Plecotus auritus*) both UK Biodiversity Action Plan (BAP) priority species, Whiskered Bat (*Myotis mystacinus*), Leisler's Bat (*Nyctalus leisleri*) and the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Several bat roosts are known to exist within the 2km of the proposed development, with 3 known roosts 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** – Lying 507m south-west of the proposed development is Peninnis Head SSSI. The site designated primarily for its maritime heathland, maritime grassland, and scrub habitats together with good populations of several rare plant and lichen species, in addition to its significant quaternary geomorphology.
- ii.) **Lower Moors SSSI** – Situated 243m due east of Westward Ledge lies Lower Moors SSSI. 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 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*).
- iii.) **Higher Moors & Porth Hellick Pool SSSI** – 1.3km east north-east of the proposed development is Higher Moors 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*).

iv.) **Porthloo SSSI** – Situated 944m due north of the proposed development lies Porthloo SSSI designated for its geology, particularly for its Quaternary sediments in the cliffs that show changes in the climates and environments of the Quaternary period in Scilly.

3.3 Habitats surrounding the application site

Westward Ledge lies within the south-eastern are of the Built-Up Areas Boundaries² (2011) for England and Wales (published by the Office for National Statistics, Geography) for the Isles of Scilly. The street lighting throughout the town is intermittent and minima within the immediate locality of the property, consisting of orange sodium lighting. The nearest light is found approximately 20m south-west of the property, with a further sodium light 60m to the north-west. The nearest potential foraging feature to the proposed development lies approximately 26m away to the north, consisting of a mature Elm (*Ulmus* sp.) copse surrounding the church rectory and bounding the old school site of Carn Thomas further north. Immediately east of the property the allotments of Pilot's retreat permit access to the wetland of Lower Moors SSSI. For a further 2km north and east of these areas the countryside consists of a mixture of small, enclosed fields bounded by hedgerows, linked to small linear shelterbelts, beyond the SSSI and the large, open expanse of the airfield and golf course. South-west of the proposed development is the beach of Porthcressa, with its strandline stretching 350m and 230m to the west. Immediately due south of the property are the large, mature gardens of Buzza Hill, which drop down to Porthcressa allotments, immediately south-east of the beach, comprising of small hedgerow enclosed cultivated fields. Beyond these and further to the south-east is the open headland of Peninnis Head SSSI, consisting of semi-natural grassland, scrub, and heathland.

In summary, the immediate habitat surrounding the complex is limited in terms of feeding opportunities, however the dark corridor to the east of the complex and the open beach of Porthcressa to the south-west are potential commuting routes for bats to reach more favourable feeding habitat. This dark corridor may be an important route for bats to utilise as it has been shown that street lighting can negatively impact upon bats commuting and foraging routes³. In contrast, it has been shown that species such as Common Pipistrelle and Leisler's Bat will feed around street-lighting, to take advantage of the insectivorous prey that congregates around them. However, this has been shown to be dependent on the light emitting from the lamps, with orange sodium light (found here in this instance) having the greatest negative impact on feeding opportunities⁴.

Though Soprano Pipistrelle have been shown to utilise more built-up areas compared to Common Pipistrelle⁵, all species of bat require 'edge' habitat (like hedgerows) to both feed from and commute to other feeding areas^{6, 7&8}. This type of habitat is limited, particularly to the west and quickly breaks down after approximately 175m, where the landscape becomes very open and which most species of bat prefer not to utilise⁹. In contrast edge habitat is almost continuous to the east and north-east for at least two kilometres, providing access to a wider variety of habitats for which Common Pipistrelle are known to take advantage of¹⁰, including the strandline along the beaches¹¹ to the south-west and north. The former commuting routes are also important for both Soprano and Nathusius Pipistrelle as they provide a feeding corridor to their preferred habitat of open water and watercourses^{6, 7&8}, habitats such as those found at both Lower and Higher Moors SSSIs and Holy Vale. The location of Westward Ledge also falls within the core sustenance zones of all three species being 1.7km, 1.5km to 3km respectively¹².

