ECOLOGICAL ASSESSMENT

SEAVIEW, MACFARLAND'S DOWN, ST MARY'S, ISLES OF SCILLY

Client: *Duchy of Cornwall*

Our reference: *22-1-2*

Planning reference: *P/22/004/FUL, P/22/005/FUL and P/22/006/FUL*

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Executive Summary

Overview

The property known as Seaview on MacFarland's Down, St Mary's was subject to a Preliminary Ecological Assessment, Preliminary Bat Roost Assessment and Bat Presence/Absence Surveys in 2020.

These assessments were revised based upon update surveys in 2022 and this report provides a current Ecological Assessment of the site. The previous reports are appended to the document but it is intended that this document represents a comprehensive and stand-alone assessment.

Proposals

The existing bungalow would be demolished and three separate dwellings with associated gardens and infrastructure would be constructed on the footprint of the building and its existing garden. A soakaway and drainage field would be constructed in an arable field to the east.

Ecological Assessment

The habitats are dominated by an extensive amenity lawn and ornamental planting with non-native boundary hedgerows. These habitats are typical of residential gardens and have limited ecological value. The brash pile present is well-established and currently provides suitable habitat for nesting birds and small mammals.

The surveys conclude a Likely Absence of bats from the existing dwelling and low-level use of the associated habitats by foraging and commuting bats.

The woody and ruderal vegetation associated with the site has the potential to support nesting birds as well as provide foraging habitat for a variety of species.

No other evidence of, or suitable habitat for, other protected species is noted.

The site itself is not subject to any statutory or non-statutory nature designations and no impacts to external designated sites are identified as a result of the proposals.

Recommendations

Recommendations provided will ensure that impacts to protected species are avoided and enhancement measures will provide a minor net gain as a result of the new development proposals. These measures include:

- Timing of vegetation clearance works to avoid impacts to nesting birds and of demolition works to avoid times when bats are most sensitive to disturbance;
- Planting recommendations to include native trees and shrubs as well as enhancement of the grassland within the new landscaping;
- Erection of bird and bat boxes to provide additional habitat resource for these species;
- Precautionary Working Methodology with regards to demolition to control the low residual risk of opportunistic or exploratory use of minor roosting niches by bats.

This report provides an appropriate baseline to inform Planning – no further ecological surveys are recommended.

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1. Introduction

1.1. Purpose of Report

This report collates information from three ecological reports originally produced for the site in 2020 and combines the information with an updated 2022 survey to produce a single Ecological Assessment.

The previous reports, as detailed below, are included as appendices to this report for comprehensiveness. However it is intended that this report can be considered a stand-alone document containing the findings, assessments and recommendations detailed within the previous reports:

- Preliminary Ecological Appraisal (PEA) produced by the Isles of Scilly Wildlife Trust in March 2020 – see Appendix 2;
- Preliminary Bat Roost Assessment (PRA) produced by the Isles of Scilly Wildlife Trust in March 2020 – see Appendix 3;
- Bat Presence/Absence Survey (PAS) produced by the Isles of Scilly Wildlife Trust in July 2020 – see Appendix 4.

1.2. Project Overview

The site is a bungalow known as Seaview set within a managed garden in MacFarland's Down, St Mary's in the Isles of Scilly.

The proposals relate to the demolition of the existing bungalow and the removal of elements of the existing landscaping including a boundary hedge, to create plots for three separate dwellings with associated infrastructure and landscaping. A soakaway will be installed in arable land to the east – this latter element of the works would result in temporary ground disturbance only.

Map 01 – Site location. Reproduced in accordance with Google's Fair Use Policy.

2. Site Location and Description

2.1. Site Location

The property known as 'Seaview' is situated in MacFarland's Down, St Mary's, Isles of Scilly TR21 0JT. The National Grid Reference for the centre of the site is SV9126212199 (see Map 1).

2.2. Site Description

The site is approximately 0.13 hectares (ha) in size and comprises a residential property surrounded by a well-managed garden. The site is bounded on three sides by similar detached properties with the exception of pasture to the east.

2.3. Local Landscape Setting

The Site is set at the southern end of a small linear development of detached dwellings at MacFarland's Down. Each of the properties are set within their own mature gardens consisting of a mixture of lawn and flower borders which are bounded by hedgerows that contain the occasional mature tree.

The land immediately to the west is comprised of a large, open field of semi-natural grassland broken up by small blocks of scrub which is seasonally grazed by cattle. This field backs onto open headlands, consisting of a mosaic of coastal grassland, heathland and scrub which are grazed for conservation purposes.

Immediately west of Seaview is a small block of cultivated fields used for growing flowers which are linked to a small shelterbelt by mature hedgerows of Pittosporum (Pittosporum tenuifolium). This shelterbelt forms part of the north-eastern boundary of the local golf course, a large, exposed expanse of very short grassland and heathland with minimal trees or shrubs to provide cover.

Due south and to the south-east of the proposed development the landscape is dominated by a mosaic of small, enclosed fields used for growing flowers. This contiguous patchwork of small fields, hedgerows and linear shelterbelts extends for at least 2km, reaching as far south as both wetland SSSIs.

Immediately east-north-east of the proposed development, a lane bounded on both sides by mature hedgerows, leads to a small shelterbelt to the north and to further cultivated fields bound by hedgerows. This habitat extends 660m north-eastwards to the large pine shelterbelt at Trenoweth. To the east the small fields and lanes are bounded by hedgerows or mature trees. This habitat continues south-eastwards for at least 2km.

Map 02 – Showing the landscape and habitats immediately surrounding the site. Reproduced in accordance with Google's Fair Use Policy.

2.4. Relevant Designations

The Site itself is not subject to any statutory or non-statutory designations of relevance to the consideration of ecological value or impacts.

There are four statutory designated sites of conservation importance situated within a 1km radius of the site. Details of these designations are provided below:

- **Isles of Scilly SAC Complex –** Situated 673m north of the proposed development designated for its nationally important numbers of Grey Seal and the nationally rare Shore Dock. Annex 1 habitats that are the primary reason for site selection include; Mudflats; inter-tidal sandflats; reefs and sub-tidal sandbanks

- **Isles of Scilly SPA Complex –** Situated 673m north of the proposed development and designated for its internationally important seabird assemblage of 13 species including; internationally important numbers of Lesser Black-backed Gull and nationally important numbers of European Storm Petrel and European Shag.

- **Porthloo SSSI –** Situated 815m south-west 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.

- **Watermill Cove SSSI –** Lying 1km due east of Seaview, 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.

2.5. Planning Context

2.5.1. National Planning Context

The National Planning Policy Framework (NPPF)[1] sets out the government's requirements for the planning system in England. A number of sections of the NPPF are relevant when taking into account development proposals and the environment.

As set out in within Paragraphs 7 to 10 of the NPPF "*the purpose of the planning system is to contribute to the achievement of sustainable development*." The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 170 states that "*Planning policies and decisions should contribute to and enhance the natural and local environment and minimise impacts on and providing net gains for biodiversity*." A number of principles are set out in Paragraph 175 including the principle that where harm cannot be adequately avoided then it should be adequately mitigated, or, as a last resort, compensated for.

In addition to the NPPF, the Office of the Deputy Prime Minister (ODPM) circular 06/0511[2] provides guidance on the application of law relating to planning and nature conservation as it applies in England. Paragraph 98 states "*the presence of a protected species is a material consideration when a planning authority is considering a development proposal, that if carried out, would be likely to result in harm to the species or its habitat*." Whilst Paragraph 99 states "*it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted*."

2.5.2. Local Planning Context

The following policies relating to biodiversity are most relevant to this assessment:

- **Core Policy 1** - Environmental Protection;
- **Policy OE2** - Biodiversity and Geodiversity.

The following planning guidance documents are also of relevance:

- The Isles of Scilly Local Development Framework Supplementary Planning Document Biodiversity and Geological Conservation[3].

[1] Ministry of Housing, Communities & Local Government. (2019). National Planning Policy Framework. OGL
[2] Office of the Deputy Prime Minister. (2005). Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. ODPM Circular 06/2005
[3] https://www.scilly.gov.uk/sites/default/files/IslesofScillyBiodiversity&GeodiversitySPD.pdf

3. Survey Methodology

3.1. Introduction

The following information reflects the Survey Methodology used by the Wildlife Trust to produce the PEA, PRA and PAS reports which are appended to this document.

Updated surveys undertaken in February 2022 followed the same methodology.

3.2. Desktop Survey

A full biological record centre desktop study was undertaken for the presence of bats, but was not taken for the remaining assessment of the development, as it was not considered necessary given the limited scale of impacts and the nature of the on-site and surrounding habitats. The desk study also included accessing the Multi-Agency Geographic Information for the Countryside (MAGIC)[4] database in order to establish the presence of statutory designated sites, including all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar sites and Sites of Special Scientific Interest (SSSIs) within 1km of the site.

Other resources used were aerial photography to identify the presence of habitats such as woodland blocks, watercourses and hedgerows in close proximity to the site. This assists in the assessment of the potential of the site and its surrounding habitat to support protected species.

3.3. Vegetation and Habitat Assessment

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 survey methodology[5]. This involved a walkover survey to identify broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate.

A list of characteristic plant species for each vegetation type was compiled and any invasive species encountered as an incidental result of the survey are noted.

This survey was originally undertaken by the Wildlife Trust in 2020 and repeated in 2022 by James Faulconbridge to update the findings.

[4] http://defra.magic.gov.uk
[5] JNCC (2010). Handbook for Phase 1 Habitat Survey: A technique for environmental audit – Field manual

3.4. Bats

3.4.1. Preliminary Bat Roost Assessment (PRA)

The PRA 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.

The building was classified according to its suitability for use by roosting bats. The classification was dependent on a number of factors and the categories used to classify buildings and the survey effort required to determine the presence or absence of bats accord with those published in the relevant Best Practice methodology[6].

This survey was originally undertaken by the Wildlife Trust in 2020 and repeated in 2022 by James Faulconbridge to update the findings.

3.4.2. Presence/Absence Survey (PAS)

The objective of the two dusk emergence surveys was to detect active bat use of the site and identify any exit locations being used around the building. Survey effort was concentrated on areas of the site where suitable features or bat field signs were noted from the PRA. The survey followed relevant Best Practice methodology.

The following equipment was used for the dusk emergence survey at the site:

- Anabat Express (Frequency Division) static bat recorder;
- Elekon Batscanner Stereo Heterodyne;
- Elekon Batscanner Heterodyne;
- Magenta Bat 4 Bat Detector;
- Bestguarder WG-50 Night vision camera.

Sound recordings were analysed using Analook W 4.3x software to confirm surveyors' identification of species.

These surveys were undertaken by the Wildlife Trust in 2020 – full details of surveyor positions, weather conditions and other environmental data are

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

provided in the PAS report appended to this document. These details are not repeated here for brevity and updated surveys were not considered to be necessary in 2022.

3.5. Birds

The assessment of breeding and wintering birds on the site was based on the suitability of habitat present, evidence of nesting such as old or currently active nests and the presence of bird species that may potentially nest within the available habitat.

3.6. Other Protected Species

An assessment of potential and suitability for other protected species was made based on the habitats present both on- and offsite; the local status of these species; and the background records.