In contrast, Whiskered Bat in Britain has been shown to favour more open areas of semi-natural grassland and pasture with scattered hedgerows, or small woodland blocks^{13&14} in which to feed. Habitat such as the Garrison to the west and the golf course to the north-east are typical examples of such habitat which they could exploit and fall within the typical core sustenance zone for this species¹³. Brown Long-eared bat have been shown to prefer to feed in open canopy deciduous woodland typically located close to their roosts, which would also have larger tracts of woodland available to feed no greater than .5km away¹⁵, making the former school site at Carn Thomas a potential site to feed. This site falls within this species core sustenance zone of 1.1km¹⁶, however the lack of trees in the immediate area of the complex may limit the sites' use as a roost. Likewise, Leisler's Bat also take advantage of woodlands, particularly woodland edge¹⁷, making these woodland blocks and the woodlands at Lower Moors, Higher Moors and Holy Vale and even Trenoweth shelterbelt at 2.4km away as Leisler's Bat has a large core sustenance zone of 4.2-7.4km¹⁸. Leisler's Bat in England is also known to take advantage of open areas of pasture¹⁸, making the coastal headlands to the north, south and east potential feeding areas also. This contrasts with most other species of bat which typically avoid this type of open habitat, particularly during peak times of prey abundance (dusk and dawn) to avoid predation^{19&20}.

3.4 Habitats within the application site

The west facing garden is terraced, bounded on two sides by low granite block walling to the north and west, with the southern boundary open to the neighbouring garden. Above the walling pollarded Elms are present, with well-maintained hedges of Karo (*Pittosporum tenuifolium*), to the rear on the north and west boundaries. The terraces are laid to lawn, consisting primarily of Perennial Ryegrass (*Lolium perenne*), Creeping Bent (*Agrostis capillaris*) with rare Daisy (*Bellis perennis*). The lower terrace is separated from the upper terrace by a selection of shrubs including Hydrangea (*Hydrangea macrophylla*), Sage sp. (*Salvia* sp.) and two well-pruned Hollies (*Ilex aquifolium*). Other shrubs and plants scattered below the hedgerow to the north and covering the low drystone wall to the west includes African Lily (*Agapanthus africanus*), Japanese Rose (*Rosa rugosa*), Hottentot Fig (*Carpobrotus edulis*), Tree Bedstraw (*Coprosma repens*), Fennel (*Foeniculum vulgare*) and Cabbage Palm (*Sabal palmetto*).

In summary, the open front garden provides a limited number of species that may attract a variety of insects which bats may feed upon. The pollarded Elms and Holly provide little cover for bats leaving a roost, with the nearest sufficient cover being the mature Elm copse to the north 20m away. The open nature of the garden, its limited variety of plants and limited cover immediately surrounding the building suggest that the habitat immediately within the application site provides limited foraging opportunities for bats, but beyond 20m to the conditions become optimal.

Preliminary Roost Assessment

3.5 External

Westward Ledge is a large detached, block-built part fine pebble-dashed, part smooth rendered property, with UPVc fenestration, fascia, and soffits along its western elevation. The north and south elevations are open gable ended and are fine pebble-dashed for their full height and width. Throughout, the render is in good condition. The fenestration is in good order with no obvious gaps between the surrounding walls and the associated window frames and the UPVc fascia and soffits are tightly bound together, with the soffit fitting almost flush to their corresponding elevations. This furniture presents with negligible opportunities such as cracks, gaps, holes, or missing render which bats could utilise as a roost or gain access into the roof space.

The west/east facing roof has an approximate pitch of 35°, is capped with glazed concrete ridge tiles and no chimney stacks and is covered in the original fibre cement tiles. The mortar bed between the ridge tiles

and the tiles below is good throughout with no mortar missing that could afford access to bats into the internal roof space. There are no roof tiles missing, all are closely bound to each other and do not present with any obvious cracks or gaps. The roof tiles at the gable ends of the building overhang the elevation and where the tiles meet the elevation the render and mortar are in good order. The overall condition of the roof presents with negligible opportunities for bats to utilise as a roost, or to gain access into the interior roof space.

3.6 Internal

The internal roof construction of the main building was open providing an uncluttered environment constructed in a typical 'A'-frame style with the majority of rafters being modern butt joints' (see Photo 2.).

Inspection of these joints revealed no obvious staining or claw marks to suggest use by bats.

Inspection of the ridge board also revealed no scratch marks and the floor below when

inspected revealed no bat droppings. The final

rafters at the north and south gable ends did not butt up to their corresponding elevations, limiting the number of crevices within the loft space.



Photo 2.



Photo 3.

The only droppings found were those of Brown Rat (*Rattus norvegicus*) and House Mouse (*Mus musculus*) and were found in the un-boarded northern half of the loft. No droppings were noted on the assorted boxes and bags either. Cobwebs were present but not numerous, those that were present were coated in a thick layer of dust. The original roof-lining was present and in very good order being well-fitting and with no obvious tears or pieces missing (see Photo 3.). The roof void can be artificially lit for access, but with the light switched off no obvious natural

light entered the roof space, suggesting limited opportunities from the exterior into the interior of the roof space.

In summary, it has been shown that all 3 pipistrelle species of bat along with Whiskered bat typically roost within buildings, utilising a very wide variety of features^{13, 14 & 19} including, crevices, cracks, holes etc as individuals up to several hundred at a time. During the survey features such as these were negligible and suggests that the building does not provide the likely conditions which a larger number of bats could utilise on a regular basis, or for individuals or a small number of bats opportunistically.

In contrast, Brown Long-eared bats prefer to roost in roof voids that provide flight space within their chosen roost, or roofs that are divided into several smaller compartments. Brown Long-eared bats also typically roost between the joints where the rafters meet the ridge board, or along the ridge board itself¹⁵. Brown Long-eared bats also show high roost fidelity where it would be expected to see concentrations of droppings¹⁶, which was not found during the roost assessment. Leisler's bat in contrast to the other species is a typical tree dwelling species, particularly during the non-breeding season with roosts typically found in cavities such as mechanical breaks, rot cavities and behind loose bark of large live trees in open conditions^{17 & 18}. However, it has been shown that nursery roosts of Leisler's bat show a limited preference for buildings, but only those lined with roof felt and constructed of stone, rather than of block and brick¹⁷.

Westward Ledge therefore presents with negligible features which bats could utilise as a potential roost space.

Assessment and recommendations (excluding bats)

4.1 Protected sites

The proposed development falls into the SSSI Impact Risk Zones of Lower Moors, Higher Moors and Peninnis Head 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 likely attributable impact in these zones is for residential developments of 100, or 50 or more houses outside existing settlement/urban areas. Therefore, in this instance the development 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 built²⁰. During this survey, no evidence of nesting birds was found. However, if work was 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 evidence of breeding activity was found, or nests are identified works that would disturb the adults, the nest or young must be postponed until all young have fledged the nest and it is no longer in use.

4.3 Ecological features of importance

To identify which ecological features are important and which could potentially be affected by the proposed project, an evaluation of their importance for example in a geographical context, degree of scarcity or level of protected status needs to be undertaken²³. The table below outlines those features identified as important, the nature conservation legislation relevant to those features and an assessment of the level of impact from the proposed development on those features.

Ecological Feature	Relevant Legislation	Evaluation (of importance)	Mitigation Hierarchy	Impact Level
Habitats:				
Building (roosts)	CHSR, W&CA, NPPF	Local	A & E	Low
<p>Impacts:</p> <p>Demolition: – None predicted if Reasonable Avoidance Measures (RAM) are followed (see section 5)</p> <p>Construction: – None. Positive impact may result through enhancement by creating/incorporating new roosts in/on the building²⁴</p> <p>Operational impact: - None predicted, however please note a summary of criminal offences with respect to bats and their roosts. http://www.bats.org.uk/pages/bats_and_the_law.html</p>				
Species:				
Bats	CHSR, W&CA, NPPF	International	A & E	Medium
<p>Impacts:</p> <p>Demolition – None predicted if Reasonable Avoidance Measures (RAM) are followed (see section 5)</p> <p>Construction/post-construction - Positive impact may result through enhancement by increased roost availability^{24, 25}</p> <p>Operational impact: - None predicted, however please note a summary of criminal offences with respect to bats and roosts. http://www.bats.org.uk/pages/bats_and_the_law.html</p>				
Key to Legislation and Mitigation Hierarchy				
<p>CHSR – Conservation of Habitats and Species Regulations 2017⁶ - http://www.legislation.gov.uk/ukxi/2017/1012/made</p> <p>W&CA – Wildlife & Countryside Act 1981 (as amended)²² - http://www.legislation.gov.uk/ukpga/1981/69/contents</p> <p>NPPF – National Planning Policy Framework 2019²⁵ - https://www.gov.uk/government/publications/national-planning-policy-framework--2</p> <p>A – Avoid, M – Mitigate, C – Compensate, E - Enhancement</p>				