No further protected species survey methodologies were required to support a comprehensive Ecological Assessment.

3.7. Surveyor Competence

The original PEA and PRA surveys were undertaken in 2020 by Darren Mason BSc (Hons) of the Isles of Scilly Wildlife Trust. Darren has undertaken professional Bat Licence Training to permit him to undertake professional surveys and has gathered sufficient working hours to achieve a Natural England Class Level 2 licence.

The PAS survey was led by Darren and supported by Rob Carrier and Rhianna Pearce, both of the Isles of Scilly Wildlife Trust. These surveyors have experience of undertaking emergence and re-entry surveys.

The updated PEA and PRA in February 2022 were undertaken by James Faulconbridge MRes MCIEEM of IOS Ecology. James is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) is a Licenced Bat Worker (Class Licence Level 2) and has over 14 years' experience undertaking a range of ecological surveys and assessing the factors that affect ecology in relation to construction and the built environment.

3.8. Survey Dates

The original PRA and PEA surveys were undertaken on 20th March 2020.

The PAS surveys were undertaken on the nights of 19th May 2020 and 7th July 2020.

The updated PEA and PRA surveys were undertaken on 3rd February 2022.

3.9. Zone of Influence

The Zone of Influence (ZOI) is the area within which the ecological impacts arising from a proposed development are likely to be significant. Due to the nature of the proposed development the ZOI is identified as the site and the habitats which immediately bound it.

The sensitivity and value of offsite statutory and non-statutory sites mean that the potential for impacts arising from the proposed development should be considered within a wider ZOI. Therefore, scoping for direct and indirect impacts to designated sites is conducted within a ZOI of 2km of the Survey Site.

3.10. Assessment of Ecological Value

The ecological values provided within this report are based around both the professional judgement of the author and current published relevant guidance, including "Guidelines for Ecological Impact Assessment in the United Kingdom."[7]

[7] CIEEM (2016). Guidelines for Ecological Impact Assessment in the UK and Ireland. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester.

4. Results

4.1. Introduction

This section of the report outlines the results of the surveys undertaken between 2020 and 2022. Where discrepancies in condition arise, the updated 2022 information will be presented and reference to previous conditions will be made only where of significance to the assessment. Where surveys have not been updated in 2022, for example in the case of the PAS for bats, the 2020 results are presented along with commentary on current validity based on the updated walkover survey.

The following descriptions can therefore be considered to represent the current site status in February 2022. The original reports which describe the site conditions in 2020 are appended to this document for reference.

4.2. Habitats

4.2.1. Building

The central focus of the Site is the bungalow known as Seaview. A description of this building is provided in Section 4.3 regarding bats, as the primary focus of ecological consideration is with regards to its potential to support roosting bats.

4.2.2. Residential Garden

The building is surrounded by a well-maintained residential garden.

The garden is predominantly an amenity grass lawn with a typical range of species characteristic of a regularly maintained sward with minimal inputs allowing a degree of herbaceous diversity to develop. Species are frequently typical of sandy soils including field speedwell (*Veronica persica*), common fumitory (*Fumaria officinalis*) and hairy bitter-cress (*Cardamine hirsuta*); along with more typical lawn species including creeping buttercup (*Ranunculus repens*), common daisy (*Bellis perennis*), white clover (*Trifolium repens*) and broadleaf plantain (*Plantago major*). In areas where the sward is shaded, or subject to recent disturbance, this is reflected by a higher proportion of characteristic species including red campion (*Silene dioica*), hogweed (*Heracleum spondylium*) and common nettle (*Urtica dioica*). Invasive non-native species are also recorded including three-cornered leek (*Allium triquetrum*) and montbretia (*Crocosmia x crocosmiiflora*). Both of these species are listed under Part 2, Schedule 9 of the Wildlife and Countryside Act[8].

Planted within the mown grassland areas are occasional introduced shrub species that include common laurustinus (*Viburnum tinus*), rhododendron (*Rhododendron ponticus*), dogwood (*Cornus sp.*), yucca species (*Yucca sp.*) and Pittosporum (*Pittosporum tenuifolium*). Found along the eastern boundary are

[8] HMSO (1981). Wildlife and Countryside Act 1981 (as amended). HMSO, London.

several mature specimens of New Zealand Flax (*Phormium tenax*). Several shrubs of European gorse (*Ulex europaea*) are found along the eastern border bounding the hedgerow, as is a small stand of bramble (*Rubus fruticosus agg*.) situated under the yucca along the southern boundary.

A large brash pile is present in the south-western corner of the garden. Though there are recent additions to this pile arising from ongoing maintenance of the garden, much is well established with significant growth of opportunistic ruderals such as bramble. This brash pile would provide excellent nesting habitat for breeding birds and small mammals.

Photo 01 – Showing the close-mown amenity grassland which dominates the site. The brash pile can be seen in the south-western corner of the garden.

Photo 02 – Showing typical examples of the trees and shrubs set within the amenity grassland.

4.2.3. Boundary Features

The site is enclosed by hedgerows on all boundaries; though sections are sparse or missing including to the north of driveway entrance. A hedgerow of Cordoba (*Escallonia cordobensis*) is present along the southern boundary; a hedgerow of Pittosporum along the western and northern boundary; and the eastern boundary is partly enclosed by a hedgerow of Maidenhair vine (*Muehlenbeckia complexa*) south of the driveway into the property.

Two Dutch elm trees are present in the north-western corner of the site on the boundary set just in front of the Pittosporum hedge.

Two short sections of granite stone wall extend along part of the northern boundary and the eastern boundary (north of the access drive). These are typical in design for the islands being soil-filled. There are opportunistic species growing within or over these walls including gorse and bramble.

Photo 03 – Showing the maidenhair hedge on the eastern boundary with opportunistic gorse shrubs developing

Photo 04 – Showing the Pittosporum hedge on the northern boundary with the two elm trees visible.

4.2.4. Adjacent Arable Field

The field to the east of the property is separated from it by a single-track tarmacked road. The field boundary is a soil-filled double-stone wall which is of a similar character and condition to the one bounding the site and described above.

The field itself was fallow at the time of survey but is likely to be used for bulb growing. A bank of ruderal vegetation, dominated by bramble, occurs along the boundaries.

Photo 05 – Showing the overgrown wall in the north-eastern corner of the site – this would be disturbed for the creation of the soakaway.

Photo 06 – Showing the view of the adjacent field from within the site – the road and separating wall can be seen.

4.3. Bats

4.3.1. Background Data

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 five 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*). Leisler's bat (*Nyctalus leisleri*) and Nathusius pipistrelle (*Pipistrellus*

nathusii) records were also returned though these species are not known to be resident on the island.

Twenty bat roosts are known to exist within 2km of the proposed development, with one known roost in close proximity to the east of the property.

4.3.2. Building Description

Seaview is a detached block-built, part-rendered bungalow which appears to have been extended along its eastern elevation in the recent past. The render on all sides appeared to be in good condition, with no cracks or missing masonry. Both the original building and extension have independent hipped rooves which are tied by a lead valley. The main roof is clad in the original scantle tiles with well-pointed mortar between each layer and concrete capping tiles. The more recent eastern extension is clad in modern, well-fitting slate tiles with glazed concrete capping tiles along its ridges. The ridge tile at the base of the hipped section to the south-east has slipped, but this does not provide further access to roosting opportunities within the roof. The eastern roof of the original dwelling has a rendered chimney stack that is tied into the roof with the original lead flashing – there are minor gaps associated with this but these appear to be superficial.

The soffit boards throughout are of a box gable style and are constructed of wood and are well-fitting. Air vents are equally spaced in the soffit boards around the full perimeter of the development. Each vent has a plastic cover which has a secondary layer of fine mesh below which permits airflow into the roof but helps to deny access into the building.

The windows comprise double-glazed timber units and single-glazed sash windows with slate sills below. Wooden doors are present on the northern and eastern aspects of the extension. All window and door frames are well fitted.

The internal roof space of Seaview is of a Queen post and collar beam type construction, with exposed purlins and rafters. The roof space behind this construction is clad throughout in hardboard, with only one area of baton and scantle tiles exposed on the western elevation, where it appears an old chimney stack was once present. Light showing through the eaves in a number of discreet locations indicates that it would be possible for bats to enter the interior of the roof space, but access would be obstructed by the guttering attached to the soffits below the tiles.

Internally, the loft was relatively clean with recently insulated floor. A full inspection of the roof void did not reveal any evidence of bats either in 2020 or in 2022.

Access into the roof space of the more recent eastern extension was not possible due to the lack of a loft hatch – therefore no internal description could be made but inspection of the tiles externally identified no suitable access points to this component of the roof.

As the building is proposed to be demolished, the internal floor space was also inspected. Examination with endoscope of holes in partition walls and/or cupboards was undertaken. Throughout this inspection no evidence of bats or suitable roosting habitat within the main living space were noted.

Photo 07 – Showing the interior of the roof – the beam structure can be seen along with light from the eaves where potential internal access could be gained.

Photo 08 – Showing the slightly lifted flashing around the chimney – this appears to be superficial

Photo 09 – Showing an example of the minor gaps in the tiles; otherwise the scantle tiles are well fitted with mortar beneath.

Photo 10 – Showing the damaged terminal hip tile in the south-east corner of the property – this was inspected at height and no roosting potential was identified.

4.3.3. Roosting Potential

The proposed development has very limited features which are potentially suitable for roosting bats – these comprise:

- Missing tile just above guttering along with missing mortar below several tiles on western aspect of the original building which could permit access below these tiles to minor niches for use by individual bats;
- Gaps beneath terminal tiles at the eaves in discreet locations which would permit access to the main roof space – only free-hanging roosting opportunities suitable for species such as brown long-eared were noted internally however;
- A minor gap below the slate sill on the southern aspect which provides access to a very minor niche potentially suitable for use by individual bats;

- Minor gaps beneath lifted flashing on the chimney though these appear to be superficial.

The majority of these potential features were recorded in 2020 and there appeared to be little or no deterioration in condition of the building which might change the assessment of Low potential.

No other structures on site were identified as offering roosting potential, including the two elm trees situated on the north-western boundary.

4.3.4. Foraging and Commuting

The habitats associated with the residential garden offer suitable foraging and commuting habitat for bats roosting within the wider landscape. This includes the boundary hedgerows which, due to their linear vegetated nature, may represent a component of a flightline used by bats between roosting and foraging habitats.

4.3.5. Presence/Absence and Bat Activity Surveys

The two dusk emergence surveys were undertaken on 19th May 2020 and 7th July 2020. No bats were recorded emerging from the property on either occasion.

All bat activity recorded was confined to commuting and feeding behaviour, recorded primarily along the eastern side of the eastern boundary hedge. The number of bat passes recorded were relatively low – a total of 26 common pipistrelle passes were recorded during the initial survey and only two passes by the same species on the second survey. No other bat species were recorded on either survey.

These results confirmed the likely absence of roosting bats at Seaview. However, the results can only be based on presence/absence at a particular time as bats are highly mobile in nature may use the building at other times of the year. During both dusk surveys it was noted that bats use the eastern boundary hedge both as a commuting route and to feed along.