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 and it was possible to survey the whole area of the proposed development.

5.2 Further survey requirements

In the professional opinion of the author there are **no further surveys required**. The justification for this is BCT guidance suggests that for buildings with negligible roost potential no further surveys are required¹. The survey carried out to date follows this guidance, is proportionate to the scale of the development and the information provided is believed to be sufficient to inform the planning decision.

5.3 EPS Licence requirement

For any development that is likely to commit an offence (or offences) in respect to a European Protected Species (EPS) i.e., bat, or their habitat, a licence will be required. In this instance based on sufficient survey work **no licence is required**. If, in the unlikely event a bat was found during the demolition phase of the project, Reasonable Avoidance Measures (RAM) must be followed and will determine any further action, such as licensing if necessary.

5.4 Planning Recommendation(s)

The information gathered in this report is sufficient to support a planning application with regards to protected species in accordance with relevant best practice guidelines.

It is considered that the impacts of the proposed works on protected species can be mitigated sufficiently to ensure that the conservation status of Common Pipistrelle on St Mary's is not negatively impacted. The mitigation outlined in Section 5.5. would represent appropriate measures.

It is recommended that planning permission be granted if compliance with the recommendations in Section 5.5 of this report is conditioned.

5.5 Recommendations – Further Action

As there is a very low risk that bats may roost within the building, prior to demolition, precautions should be taken to reduce the probability of committing an offence. By undertaking Reasonable Avoidance Measures (RAM), if affected RAM should include:

Avoidance – Bats

- i. When roofing works are planned these should (wherever possible) avoid the main breeding and mating season of *Vespertilionidae* bats, **work should typically take place between the 1st November and 1st May inclusive.**
- ii. Ensure all workers on site (including sub-contractors) are made familiar with bat legislation and agree to work in accordance with and fully follow best practice measures.
- iii. Carry out prior to demolition careful checks of any cracks/crevices and cavities in or on the building. Signs of usage include bat droppings, dis-colouration or polishing of access points where bats rub against them, urine stains and a lack of cobwebs, particularly if other crevices around them have plenty.
- iv. Individual bats may be found in/under; cladding, between timber boards, between corrugated sheeting, in soffit boxes, behind lead flashing and sometimes just clinging to timber beams around joins as well as other areas. When any of these are removed, please do so carefully, lifting outwardly, and checking for bats continually. If in doubt, consult a licensed bat worker.
- v. Try to minimise any dust generated from demolition works from entering off-site buildings and gardens.
- vi. In the unlikely event that a bat is found please see below:

1. At no point should a worker handle a bat. Untrained handling may cause undue stress and injury to the bat, and if bitten may expose the worker to rabies-related European Bat Lyssavirus
2. Where possible replace any covering without damaging the bat, then halt works and contact **Natural England** (Tel: 0845 601 4523), or the **Bat Conservation Trust Helpline** (0845 1300 228), or **IoSWT** (01720 422153) for advice.
3. Any bats that go to ground should be covered with a box and left alone until a licensed bat worker arrives to assess the condition of the bat.
4. If the bat attempts to fly at any point allow it to do so. Preventing natural behavior will cause unnecessary stress and may cause injury. Attempt to see where bat goes. If the bat returns to the building, halt works and report the escaped bat to the local bat worker.

Enhancement (E) – Bats

The Isles of Scilly have the most southern population of Common Pipistrelle (*Pipistrellus pipistrellus*) bats in the United Kingdom. The islands also hold small populations of Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-eared Bat (*Plecotus auritus*) both UK Biodiversity Action Plan (BAP) priority species and holds records for the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Any loss of roosting, commuting or foraging sites could have a detrimental effect on these species distributions as a whole and cause a net loss in biodiversity on the islands.

Each local planning authority in England and Wales has a statutory obligation under Part 3 Section 40 of the Natural Environment & Rural Communities Act 2006²⁷ (NERC 2006) to have due regard for biodiversity when carrying out their functions and under Section 15 paragraph 170(d) of the NPPF 2019, all planning policies and decisions shall contribute to and enhance the natural and local environment by providing net gains in biodiversity. **Therefore, to assist in meeting these obligations the following suggestion could be undertaken:**

- i. Erect one free-standing bat box developed for crevice-dwelling species (see figure 2 for example and Appendix A for supplier details) at the apex of the south-east gable end of the development.

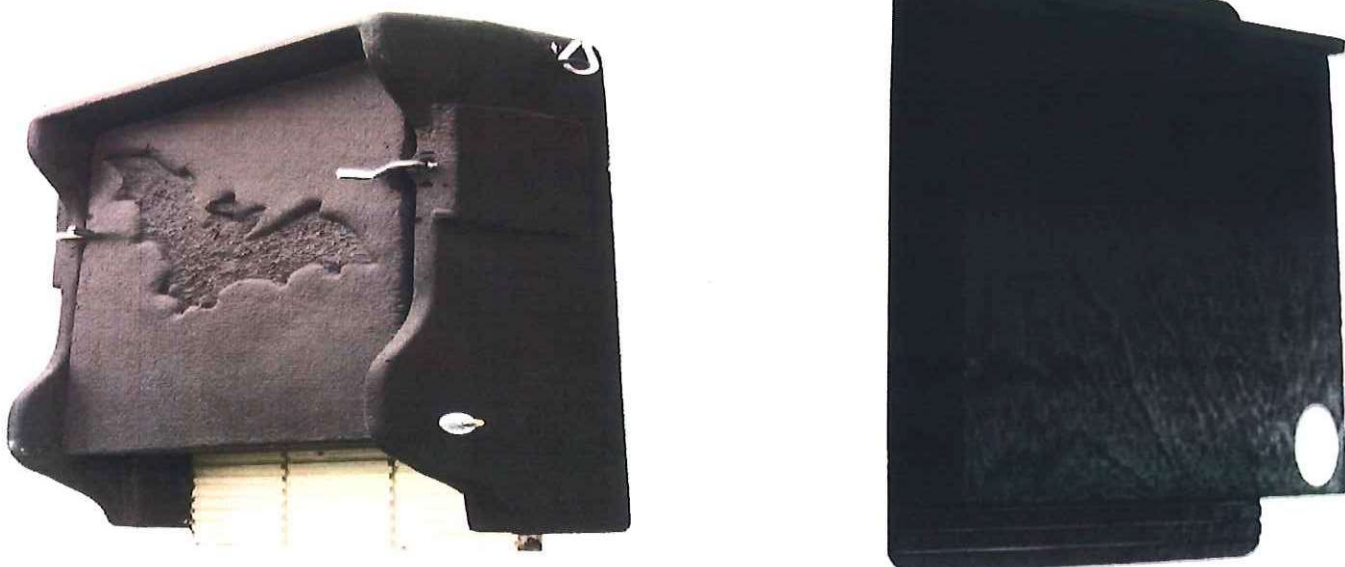


Figure 2. free-standing bat box examples

https://www.nhbs.com/browse/search?q=bat%20boxes&hPP=30&idx=titles&p=0&is_v=1&qview=158636