4.3.6. Conclusion

The building was identified in 2020 as providing Low Potential for use by roosting bats based on the limited number of suitable features associated with the property. The updated inspection survey undertaken in February 2022 identified negligible change in the condition of the property or the distribution of features. The assessment is therefore confirmed as Low Potential for use by roosting bats in February 2022.

An assessment of Low Potential would require a single dusk or dawn survey to support an assessment of Likely Absence in accordance with the relevant Best Practice guidance. The two PAS surveys undertaken in summer 2020 exceeded this requirement and confirmed not only a lack of emergence from the property

but generally low levels of site presence by bats. Taking into account this recent survey effort, the absence of evidence of bat occupation from an updated inspection in February 2022, and the continuity in condition and opportunity within the intervening timeframe, it is considered that the PAS results can still be relied upon to support an assessment of Likely Absence with regard to an updated Planning Application in 2022. The residual risk arising from the unlikely instance of bats utilising features associated with the building can be addressed through appropriate avoidance measures during demolition.

The PAS surveys identified low levels of bat activity including foraging and commuting – this finding does not suggest a requirement for retention of the eastern boundary hedgerow although including equivalent or enhanced vegetated linear features in the design would ensure continuity of landscape connectivity.

4.4. Birds

During the site visits in both 2020 and 2022, a number of typical garden species were noted including song thrush (*Turdus philomelos*), blackbird (*Turdus merula*), wren (*Troglodytes troglodytes*) and dunnock (*Prunella modularis*).

No active bird nests were recorded, though the site is considered to have high potential for supporting nesting birds in shrubs, boundary hedges and the brash pile.

The stone boundary walls and associated vegetation along with ruderal boundary vegetation within the adjacent arable field, may have potential to support nesting birds which favour these habitats.

4.5. Other Protected Species

The surveys did not identify suitable habitat for other protected or notable species.

5. Evaluation

5.1. Proposals

The proposed development entails the demolition of the existing building and its replacement with three new dwellings. Landscaping works would require the removal of the existing brash pile and most elements of the ornamental shrub planting within the existing amenity grassland, along with a reduction in the extent of the grassland habitat. The proposals also require the complete removal of the hedge along the eastern boundary and its replacement it with a low dry-stone wall. Partial removal of the hedge along the southern boundary would also be required.

Temporary impacts would occur through the installation of a drainage pipe and soakaway field in the arable field to the east of the property. This would be restricted to vegetation clearance and soil disturbance for the installation of the infrastructure with restoration to the existing condition following completion of works.

5.2. Assessment of Ecological Impacts

5.2.1. Statutory and non-statutory Sites

The proposed development would not impact directly or indirectly upon any offsite statutory sites.

5.2.2. Habitats

The habitats associated with the Site are of inherently low ecological value comprising well-managed, species-poor amenity grassland with a small number of introduced shrub species and non-native hedgerows. Whilst these all hold inherent value as green space and are capable of supporting a limited range of generalist species, they are ubiquitous in the local environs. The proposals will result in an increase in built infrastructure on the site, and a reduction in the area of 'green space'.

The removal of the non-native hedgerow will represent the loss of an established vegetated linear feature which is likely to provide a small contribution to landscape-scale connectivity; though considerable replication of function occurs through inspection of aerial photographs.

There is scope to compensate for the removal of these discreet features and for the overall reduction in area of green space, through the enhancement and improvement of the new garden areas. Recommendations are provided to secure this.

5.2.3. Bats

The assessment concludes the 'Likely Absence' of roosting bats on the site. For the purposes of this assessment therefore, there would be no impact on bat roosting habitats. However precautionary methodologies would be required to control residual risk of impact in the unlikely event of bats making use of roosting features on a precautionary or opportunistic basis. The provision of bat boxes on the new properties would represent an increase in the availability of suitable habitats for local bat populations.

The PAS survey results indicate low level foraging and commuting behaviours associated with onsite habitats, particularly around the boundaries. Inspection of the aerial imagery of the site reveal that potential flightlines are replicated widely within the surrounding environs, and the dominant species recorded on the island (common and soprano pipistrelle) do not have high dependency on unbroken flight paths. The levels of activity recorded are typical of a residential garden on the edge of open countryside.

The habitat impacts are unlikely to have any significant effect on the local bat populations due to the small size of the garden and the dominance of low-value, ubiquitous habitats. However, the recommendations provided to enhance the post-development garden habitats would also benefit bats through increased invertebrate diversity and thus foraging resources.

It is not considered that there is a requirement to replace the hedgerow for the reasons outlined; however the splitting of the site into three separate dwellings offers an excellent opportunity to create hedgerows between properties and thus increase both habitat connectivity and foraging resources.

5.2.4. Birds

The site provides various suitable habitats for use by common nesting bird species. The removal of these elements could result in disturbance to nests if appropriate measures are not put in placed to avoid this.

Long term opportunities to increase the range of nesting habitats within the site can be secured through hedgerow and tree planting, and through the installation of bird boxes.

5.2.5. Other Protected Species

The assessment did not identify the presence of, or suitable habitat for, other protected species. No further impact assessment is therefore provided.

6. Recommendations

6.1. Timing of Works

6.1.1. Building Demolition

The assessment concludes a Likely Absence of roosting; however these species are mobile and opportunistic in their use of roosting habitat. A precautionary approach to demolition should therefore be taken to minimise the risk of harm in the unlikely event of bats utilizing the building.

Demolition works to the main building should be targeted between **September – November inclusive**, or **February – April inclusive**. This is to ensure that the demolition works do not take place when bats are most vulnerable to disturbance, either during the summer when they have dependent young, or in the winter when they are in torpor or with reduced activity. The mild winters on Scilly mean that pipistrelle species remain relatively active throughout the year and therefore it is only recommended that the winter months of December and January should be actively avoided.

The timing of works constraints detailed above apply only to the demolition of the building.

6.1.2. Vegetation Clearance

The following features within or adjacent to the Site offer suitable nesting habitat for breeding birds:

- Large brash pile within the residential garden;
- Trees and shrubs within the amenity grassland;
- Boundary features including hedgerows;
- Walls and associated ruderal vegetation to the east of the property;
- Ruderal vegetation bounding the arable field to the east.

Removal or disturbance of these features should be conducted outside of the bird breeding season which runs from March to August inclusive. Works affecting the features specified above should therefore be targeted between **September and February inclusive**.

If works affecting the above specified features proceed during the breeding season, a nesting bird survey would need to be carried out by a suitably qualified person prior to clearance. Nests are only protected if they are active (i.e. being used to rear young) or in the process of being built.

- Where active nests are identified, works affecting these must be delayed until the chicks have fledged the nest.
- Once it is confirmed that nests are absent or no longer active, the works can proceed.

6.2. Landscaping

The landscaping scheme for the gardens should include the planting of native trees and shrubs to replace those lost in the development works and to provide continued nesting and foraging habitat for breeding birds, and a foraging resource for bats.

Retained grassland should be enhanced with over-seeding and plug planting of wildflowers. It is recommended that a Flowering Lawn mix be used in areas likely to be used actively by new residents – these mixes include a range of species which provide pollinator resource whilst also being tolerant of regular mowing and footfall.

To address the removal of the maidenhair hedgerow along the eastern boundary, compensatory planting in the form of two native boundary hedges between the new dwellings should be provided, along with the planting of three native standard trees approximately 10m apart along the length of the eastern boundary. To enhance the development and to provide a small net gain in biodiversity, all replacement hedgerows and standard trees should consist of native species, known to be present on the islands, or were once present on the islands. Shrubby or hedgerow species include hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*)) and hazel (*Corylus avellana*); whilst appropriate tree species include oak (*Quercus petraea*), birch (*Betula pendula*) and crab apple (*Malus sylvestris*).

It is noted that, contrary to the original PAS report appended to this document, a separate permission from the Council is not required to remove the hedgerow along the eastern boundary; if the proposal is included within the Planning Application and the application is approved then further consents are not required.

6.3. Bat and Bird Boxes

The new buildings should include built-in or otherwise attached boxes to provide additional bat roosting and bird nesting habitat.

- One in-line Habibat bat box, or Schwegler 1FE Bat box should be installed at the apex of the gable end of each new dwelling (one box for each dwelling). Two should be facing the same aspect, whilst the remaining box should face the opposing aspect to provide varying environmental conditions that bats can take advantage of;
- One or more bird boxes should be installed on each new dwelling. House sparrows nest communally and nest boxes could accommodate this, either through the installation of a single purpose-built nest box comprising several individual chambers with separate entrances, or the installation of 3+ nest boxes in close proximity. Nest boxes suitable for hole-dwelling species such as blue tits, or open-fronted boxes for species such as blackbird and robin also have a high likelihood of occupation. Boxes should be mounted on a wall, at a height of at least 3m above the

ground with an entrance clear of vegetation/other features which may put them at risk of predation from cats.

6.4. Precautionary Working Methodology for Bats

The assessment of Likely Absence means that no further surveys are required to support Planning, nor is there any requirement for an European Protected Species Mitigation Licence (EPSML) to permit works to proceed with legislative compliance.

Bats are however mobile in their use of roosting habitat and there remains a low residual risk that changes in site conditions or opportunistic use of potential roosting opportunities may result in bats being present at the time of demolition. This risk is common to most demolition projects and can be adequately controlled through an appropriate Precautionary Working Methodology to be followed by contractors undertaking the demolition works.

This Method Statement is outlined in Appendix 1 of this report.

6.5. Invasive Species

Under the Wildlife and Countryside Act, 1981, a number of alien plant species are listed in Schedule 9 Part II. These are species which have become naturalised in Britain, usually as garden escapees. Section 14 (2) of the Act states that an offence is committed "*if any person plants or otherwise causes to grow in the wild any plant*" in Schedule 9. Three-cornered leek and Montbretia were both recorded – these species are ubiquitous across the islands and their low-level presence on the site is commonplace.

It is incumbent on a landowner to ensure that any actions of land management or development do not result in the plant being spread either within the existing site or elsewhere. Working practises during demolition and construction should be designed to ensure this.

6.6. Survey Validity and Update

The data supporting this ecological assessment are considered to provide an appropriate baseline for planning in 2022.

Due to the PAS surveys being undertaken in 2020, it is advised that if demolition of the bungalow is not completed in 2022, then further update surveys comprising a PRA and PAS should be undertaken prior to demolition in order to re-affirm the assessment of Likely Absence.

6.7. Planning Conditions

The recommendations outlined in this Section 6 of the Ecological Assessment report could be secured through means of a Planning Condition attached to the permission should the LPA be minded to approve.

APPENDIX 1 - PRECAUTIONARY METHOD STATEMENT WITH REGARDS TO BATS

The purpose of this Method Statement is to ensure that demolition works can proceed where presence of bats has been determined to be unlikely, but a precautionary approach is still advisable. It has been determined that direct harm to roosting bats during the proposed demolition works would be highly unlikely.

Contractors should, however, be aware of **their own legal responsibility with respect to bats**:

Relevant Legislation regarding Bats

The Conservation of Habitats and Species Regulations 2017, or the 'Habitat Regulations 2017', transposes European Directives into English and Welsh legislation. Under these regulations, bats are classed as a European Protected Species and it is, therefore, an offence to:

- *Deliberately kill, injure or capture bats;*
- *Deliberately damage or destroy bat roosts.*

A bat roost is commonly defined as being any structure or place that is used as a breeding site or resting place, and since it may be in use only occasionally or at specific times of year, a roost retains such a designation even if bats are not present.

Bats are also protected from disturbance under Regulation 43. Disturbance of bats includes in particular any disturbance which is likely:

(a) To impair their ability -

- *to survive, to breed or reproduce, or to rear or nurture their young; or*
- *in the case of animals of a hibernating or migratory species, to hibernate or migrate; or*

(b) To affect significantly the local distribution or abundance of the species to which they belong.

Bats also have limited protection under the Wildlife and Countryside Act 1981 (as amended) and the Countryside Rights of Way Act 2000 (as amended). It is, therefore, an offence to:

- *Intentionally or recklessly destroy, damage or obstruct any structure or place which a bat uses for shelter or protection.*
- *Intentionally or recklessly disturb bats whilst occupying any structure or place used for shelter or protection.*

Contractors should be aware of **where bats are most likely to be found** in respect to the given building structures:

Missing tile just above guttering along with missing mortar below several tiles on western aspect of the original building. A minor gap below the slate sill on the southern aspect which provides access to a very minor niche potentially suitable for use by individual bats. Minor gaps beneath lifted flashing on the chimney though these appear to be superficial.

Contractors should be aware of **the process to follow in the event of finding bats** or evidence indicating that bats are likely to be present:

If bats are identified, works should cease and the named ecologist contacted immediately for advice. If the bat is in a safe situation, or a situation which can be made safe, they should remain undisturbed. Only if the bat is in immediate risk of harm can the bat be moved with care and using a gloved hand. This is a last resort and should only be undertaken for humane reasons if the bat is at immediate risk of harm **and** if the ecologist cannot be contacted for advice.

APPENDIX 2 – PEA REPORT (2020)

PRELIMINARY ECOLOGICAL APPRAISAL OF:

SEAVIEW
McFARLANDS DOWN
ST MARY'S
ISLES OF SCILLY
TR21 0NS

Client: Duchy of Cornwall

Our reference: BS27-2019

Report date: 23rd March 2020

Author: Darren Mason BSc (Hons)

Report peer reviewed: Darren Hart BSc (Hons)

Report signed off: Sarah Mason

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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Contents

Non-technical Summary

- On 20th March 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) of 'Seaview', McFarlands Down, St Mary's, Isles of Scilly, TR21 0NS (BS27-2019), for which there is a proposal to demolish the existing bungalow to ground level and replace with three new dwellings within the plot. The removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south is included in the proposal
- The PEA was undertaken to ascertain the potential for protected habitats and species to be present within the site
- The habitats on site are assessed as being of low ecological value
- The property was deemed as having a low bat roost potential, but the proposals may impact negatively on the feeding and commuting habitat of bats as result of proposals to remove the complete hedge along the eastern boundary and part of the hedge along the southern boundary, as well as some of the scattered trees and introduced shrubs as part of the creation of the new dwellings
- The property was deemed to have high ecological value for breeding birds and these are likely to be negatively impacted as a result of a loss of breeding and feeding habitat.
- The property was deemed to have negligible ecological value for reptiles, amphibians and invertebrates
- Phase 2 bat surveys are recommended to ascertain the presence or likely absence of bats on site in order to enable the demolition of the property.
- Phase 2 bat surveys are recommended to evaluate the impact of the removal of the hedgerows on the feeding and commuting habitat of bats
- Due to the nature of the proposal mitigation will be required to support breeding birds and bats to off-set the loss of the hedgerows, scattered trees and introduced shrubs.
- A net gain in biodiversity is possible on this site if bird boxes and integrated bat boxes are erected on each of the new dwellings
- The proposed development has the potential to provide further ecological enhancements through the planting of native trees and shrub species (not like for like, or Pittosporum) and enhancement of the remaining grassland through over-seeding and plug planting with wild flowers.
- If works have not been completed by December 2021, it is recommended that this ecological appraisal is updated
- **It must be noted that this report alone is not 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) of 'Seaview', McFarlands Down, St Mary's, Isles of Scilly TR21 0JT, National Grid Reference SV9126212199 (see Map 1). The survey, carried out on 20th March 2020, was undertaken in order to inform proposals to demolish the existing bungalow to ground-level and replace with three new dwellings within the plot and includes the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south.

1.2 Aims and Scope of the report

This report is a Preliminary Ecological Appraisal (PEA). According to the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines, a PEA "*can be used as a scoping report (for non-Environmental Impact Assessment (EIA) projects), but should be submitted as part of a planning application unless it can be determined that the project would have no significant ecological effects, no mitigation is required and no further surveys are necessary.*"[1]

This report is based on an extended Phase 1 habitat survey and desktop study aimed at assessing the suitability of the site to support notable habitats and protected species. This report will assess the compliance of the scheme with relevant local and national planning policy and will provide an initial assessment of the biodiversity value of the site to be made, identifying the likely ecological constraints associated with the project and identifying any mitigation measures likely to be required following the '*Mitigation Hierarchy*'[2]. Any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA) will be identified, as will any opportunities to deliver ecological enhancement.

1.3 Site Setting and Description

Seaview is situated in the Isles of Scilly National Character Area (NCA), described by Natural England as follows[3]; "*The Isles of Scilly comprise over 200 granite islands scattered across 200 km2, set out in the Atlantic some 45 km south-west of Land's End. Of these islands only five are currently inhabited, namely the islands of St Mary's, St Agnes, St Martin's, Tresco and Bryher. The occupied islands cover a total area of just over 14 km^2. The islands contain 26 Sites of Special Scientific Interest and one Special Area of Conservation (SAC), designated for a range of geological and biological features, including maritime heathland and grassland, as well as one Special Protection Area and Ramsar site, highlighting the*

important seabird colonies. The marine environment between and around the islands is designated as an SAC and a Marine Conservation Zone for the wealth of marine species it supports, from diverse rocky reef to grey seals that breed around the islands. For such a small land area, the islands display a striking diversity of landscape, including lowland heath and small pastures enclosed by stone walls and banks, plus tiny hedged bulb fields and a varied coastline. Many of these features have been in place for 4,000 years, and still retain their original purpose. Harsh conditions created by the maritime climate mean that woodland cover is minimal. It is a landscape rich in history, with 900 historic monuments. The most notable features are the outstanding prehistoric monuments of chambered barrows and standing stones of the late Neolithic and early Bronze Age. The entire NCA has been designated as an Area of Outstanding Natural Beauty (AONB) and is recognised as a Heritage coast.

The nearest and largest conurbation to Seaview is Hugh Town, situated 1.7km south-west. The proposed development is situated within a open rural landscape dominated by a patchwork of small enclosed cultivated fields used in the flower-farming industry, semi-natural grazed pasture interspersed by small deciduous and coniferous shelterbelts and a mosaic of coastal grassland and heathland (for a more detailed description of the surrounding habitat see report IoSWT-BS27-2019).

The site is approximately .13 hectares (ha.) in size and comprises a residential property sat in the centre of its own well-managed garden. The site is bounded on three sides by similar detached properties with the exception of pasture to the east.

Figure 1 Site Location

1.4 Site proposals

This report is provided alongside a Preliminary Roost Assessment (PRA) (IoSWT-BS27-2019) in support of a planning application for the demolition of the existing property to facilitate the construction of three new dwellings. The proposals include the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow along the eastern boundary of the site and replace with a low dry stone wall and access into the site and part removal of the *Escallonia* sp. hedge to the south. It is presumed that the existing garden landscaping will remain on site and that the planning application will be submitted in the summer of 2020 with construction commencing soon after planning has been achieved.

2.0 Methodology

2.1 Zone of Influence (ZoI)

The ZoI is the area encompassing all predicted negative ecological effects from the proposed scheme and is informed by the habitats present within the site and the nature of the proposals. Due to the scale and nature of the proposals it is considered that a ZoI of 1km from the centre of the site is appropriate for the gathering of information for the desk study. For the extended Phase 1 habitat survey the area within the red line boundary (see map 1.) was considered appropriate.

2.2 Desk Study

A full biological record centre desktop study was undertaken for the presence of bats (see report IoSWT-BS27-2019), but was not taken for the remaining assessment of the development, as it was not considered necessary given the limited scale of impacts and the nature of the on-site and surrounding habitats. The desk study also included accessing the Multi-Agency Geographic Information for the Countryside (MAGIC)[4] database in order to establish the presence of statutory designated sites, including all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar sites and Sites of Special Scientific Interest (SSSIs) within 1km of the site.

Other resources used were aerial photography to identify the presence of habitats such as woodland blocks, watercourses and hedgerows in close proximity to the site. This assists in the assessment of the potential of the site and its surrounding habitat to support protected species.

2.3 Extended Phase 1 Habitat Survey Methods

The survey involved a walkover of the site to identify the habitat types present and to record evidence of the more commonly encountered protected species. The scope of the protected species was based on the habitats present with particular reference to bats, birds, reptiles/amphibians and invertebrates (protected species such as Badger (*Meles* meles), Dormouse (*Muscardinus* avellanarius) and Great Crested Newt (*Triturus* cristatus) are not known to occur on the islands). Details of the species-specific appraisal methods are given below.

2.3.1 Vegetation

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 survey methodology[5]. This involved a walkover survey to identify broad vegetation types, which were then

classified against Phase 1 habitat types, where appropriate. A list of characteristic plant species for each vegetation type was compiled and any invasive species[6] encountered as an incidental result of the survey are noted.

2.3.2 Bats

An assessment was made of the suitability of the buildings and trees up to the site boundary to support roosting bats based on the presence of features such as loose or missing tiles, lifted lead flashing for buildings and holes, cracks, splits and loose bark for trees. An assessment was made of the suitability of the site and surrounding landscape to support foraging and/or commuting bat species. This survey confirmed to current Bat Conservation Trust (BCT) guidelines[7]. For in depth details of this survey please see report IoSWT-BS27-2019.

2.3.3 Birds

The assessment of breeding and wintering birds on the site was based on the suitability of habitat present, evidence of nesting such as old or currently active nests and the presence of bird species that may potentially nest within the available habitat.

2.3.4 Reptiles/Amphibians

The reptile survey was based on an assessment of the suitability of habitat present within the site to support a population of reptiles. Reptiles particularly favour scrub and grassland interfaces and the presence of these is a good indication that reptiles may be present on site. In addition, reptiles are known to utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

2.3.5 Invertebrates

An assessment was made of the site for its potential value to support diverse communities of invertebrates. The assessment was made based on the presence of habitat features which may support invertebrate communities. These features include; an abundance of dead wood, the presence of diverse plant communities, the presence of varied woodland structure, sunny woodland edges, presence of ponds and water courses and free-draining soil. At the time of the Phase 1 survey no attempt was made to identify species present and where a site supports features that may be of importance to invertebrates then further surveys (Phase 2) may be required to assess the importance of the site.

2.4 Preliminary Ecological Appraisal Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Therefore, the field survey has not produced a complete list of plants and animals and in the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. The survey was undertaken at a time of year when many species of plant and animal are either dormant, not visible above ground or simply not present in the UK (such as migratory birds). Therefore, the survey was based upon an assessment of the habitat present on site and the suitability of this habitat to support protected species. For the limitations of the bat survey please see report IoSWT-BS27-2019.