<https://www.nhbs.com/browse/search?q=bat+boxes&qview=176916>

7. Bibliography

1. Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*. The Bat Conservation Trust
2. 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 - <https://data.gov.uk/dataset/15e3be7f-66ed-416c-b0f2-241e87668642/built-up-areas-december-2011-boundaries-v2>
3. Stone, E.L., Jones, G. & Harris, S. (2009). *Street Lighting Disturbs Commuting Bats*. *Current Biology* 19. P1123-1127
4. Blake, D. et al. (1994). Use of lamp-lit roads by foraging bats in southern England. *Journal of Zoology* 234. P 453-462.
5. Lintott, P. et al. (2015). Differential responses of cryptic bat species to the urban landscape. *Ecology and Evolution* 6 (7). P2044-2052
6. Vaughan N, Jones G, Harris S (1997) *Habitat use by bats (Chiroptera) assessed by means of a broad-band acoustic method*. *J Appl Ecol* 34:716-730.
7. Russ JM, Montgomery WI (2002) *Habitat use associations of bats in Northern Ireland: implications for conservation*. *Biol Conserv* 108:49-58
8. Nicholls B, Racey PA (2006) *Habitat selection as a mechanism of resource partitioning in two cryptic bat species Pipistrellus and Pipistrellus pygmaeus*. *Ecography*, vol 29 (5) 697-708
9. Downs N, Racey PA (2006). *The use by bats of habitat features in mixed farmland in Scotland*. *Acta Chiropterologica*, vol 8:169-185.
10. Russ, J.M. and Montgomery, W.I. (2002). *Habitat associations of bats in Northern Ireland: implications for conservation*. *Biological Conservation* 108. P.49-58
11. Hough, T. (2015). *Coastal habitat use by bat species*. BSG Ecology
12. Watts-Davidson, I. & Jones, G. (2005). Differences in foraging behavior between *Pipistrellus* and *Pipistrellus pygmaeus*. *Journal of Zoology* 268. P. 55-62
13. Berge, L. (2007). *Resource partitioning between the cryptic species Brandt's bat (Myotis brandtii) and the Whiskered Bat (M. mystacinus) in the UK*. University of Bristol. School of Biological Sciences

14. Buckley, D.J. et al. (2012). The *spatial ecology of the whiskered bat (Myotis mystacinus) at the western extreme of its range provides evidence of regional adaptation*. Mammalian Biology Vol 78. Issue 3: p198-204
15. Entwistle, A.C., Racey, P.A. and Speakman, J.R. (1997). *Roost selection by the brown long-eared bat Plecotus auritus*. Journal of Applied Ecology 34. P399-408
16. Swift, S.M. & Racey, P.A. (1983). *Resource partitioning in two species of vespertilionid bats (Chiroptera) occupying the same roost*. Journal of Zoology 200 p.249-259
17. Shiel, C.B., Duverge, P.L., Smiddy, P. and Fairley, J.S. (1998). *Analysis of the diet of Leisler's bat (Nyctalus leisleri) in Ireland, with some comparative analyses from England and Germany*. Journal of Zoology 246: p417-42
18. Waters, D, Jones, G and Furlong, M. (1999). *Foraging ecology of Leisler's bat (Nyctalus leisleri) at two sites in southern Britain*. Journal of Zoology 249: p173-180
19. Jenkins, E.V. et al. (1997). *Roost selection in the pipistrelle bat, Pipistrellus (Chiroptera: Vespertilionidae), in northeast Scotland*. Animal Behaviour 56. P909-917
20. H.M.S.O. (1981). *The Wildlife and Countryside Act 1981 (as amended)*. London.

APPENDIX A – SUPPLIERS

1. Natural History Book Service
1-6 The Stables
Ford Road
Totnes
Devon, TQ9 5LE
Tel: 01803 865913
Email: customer.services@nhbs.com
Website: <https://www.nhbs.com/>

2. Habibat
Tel: 01642 724626
Email: <http://www.habibat.co.uk/contact>
Website: www.habibat.co.uk

3. Dreadnought Tiles
Dreadnought Works
Brierley Hilly
West Midlands, DY5 4TH
Tel: 01384 77405
Email: sales@dreadnought-tiles.co.uk
Website: www.dreadnought-tiles.co.uk

4. Wildlife & Countryside Services
Covert Cottage
Pentre Lane
Rhuddlan
North Wales, LL18 6LA
Tel: 0333 9000927
Email: support@wildlifeservices.co.uk
Website: www.wildlifeservices.co.uk

5. Wildcare
Eastgate House
Moreton Road
Longborough
Gloucestershire, GL56 0QJ
Tel: 01451 833181
Email: sales@wildcare.co.uk
Website: www.wildcare.co.uk