2.5 Initial Protected Species Assessment

As part of a PEA, the assessment criteria is based on the potential for the site to support the species considered, this is usually based on habitat features, their suitability for the species and the results of any desk study data obtained as part of the appraisal. In many cases Phase 2 surveys will be required to assess the status of species and hence the importance of a population at a site. Therefore, the assessment should be considered a provisional assessment. Tables 1 and 2 below define the criteria used to assess the potential of the site to support protected species.

2.6 Criteria used to Assess Ecological Value

The ecological values provided within this report are based around both the professional judgement of the author of this report and current published relevant guidance, including information sources such as "*A Nature Conservation Review*[8]*"* and *"Guidelines for Ecological Impact Assessment in the United Kingdom*[9]*."*

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.

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

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

Table 2 – Description of the categories used to classify a sites potential and the survey effort required to determine the likely presence or absence of a protected species or protected group of species

Potential	Description	Survey effort required to determine the likely presence or absence of the species
High	On site habitat is of high quality for a species or species group. The site is within or near a geographic stronghold. Good quality surrounding habitat and good connectivity.	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.
Moderate	On site habitat is of moderate quality, providing most of the species/species group requirements. Limiting factors may include small habitat area or disturbance	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.
Low	On site habitat is of poor to moderate quality for the species or group. Presence cannot be discounted on the basis of distribution, isolation or surrounding habitats etc.	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.
Negligible	Site includes very limited or poor quality habitat for the species or group. Surrounding habitat is unlikely to support wider populations.	Further Phase 2 surveys are unlikely to be required as species is unlikely to be present

Table 2. Categorising and classifying a sites protected species potential

3. Results

3.1 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 to permit him to undertake professional surveys and has gathered sufficient 'working hours' to achieve a Natural England Class Level 2 licence.

3.2 Desktop Study

3.2.1 Statutory Designated Sites

There are four statutory designated sites of conservation importance situated within a 1km radius of the site. Details of these designations are provided below. For further information on statutory designated sites please see Appendix 2.

i.) **Isles of Scilly SAC Complex –** Situated 673m north of the proposed development designated for its nationally important numbers of Grey Seal (*Halichoerus grypus*) and the nationally rare Shore Dock (*Rumex rupestris*). Annex 1 habitats that are the primary reason for site selection include; Mudflats; inter-tidal sandflats; reefs and sub-tidal sandbanks

ii.) **Isles of Scilly SPA Complex –** Situated 673m north of the proposed development and designated for its internationally important seabird assemblage of 13 species including; internationally important numbers of Lesser Black-backed Gull (*Larus fuscus*) and nationally important numbers of European Storm Petrel (*Hydrobates pelagicus*) and European Shag (*Phalacrocorax aristotelis*).

iii.) **Porthloo SSSI –** Situated 815m south-west 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.

iv.) **Watermill Cove SSSI –** Lying 1km due east of Seaview, 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 Quarternary period.

3.3 Vegetation

The vegetation within the site is described here in general terms using Phase 1 habitat survey terminology and refers to dominant, characteristic and other noteworthy species in each vegetation type within the survey area. The habitat types on site consist of:

- Scattered Trees
- Improved grassland
- Introduced shrubs
- Scrub
- Species poor hedgerow
- Wall
- Building and hardstanding

3.3.1 Scattered Trees

The trees on site consist of two even age Dutch Elm (*Ulmus x hollandica*) situated along the northern boundary of the property (see photo 1.), a juvenile Blue Gum (*Eucalyptus globulus*) set within the western half of the grounds and a Cherry species (*Prunus* sp.) in the north-eastern most corner of the plot.

3.3.2 Improved grassland

Mown grassland makes up the majority of the landscape of the garden (see photos 2 and 3.). Creeping Bent (*Agrostis capillaris)*, Cock's-foot (*Dactylis* glomerata) and Perennial Rye-grass (*Lolium* perenne) are the dominant grasses. The grassland also contains some herbaceous species typical of sandy soils that may also reflect past cultivation practices which include; Common Field Speedwell (*Veronica persica*), Common Fumitory (*Fumaria officinalis*), Hairy Bitter-cress (*Cardamine hirsuta*) and Hairy Tare (*Vicia hirsuta*). More typical species associated with well mown grassland include; Creeping Buttercup *(Ranunculus repens*), Common Daisy (*Bellis perennis*), White Clover (*Trifolium repens*) and Greater Plantain (*Plantago major*).

Along the eastern boundary, north-eastern corner and along the western boundary there appears to have been past ground disturbance, possibly as a result of shrub removal (large brash pile situated in southern

Photo 2. Expanse of improved grassland and brash pile in background

Photo 3. Expanse of improved grassland and Dutch Elm in background

half of the garden (see photos 2 and 4.). As a result the ground flora is dominated by Red Campion (*Silene dioica*), Hogweed (*Heracleum sphondyllum*), Common Nettle (*Urtica dioica*) and Scarlet Pimpernel (*Anagallis arvensis*). Immediately to the south-west a small patch of Sheep's-sorrel (*Rumex acetosella*), Cleavers (*Galium aparine*), Common Cat's-ear (*Hypochaeris radicata*) and Procumbent Pearlwort (*Sagina procumbens*) suggest more acid conditions, likely due to a previous fire site. Under all the hedgerows the ground flora is dominated by the non-native invasive Three-cornered Leek (*Allium triquetum*) and Monbretia (*Crocosmia x corocosmiliflora*), which are also found scattered throughout the area of disturbed ground to the north and west of the site.

Photo 4 Disturbed grassland with Pittosporum hedge and Eucalyptus tree

3.3.3 Introduced shrubs

Planted within the mown grassland areas are occasional introduced shrub species that include; Common Laurustinus (*Viburnum tinus*), Rhododendron (*Rhododendron ponticus*), Dogwood species (*Cornus* sp.), Yucca species (*Yucca* sp.) and Pittosporum (*Pittosporum tenufolium*). Found along the eastern boundary several mature specimens of New Zealand Flax (*Phormium tenax*).

3.3.4 Scrub

Though rare several shrubs of European Gorse (*Ulex europea*) are found along the eastern border bounding the species poor hedgerow, as is a small stand of Bramble (*Rubus fruticosus*) situated under the Yucca along the southern boundary.

3.3.5 Species-poor hedgerow

The development is fully enclosed on two sides by species-poor hedgerow which consists of: a hedgerow of Cordoba (*Escallonia corodbensis*) along the southern boundary; a hedgerow of Pittosporum along the western and northern boundary. The latter is interspersed with two Dutch Elm trees and is not complete towards its north-western corner; the eastern boundary is part enclosed by a hedgerow of Maidenhair (*Muehlenbeckia complexa*) south of the driveway into the property.

3.3.6 Wall

Two short sections of granite stone wall extend along part of the northern boundary and the eastern boundary (north of the access drive). These are typical in design for the islands being soil-filled. Species recorded include the lichens; *Flavoparmelia* caperata, *Parmotrema* perlatum, *Ramalina siliquousa* and *Ochrolechia parella*, all species typical of a granite substrate.

3.3.7 Buildings and hardstanding

The property sits almost centrally within the plot, comprising of a detached bungalow which is described in detail in the corresponding report IoSWT-BS27-2019. The hardstanding comprises of a short access drive that intersects the eastern boundary and runs up to the front door of the bungalow, comprised of compacted 'ram.'

3.3.8 Summary

The site comprises a residential property with the associated managed garden landscape. The most significant habitat features in the context of the site itself are the species-poor hedgerows. However, these are not rare or notable and overall the site is assessed as being of **low ecological value**.

3.4 Bats

For a full assessment of the potential for the building, immediate garden and surrounding foraging and commuting habitat potential for bats please see the corresponding report IoSWT-BS27-2019. In summary however, the building has only a few features potentially suitable for use by roosting bats, in particular crevice-dwelling species of the pipistrellus genus, but the site has optimal foraging habitat nearby and has good habitat connectivity. Overall, the site is assessed as being of **low roost potential**. However, the proposed complete removal of the Maidenhair hedge and part removal of the Escallonia hedge may have implications on both foraging and commuting habitat and is worthy of further investigation.

3.5 Birds

During the site visit Song Thrush (*Turdus* philomelos), Blackbird (*Turdus* merula), Wren (*Troglodytes* troglodytes) and Dunnock (*Prunella* modularis) were recorded. Song Thrush was seen feeding on the lawns, Wren singing from the top of the large brash pile in the south of the garden and Dunnock feeding along the bottom of the Pittosporum hedge that forms the western boundary. No active bird nests were recorded. The wider landscape comprises ample suitable nesting bird habitat in the form of grazed pasture, heathland, shelterbelts and a contiguous hedgerow network. Overall, the site is considered to have **high potential** for supporting nesting birds.

3.6 Reptiles/amphibians

The majority of the site is sub-optimal for reptiles, with only the introduced shrub and the species poor hedgerow suitable for hunting and commuting along with the drystone walls as potential hibernacula. There are no ponds on site and no ponds within 500m of the development. Though the surrounding habitat has good habitat connectivity in the form of mature garden and hedgerows the site is considered to have **negligible potential** to support reptiles and amphibians

3.7 Invertebrates

The site consists of a managed garden landscape and is highly unlikely to support an important food plant or rare or notable species, or species assemblage of terrestrial invertebrate. Therefore, the site is considered to offer **negligible potential** for supporting any rare or scarce species or species assemblage of invertebrate.

4. Planning Policy Context

4.1 Planning Policy

4.1.1 National Policy

The National Planning Policy Framework (NPPF)[10] sets out the government's requirements for the planning system in England. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out in within Paragraphs 7 to 10 of the NPPF "*the purpose of the planning system is to contribute to the achievement of sustainable development.*" The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 170 states that "*Planning policies and decisions should contribute to and enhance the natural and local environment and minimise impacts on and providing net gains for biodiversity.*" A number of principles are set out in Paragraph 175 including the principle that where harm cannot be adequately avoided then it should be adequately mitigated, or, as a last resort, compensated for.

In addition to the NPPF, the Office of the Deputy Prime Minister (ODPM) circular 06/05[11] provides guidance on the application of law relating to planning and nature conservation as it applies in England. Paragraphy 98 states "*the presence of a protected species is a material consideration when a planning authority is considering a development proposal, that if carried out, would be likely to result in harm to the species or its habitat.*" Whilst Paragraph 99 states "*it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted.*"

4.1.2 Local Policy

Local planning policy with the Isles of Scilly Council is provided by the current Local Plan 'A 2020 Vision.' A single over-arching policy within this document makes specific reference to environmental protection.

Policy 1 – Environmental protection

- *Protect a statutorily-protected plant or animal species and the wildlife, geological and geomorphological interest and features of designated Sites of Special Scientific Interest; and locally important biodiversity habitats, species and landscape features;*

5. Evaluation, Potential Impacts and Recommendations

5.1 Site Evaluation

The site is approximately .13ha. in size and comprises a residential property and associated managed garden. The protected species potential on site includes roosting, foraging and commuting bat and nesting birds. Overall, the site is assessed as being of low ecological value.

5.2 Summary of Potential Impacts

The proposed development entails the demolition of the existing building, replacing it with three new dwellings along with the complete removal of the hedge along the eastern boundary and replacing it with a low dry-stone wall and the part removal of the hedge along the southern boundary. In the absence of mitigation, the potential ecological impact of these works is:

- Direct impact on roosting bats as a result of building demolition and long-term loss of roost(s)
- Loss of feeding or commuting habitat for bats as a result of complete removal and partial removal of species poor hedgerows
- Loss of nesting habitat for breeding birds as a result of complete removal of species poor hedgerow
- Loss of feeding habitat for breeding birds as a result of complete removal of species poor hedgerow, loss of open grassland area and associated shrubs due to the erection of two further developments within the plot

5.3 Summary of Key Recommendations

The following recommendations have been designed to minimise the potential impacts and enhance the site for wildlife:

- Phase 2 bat surveys to be undertaken (as per the recommendations set out in the report IoSWT-BS27-2019) to assess the presence or likely absence of bats at the existing property
- Phase 2 bat survey (as above) to assess the likely impact of the removal of the hedgerows around the property on the foraging and community habitat of bats
- The planting of native trees and shrubs (not like for like replacement, or use of Pittosporum) along the eastern boundary as mitigation for the removal of the Maidenhair hedge and any introduced shrubs within the existing grassland to provide continued nesting and feeding habitat for breeding birds and foraging bats

- To mitigate against losses of the existing grassland to the new footprints of the two new dwellings any remaining grassland should be enhanced. Enhancement to include over-seeding and plug planting of wildflowers.

5.4 Evaluation Against Relevant Planning Policy

Given the impacts identified and the subsequent recommendations made it is considered that the proposals will accord with all relevant national and local planning policy in relation to ecology (see Section 4). Providing there is scope within the proposals to support the necessary mitigation for roosting bats.

Ecological Feature	Summary	Potential Impacts of the Development	Recommendations
Designated Sites	Isles of Scilly SAC and SPA complex and associated SSSIs	The development proposal may result in an increase in residents, therefore there is a risk that there will be an increase in recreational pressure on designations within the wider countryside	Monitoring, evaluation and resolution of recreational disturbance events should be carried out in accordance with the local authorities recreational pressure assessment and strategy
Vegetation	The site comprises a managed garden landscape of **low ecological value**	The proposal is anticipated to result in a loss in a large area of improved grassland and associated introduced shrubs; the complete removal of one hedgerow along the eastern boundary and the part removal of the hedgerow along the southern boundary	The proposal should include the planting of native trees and shrubs to replace those lost in the development works and any remaining grassland should be enhanced with over-seeding and plug planting of wildflowers
Bats (for greater detail see report IoSWT-BS27-2019)	The site has few features that has the potential to host roosting bats and surrounding landscape provides optimal foraging and commuting habitat. The development is deemed to have **low bat roost potential**	Demolition of the building may lead to the loss of a bat roost(s) and may cause harm to roosting bats. The loss of suitable foraging and commuting habitat has the capacity to impact on bats	Phase 2 surveys of the development and hedgerows to ascertain presence or likely absence of bats and an assessment of how they use the site.
Birds	The site has been assessed as having **high potential** to support nesting birds within the scattered trees, introduced shrubs and hedegrows	The complete removal of the hedgerow on the eastern boundary, the part removal of the hedgerow along the southern boundary and any introduced shrub or scattered tree within the existing grassland to make way for the new dwellings is likely to have a negative impact on nesting birds. The loss of grassland and hedgerows are also likely to have a negative impact on feeding birds.	There is potential to mitigate against these losses by replanting of native trees and shrubs as part of the proposal and an opportunity to make net gains in biodiversity by installing Shwegler bird boxes on each of the new properties

Table 4. Potential impacts and recommendations

Ecological Feature	Summary	Potential Impacts of the Development	Recommendations
Reptiles/Amphibians	The dry stone wall has the potential to support hibernating amphibians. But, overall the site is assessed as having **negligible potential to support** reptiles/amphibians	There are no anticipated impacts associated with reptiles and amphibians as the existing dry stone walls are to be retained and new dry stone walls are proposed along the eastern boundary	There are no recommendations to be made in respect of reptiles and amphibians
Invertebrates	The site is assessed as having **negligible potential** to support any rare or notable invertebrate species or species assemblages	There are no anticipated impacts associated with rare or notable invertebrates and the proposals	There is potential to improve the habitat for invertebrates when native trees, shrubs and wildflowers are planted as part of any mitigation scheme

Table 4. Potential impacts and recommendations cont.....

5.5 Updating Survey

If the works have not commenced by December 2021, it is recommended that this PEA is updated. This recommendation is made as many of the species considered during the current survey are highly mobile and the ecology of the site is likely to change over a two year period. Similarly, if the planning application boundary changes or the proposals of the site alter, a re-assessment of the impacts may be required.

6.0 Conclusion

Seaview comprises a residential property with its associated managed garden landscape which has been assessed as low ecological value. The property has been surveyed for its bat roost potential (see IoSWT-BS27-2019) and has been assessed as low roost potential. Further Phase 2 surveys will be required to ascertain the presence or likely absence of bats and to ascertain if/how bats use the hedgerows bounding the property as feeding or commuting habitat. The site also has potential to host nesting birds and the loss of the hedgerows and introduced shrubs is likely to have a negative impact on these species. There is no impact on reptiles/amphibians and invertebrates anticipated. The site does have the potential to provide a net gain in biodiversity, in keeping with national and local planning policy via the erection of bird boxes for breeding birds and integrated bat boxes in the new dwellings. Mitigation in the form of planting new native trees and shrubs and improvement of the remaining grassland has the potential to enhance the development for all protected species.

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APPENDIX 3 – PRA REPORT (2020)

PRELIMINARY BAT ROOST ASSESSMENT OF:

SEAVIEW
McFARLANDS DOWN
ST MARY'S
ISLES OF SCILLY
TR21 0NS

Client: Duchy of Cornwall

Our reference: BS27-2019

Report date: 23rd March 2020

Author: Darren Mason BSc (Hons)

Report peer reviewed: Sarah Mason

Report signed off: Sarah Mason

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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Contents

Non-Technical Summary

- On 20th March 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Roost Assessment (PRA) of 'Seaview', McFarlands Down, St Mary's, Isles of Scilly, TR21 0NS (BS27-2019), for which there is a proposal to demolish the existing bungalow to ground level and replace with three new dwellings within the plot. The proposal also includes the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south.
- This report outlines the findings of the PRA and provides advice based on the surveys' conclusions.
- During the PRA an external/internal inspection of the building was undertaken (where accessible).
- All areas could be accessed and evaluated for roost potential and for evidence of bats.
- No evidence of nesting birds was found.
- No bird or small mammal droppings were found during the inspection.
- The immediate habitat surrounding the proposed development and its link to the wider countryside provides optimal foraging and commuting habitat for several species of bat. The location of Seaview in relation to this varied habitat also falls within the typical core sustenance zone of all 5 species of bat recorded within the 2km zone of interest.
- The proposed removal of the Maidenhair hedge to the east and the part removal (if over 10m in length) of the Escallonia hedge to the south may negatively impact on possible feeding opportunities or commuting routes for bats which use the area, particularly as the nearest known bat roost is situated only 60m to the north-east of Seaview.
- The proposed development presented (both externally and internally) with a few features which may be used by some of the species of bat recorded on St Mary's, most likely as a night roost or transition roost.
- The characteristics of the building and the surrounding habitat suggest a low roost potential for bats. However, the proposed removal of the hedgerow(s) is worthy of further investigation.
- The recommendations of this PRA are to carry out two (2) presence and absence surveys consisting of two dusk emergence surveys to take place within the bat active season (between May and September).
- Other than bats, if the recommendations given in this report are adhered to, there should be no further ecological constraints to the proposal.
- **It must be noted that this report alone is not enough to support a planning application.**

1.0 Introduction

1.1 Survey and reporting

This report details the results of a preliminary bat roost assessment (PRA) of 'Seaview', McFarlands Down, St Mary's, Isles of Scilly TR21 0JT. The survey, carried out on 20th March 2020, was undertaken in order to inform proposals to demolish the existing bungalow to ground-level and replace with three new dwellings within the plot and includes the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south.

1.2 The application site

The development is located at McFarlands Down, St Mary's (National Grid Reference SV9126212199). The application site is comprised of a detached block built bungalow with an east/west aspect (see photo 1). The footprint of the building is approximately 108m^2 and the total footprint of the site is approximately 1,377m^2 (red area, see Figure 1).

1.3 Details of proposed works

The proposal is to demolish the existing bungalow to ground-level and replace with three new dwellings within the plot and includes the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south.

Figure 1. Location

Photo 1. Eastern aspect of Seaview

Photo 2. Southern aspect of Seaview

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 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 (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 Guidelines[1], 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 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, endoscopes, 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 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.

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 - Bats

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 5 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 and the rare Leisler's Bat (*Nyctalus leisleri)* and Nathusius Pipistrelle (*Pipistrellus nathusii*). Twenty bat roosts are known to exist within 2km of the proposed development, with 1 known roost within 500m of the property.

3.2 Statutory and non-statutory sites

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

i.) **Lower Moors SSSI –** Situated 1.4km due south of Seaview 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 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*).

ii.) **Higher Moors & Porth Hellick Pool SSSI –** 1.4km south-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*).

iii.) **Porthloo SSSI –** Situated 815m south-west 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.

iv.) **Watermill Cove SSSI –** Lying 1km due east of Seaview, 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 Quarternary period.

3.3 Habitats surrounding the application site

'Seaview' is found at the northern tip of the island of St Mary's, sitting at the southern end of a small linear development of detached dwellings at McFarlands Down. Each of the properties are set within their own mature gardens consisting of a mixture of lawn and flower borders which are bounded by hedgerows that contain the occasional mature tree.

The land immediately to the west is comprised of a large, open field of semi-natural grassland broken up by small blocks of scrub which is seasonally grazed by cattle. This field backs onto open headlands, consisting of a mosaic of coastal grassland, heathland and scrub and which are grazed for conservation purposes. This habitat extends to the south-west for at least 800m. Immediately west of Seaview is a small block of cultivated fields used for growing flowers which are linked to a small shelterbelt by mature hedgerows of Pittosporum (*Pittosporum* tenuifolium). This shelterbelt forms part of the north-eastern boundary of the local golf course, a large exposed expanse of very short grassland and heathland with minimal trees or shrubs which provide cover.

Due south and to the south-east of the proposed development the landscape is dominated by a mosaic of small enclosed fields used for growing flowers, or as productive 'fallow' leguminous leys. This contiguous patchwork of small fields, hedgerows and linear shelterbelts extends for at least 2km, reaching as far south as both wetland SSSIs.

Immediately east-north-east of the proposed development, a lane bounded on both sides by mature hedgerows, leads to a small shelterbelt to the north and to further cultivated fields bound by hedgerows. This habitat extends 660m north-eastwards to the large shelterbelt at Trenoweth consisting primarily of Monterey Pine (*Pinus radiata*) and Lodgepole Pine (*Pinus contorta*). To the east the small fields and lanes are bounded by Dutch Elm (*Ulmus x hollandica*) hedgerows or mature trees. This habitat continues south-eastwards for at least 2km.

Street lighting around the area of the proposed development is minimal, with the nearest being situated 119m due south of the property within a small conurbation at Telegraph tower. A further light can then be found 464m away near Bishop View.

In summary, the habitat surrounding the proposed development and its links to the wider countryside provides optimal foraging habitat for species in the Pipistrellus genus and Leisler's bat, particularly as it has been shown that these require 'edge' habitat (such as hedgerows, tree-lined lanes or woodland edge) to both feed from and to use as commuting routes to other feeding areas[2,3,4&5]. This habitat is particularly contiguous for at least 2km to the south and at least 1.5km to the east and south-east, providing access to a wide variety of habitats for which these species are known to take advantage[6]. This continuity of habitat is also important for both Soprano and Nathusius Pipistrelle as it provides feeding corridors to their preferred habitat of open water and watercourses[2,3&4,], habitats such as those found at both Lower and Higher Moors SSSIs and Holy Vale. The location of Seaview makes it suitable as a potential roost site as it falls within the core sustenance zones of all 3 pipistrelle species these being 1.7km, 1.5km to 3km respectively[7].

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 in, no greater than .5km away[8], making the shelterbelt immediately to the east of the proposed development and at Trenoweth a potential feed site. Both sites fall within this species' core sustenance zone of 1.1km[9], but the lack of tree cover in the immediate area of the property may limit the sites' use as a roost. However Brown Long-eared bats are known to emerge from their roosts much later than other species of bat due to their method of feeding and the type of prey taken which reduces the need for cover and avoids the risk of predation[10]. Likewise, Leisler's bat also take advantage of woodlands, particularly woodland edge, making both woodland blocks suitable as feeding[11], as would the larger blocks of woodland at Holy Vale and even at the Garrison 2.3km to the south-west as Leisler's bat has a large core sustenance zone of 4.2-7.4km[5]. Leisler's bats in England are also known to take advantage of open areas of pasture[5], making the coastal headlands to the west and south-west potential feeding areas. This is in contrast to 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[12&13].

Lighting levels from street lighting has been shown to negatively impact upon a bats commuting and foraging routes[14]. This is minimal both within the immediate area of the proposed development and further afield, therefore likely not to impact upon bats at the property. The location and surrounding habitat of the nearest lights and their relatively low light emitting levels could actually provide feeding opportunities for both Common Pipistrelle and Leisler's bat which are both known to take advantage of the insectivorous prey that often congregates around lights[&15].

3.4 Habitats within the application site

For a description and summary of the habitats found within the application site please see the corresponding Preliminary Ecological Assessment report (IoSWT-PEA27a-2019).

Preliminary Roost Assessment

3.5 External

Seaview is a detached block-built, part-rendered detached bungalow sat in the centre of the plot. The development appears to have been extended along its eastern elevation in the recent past. The result of this extension means that Seaview has two roofs both being of a 'hipped' construction. The main building has a north/south aspect and is clad in the original 'scantle' tiles (mortared between each layer) with concrete capping tiles. The more recent eastern extension has an east/west aspect and is clad in modern, well-fitting slate tiles with glazed concrete capping tiles along its ridges. The eastern roof of the original dwelling has a rendered chimney stack that is tied in to the roof with the original lead flashing. The render on all sides appeared to be in good condition, with no cracks or missing masonry.

The original building and the more recent eastern extension roofs are tied into each other by a lead 'valley' which was well-fitted and bolted onto the fascia of the eastern and western fascias respectively. The fascias and soffit boards throughout are of a box gable style and are constructed of wood and are well-fitting. Air vents are equally spaced in the soffit boards around the full perimeter of the development. Each vent has a plastic cover which has a secondary layer of fine mesh below which permits airflow into the roof, but helps to deny access into the building. All the windows on the eastern extension are constructed of wood and are double-glazed as are the windows on the southern aspect of the original building. On the northern aspect of the main building, single-glazed wooden sash windows are present. No windows are present on the western aspect of both buildings. The meter box for the electrics which is plastic in construction and well-fitting to the wall, is mounted on the facade of the western aspect of the original

building. There are two entrances to the house; both are situated on the northern and eastern facade on the recent extension. Both are wooden in construction (including their frames) and show no obvious signs of rot. Both have external lights above them, but these do not appear to be PIR, but controlled internally.

The proposed development has very limited features which are potentially suitable for roosting bats; these are found primarily on the western and eastern aspects of the main building's roof:

- Missing tile just above guttering along with missing mortar below several tiles on western aspect of the original building which could permit access below these tiles (see photo 3.)
- Large gap at north-western eaves of roof of main building that permits access into the roof void (see photo 4.)

Photo 3.

Photo 4.

3.6 Internal

The internal roof space of Seaview is restricted to the main building. No access was possible (no loft hatch) into the roof space of the more recent eastern extension. The internal roof space of the main building was of a Queen post and collar beam type construction (see photo 5.), with exposed purlins and rafters. The roof space behind this construction throughout was clad in hardboard, with only one area of baton and scantle tiles exposed on the western elevation, where it appears an old chimney stack was once present. No roof felt was noted. Some evidence of water ingress was apparent around the eastern chimney stack (see photo 6.), but with no obvious entry point into the roof void. Examination of the insulated floor and the tops of the chimney stack, water expansion tank and pipes revealed no small mammal or bird droppings. Examination of the queen post, purlins and rafter joints revealed no obvious claw marks, grease or urine stains (see photo 7.). Throughout, extensive cobwebs were present thickly coated in dust suggesting that these had been present for some time (see photo 7.).

Photo 5.

Photo 6.

Photo 7.

As the building is proposed to be demolished the internal floor space was also inspected. Examination with endoscope of holes in partition walls and/or cupboards was undertaken (see photos 8 & 9.). Throughout this inspection no evidence (droppings, urine and grease stains, grease marks or bats) was noted).

Photo 8.

Photo 9.

In summary, it has been shown that all 3 pipistrelle species of bat typically roost within buildings, utilising a very wide variety of features[16] including, crevices, cracks, holes etc either as individuals up to several hundred at a time. 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 itself[8]. Though the internal roof space of Seaview Brown provides some of these conditions it would typically be expected to see large concentrations of droppings below the ridge board as Long-eared bats are known to show high roost fidelity[8]. 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, loose bark and woodpecker holes of large live trees, in open conditions[17]. Though the Dutch Elm fit this description of a large, live tree they did not present with any roost features suitable for Leisler's bat (see IoSWT-BS27a-2019 for description). However, it has been shown that nursery

roosts of Leilser's bat show a limited preference for buildings, but only those with lined with roof felt and are constructed of stone, rather than of block and brick[18].

Seaview, therefore presents with only a few features suitable for a small number of roosting crevice-dwelling bats, most likely as a transition or night roost.

Assessment and recommendations (excluding bats)

4.1 Protected sites

The proposed development falls outside the main SSSI Impact Risk Zones of Lower Moors, Higher Moors, Porthloo and Watermill Cove SSSIs, but falls within the impact zones for the Isles of Scilly SPA and the Isles of Scilly SAC complex. 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 impacts in these larger zones are concerned with for example large-scale discharges into the water supply and large-scale waste and composting schemes. Therefore, 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 built[19]. During this survey, no evidence of nesting birds was found. However, if demolition 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.

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. All areas of the proposed development were accessible and assessed for their roost potential.

5.2 Further survey requirements

The value of Seaview 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:

- The development has a few potential roost features suitable to a small number of crevice dwelling bats.
- The development site has optimal foraging habitats in the immediate area with links to the wider countryside and a broad range of other habitats.
- The internal roof space has potential to act as a roost for Brown Long-eared bat
- The proposal to completely remove the hedge on the eastern boundary and the partial removal (if over 10m) of hedge on the southern boundary is worthy of further investigation due to the potential disruption of suitable feeding habitat or a commuting roost
- The development site is located only 60m away from a confirmed bat roost

Seaview has the potential to host bats, likely utilising the site as a night roost or transition roost for cavity dwelling species such as Common and/or Soprano Pipistrelles. The internal roof space also provides suitable conditions to host Brown Long-eared Bat. In contrast, the construction of the development and the trees present within the grounds is less likely to be utilised by Leisler's bat. The development proposal also requires the removal of one existing hedgerow and part of another, which may cause disruption to foraging habitat and/or a commuting route. This may have particular importance due to the relative close proximity (60m) from a confirmed roost. To confirm whether or not this proposed development site hosts roosting bats and whether the hedges are used by bats as commuting routes, further surveys need to be undertaken during the bat active season (see section 5.3).

5.3 Presence or 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 'low' bat suitability require one, or two survey visits between May and September. These surveys should consist of either one or two dusk emergence or dawn re-entry surveys.

The surveys should take place 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 1.5 – 2 hours after sunset. A pre-dawn re-entry survey should commence 1.5 – 2 hours 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 three 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 the number and species of 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

Seaview has the potential to host roosting bats, providing shelter as a night roost or a transition roost for cavity dwelling species such as Common and/or Soprano Pipistrelle and possibly Brown Long-eared Bat. In contrast, the lack of typical roosting features reduces its roost potential for Leisler's bat.

To assess whether bats roost in the building, or utilise the hedgerows around the buildings perimeter (on its eastern and southern boundaries) two further surveys are recommended; two dusk emergence surveys carried out between May and September. If bats are found to be roosting in the dwelling the status of the roost(s) will need to be identified. Likewise, if bats are shown to preferentially utilise the eastern and southern hedgerows 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 and that of IoSWT-BS27a-2019 are adhered to, there should be no further ecological constraints to the proposals.

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APPENDIX 4 – PAS REPORT (2020)

BAT PRESENCE/ABSENCE SURVEYS OF:

SEAVIEW
McFARLANDS DOWN
ST MARY'S
ISLES OF SCILLY
TR21 0NS

Client: Duchy of Cornwall

Our reference: BS27-2020PAS

Report date: 22nd July 2020

Author: Darren Mason BSc (Hons)

Report peer reviewed: Sarah Mason.

Report signed off: Sarah Mason.

REPORT ISSUED IN ELECTRONIC FORMAT ONLY

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Contents

Non-Technical Summary

- On 20th March 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of 'Seaview', McFarlands Down, St Mary's, Isles of Scilly, TR21 0NS (BS27-2019 & BS27a-2019), (BS21-2019), for which there is a proposal to demolish the existing bungalow to ground level and replace with three new dwellings within the plot. The proposal also includes the removal of the Maidenhair (*Muehlenbeckia* sp.) hedgerow to the east and part removal of the *Escallonia* sp. hedge to the south. The survey concluded that the building had low potential to support roosting bats. Two presence/absence surveys were recommended and the results of these surveys are outlined in this Presence/Absence (PAS) report.
- A first dusk survey conducted on the 19th May 2020 did not identify any bats emerging from roosting sites associated with the building but did identify bats commuting and foraging along the boundary hedgerow to the east of the property.
- A second dusk survey conducted on the 7th July did not identify any bats emerging from roosting sites associated with the building and very low levels of commuting behaviour along the eastern boundary hedge. However, the low level of activity could be attributed to a change in the forecasted weather, with low cloud and light rain commencing forty minutes after sunset and through to the end of the survey.
- Both the PEA/PRA and PAS reports should be considered together to provide a comprehensive assessment of nature conservation issues at the site.
- The results confirm the likely absence of bats using Seaview as a roost
- The results confirm that the eastern boundary hedge is used as a commuting and foraging route for pipistrelle bats.
- The recommendations from the PEA/PRA along with this report, suggest no further surveys and no requirement to obtain an EPS license.
- Mitigation measures (excluding bats) recommended in conjunction with the preliminary ecological appraisal survey (BS27a) carried out on the 23rd March 2020 should include the planting of native hedgerows that demarcate the boundaries between each new property and the planting of a minimum 3 standard trees as replacement for the eastern boundary hedge.
- Mitigation measures for bats should include the installation of 'in-line' bat box(es) at each gable end of at least one of the new properties

1.0 Introduction

1.1 Background

A Preliminary Roost Assessment report (BS27-2019) dated 23rd March 2020 identified that the building under consideration provided low roosting potential for bats. A Preliminary Ecological Appraisal identified that the removal of perimeter hedgerows could be detrimental ecologically to the site and may be detrimental to bats utilizing these as commuting or foraging routes. Additional presence/absence surveys were recommended to meet best practice guidance to support a future planning application. This report outlines the results of these additional surveys.

1.2 Survey Objectives

The objectives of this Presence and Absence Survey (PAS) report, is to provide further ecological information to support the planning proposal by:

- Ascertaining if roosting bats are present at the application site
- To identify the location of these bat roosts (including exit/entry points)
- Subjecting this information (and the information from the PEA and PRA) to evaluation and impact assessment
- To provide advice on the potential for contravention of legislation/policy
- To provide recommendations on any further actions needed (i.e. further surveys, licensing, mitigation or enhancement)

1.3 Surveyor details

The survey was undertaken by Darren Mason BSc (Hons) of the Isles of Scilly Wildlife Trust and with the assistance of Rob Carrier and Rhianna Pearce. 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, endoscopes, hand, and hand-held static nets.

2.0 Methodology

2.1 Bat Dusk emergence survey

The objective of the dusk emergence surveys was to detect active bat use of the site and identify any exit locations being used around the building. Survey effort was concentrated on areas of the site where suitable features or bat field signs were noted from the PRA. The survey involved;

- Starting the survey 15 minutes before sunset and continuing for approximately 1.5-2hours after[1];
- Identification of bat species primarily using ultrasound characteristics. To aid identification flight and habitat characteristics were also noted (where possible) to determine the species.
- Identifying exit locations of bats by standing at different vantage points around the building that offered visual contact with any potential exit point previously recorded. Surveyors stood no more than 50m apart, or away from the building (see Fig 1 for location of surveyors).

2.2 Equipment

The following equipment was used for the dusk emergence survey at the site:

- Anabat Express (Frequency Division) static bat recorder
- Elekon Batscanner Stereo Hetereodyne
- Elekon Batscanner Heterodyne
- Magenta Bat 4 Bat Detector
- Bestguarder WG-50 Night vision camera

Sound recordings were analysed using Analook W 4.3x software to confirm surveyors' identification of species.

2.3 Survey Limitations

Surveys carried out during a specific season can only provide information on bat presence at that particular time, as bats are highly mobile in nature and may only use buildings at certain times of the year that favour a particular part of their roosting, maternity and hibernating requirements.

3.0 Results

3.1 Weather conditions, temperatures and timings

Survey Information:	Start and End Times:	Conditions (Start):	Conditions (End):
Dusk emergence: 19/5/20	Start: 20:55 Sunset: 21:10 End: 22:40	Temp: 17^{0}C Humidity: 75% Wind speed: 2mph - SSE Cloud cover: 0% Rain: none	Temp: 9.5^{0}C Humidity: 90% Wind speed: 2mph -SSE Cloud cover: 0% Rain: none
	Surveyors		
	1. Darren Mason 2. Rhianna Pearce 3. Rob Carrier 4. NV Camera	Notes: Temperature dropped below 10^{0}C approximately 30 minutes before the end of the survey Light level at Lux 2: 21:40	

Table 1. Site conditions for 1st dusk emergence survey 19-5-20

Survey Information:	Start and End Times:	Conditions (Start):	Conditions (End):
Dusk emergence:	Start: 21:19 Sunset: 21:34 End: 23:00	Temp: 16.5^{0}C Humidity: 81% Wind speed: 21mph WSW Cloud cover: 100% Rain: none	Temp: 14.5^{0}C Humidity: 91% Wind speed: 29mph WSW Cloud cover: 100% Rain: Yes
	Surveyors		
	1. Darren Mason 2. Rhianna Pearce 3. Rob Carrier 4.NV Camera	Notes: Unexpected low cloud clover from 22:23 along with light rain until end of survey Light Lux 2 at 22:01	

Table 2. Site conditions for 2nd dusk emergence survey

Photo 1. Surveyor location for 1st dusk emergence survey 19-5-20 and 7-7-20

3.2 Dusk emergence roost survey results

The first dusk emergence survey recorded no bats entering or exiting the building. All bat activity was confined to commuting and feeding behaviour, recorded primarily along the eastern side of the eastern boundary *Muehlenbeckia* sp. hedge. In total 26 passes of Common Pipistrelle were recorded, the first 18 minutes after sunset, well within the normal temporal of this species[2,3]. 11 of the 26 calls were picked up by both Surveyor 1 and 2 at the same time. Of this 11 at least 4 were picked up by Surveyor 3 confirming that the main direction of travel was north to south (See Appendix A). Activity was deemed low, however this may be a result of the temperature dropping below 10^0C (see Appendix B for environmental data) during the last 30 minutes of the survey, when only 7 calls were recorded. Bats are known to fly when temperatures rise above 8^0C if insects are active, but as flight is energetically demanding and if insect levels are low hunting may not be profitable[4], therefore overall low numbers of prey may also be a reason for reduced bat activity during this survey.

The second dusk emergence survey undertaken on the 7th July recorded no bats entering or exiting the building. Only 2 Common Pipistrelle were recorded, one unseen the 2nd seen flying north to south parallel

to the eastern boundary hedge. The first bat contact was made at 22:07, 33 minutes after sunset the second at 22:12. However, 11 minutes later un-forecasted low-level cloud and light rain began and remained until the end of the survey period. During this time no further bat contacts were made.

3.3 Summary

The results of the two dusk emergence surveys have confirmed the likely absence of bats at Seaview. However, the results can only be based on presence/absence at a particular time as bats are highly mobile in nature may use the building at other times of the year. Avoidance measures set out under Section 5 will help to reduce the probability of committing an offence if bats were found during the demolition phase of the works.

During both dusk surveys it was noted that bats use the eastern boundary hedge both as a commuting route and to feed along. Though the activity level is deemed low the unexpected changes in environmental conditions may account for the reduced level of activity.

4. Evaluation of Results

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 undertaken[5]. 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
Bats	CHSR, W&CA	Local	A, & E	Low
	Impact to roost site: Confirmed likely absence of a bat roost at Seaview suggests that the impact to a roost site at this location is low. However, if a roost were located this would have a negative effect on the population status of Common Pipistrelle bats on the Isles of Scilly. Therefore, consideration and due care must be considered and undertaken at the following stages: **Impacts to bats:** **Demolition:** – Undertaking Reasonable Avoidance Measures (RAM) can reduce the likelihood of negatively effecting the local population status and minimise the probability of committing an offence with respect to bats and their roosts if measures are adhered to. **Construction:** – A positive impact on the local population of Common Pipistrelle bats may result through the incorporation of new roost(s) in the new buildings[6]			
Habitat:	**Relevant Legislation**	**Evaluation (of importance)**	**Mitigation Hierarchy**	**Impact Level**
Hedgerows	HRA	Local	C, & E	Medium
	Impact on hedgerow – A hedgerow is protected if it is more than 20m long and with gaps of 20m or less in its length. Therefore, in this instance the eastern boundary hedgerow will require a plan of action to be submitted to the Local Planning Authority (LPA) and written permission granted from the LPA before the hedgerow can be removed. Ecologically, the hedgerow is classed as non-native poor hedgerow **Impact on Bats and Birds** **Removal –** The removal of the hedgerow may result in a loss nesting and feeding habitat for breeding birds and will affect commuting and foraging routes for bats (see below). **Replacement –** If replaced by native species there is an opportunity to provide a small 'net gain in biodiversity', whilst increasing bat commuting and foraging routes and improving feeding and nesting opportunities for breeding birds.			

Key to Legislation and Mitigation Hierarchy

CHSR – Conservation of Habitats and Species Regulations 2017[7] - http://www.legislation.gov.uk/uksi/2017/1012/made
W&CA – Wildlife & Countryside Act 1981 (as amended)[8] - http://www.legislation.gov.uk/ukpga/1981/69/contents
HRA – Hedgerow Regulations Act 1997[9] - https://www.legislation.gov.uk/uksi/1997/1160/made
A – Avoid, **M** – Mitigate, **C** – Compensate, **E** – Enhancement

5. Recommendations and Mitigation

The recommendations in this section are provided as information only and specialist legal advice may be required. If works are delayed for more than one year, then re-assessment may be required.

5.1 Survey constraints

The surveys were undertaken at an appropriate time of year, during the main summer active season.

5.2 Further survey requirements

No further surveys are recommended with regards to the proposed development – it is considered that this report, alongside the PRA (BS27) and the PEA (BS27a) produced separately, constitute a comprehensive ecological baseline from which to assess the impacts of the application.

5.2 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.

5.3 Hedgerow Retention notice

Any hedgerow that meets the criteria of length, location or importance set out under the Hedgerow Regulations 1997 cannot be removed without first receiving written notice from the LPA. In this instance, the hedgerow meets the criteria of length (being over 20m long) therefore deemed **protected.** There will be a requirement to submit a plan of works to the LPA outlining how the hedgerow will be removed. Within 42 days the LPA will issue within a hedgerow retention notice (prohibiting removal), or written notice granting permission to remove the hedgerow in the way proposed in the plan of works.

5.4 Planning Recommendation(s)

The information gathered in the PRA (BS27-2020), PEA (BS27a-2020) and 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. However, Section 5.5.3 and 5.5.4 should be a compliance rather than a pre-commencement condition to ensure alternative feeding and/or commuting routes remain available for Common Pipistrelle.

5.5 Mitigation Proposals

5.5.1 Avoidance (A) – Bats

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:

i. When roofing works are planned these should avoid the main breeding and mating season of *Vespertilionidae* bats, work should typically take place between the 1st November and 1st May inclusive, however the months of **November to February should be avoided where possible** as this is when bats enter a time of reduced activity and torpor which makes disturbance impacts more significant

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

5.5.2 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 2006[10] (NERC 2006) to have due regard for biodiversity when carrying out their functions and under Section 15 paragraph 170(d) of the NPPF 2019[11], 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 should be undertaken:**

i. Install three (3) in-line Habibat bat boxes, or three (3) Schwegler 1FE Bat boxes at the apex of the gable end of each new dwelling (one box for each dwelling) two facing the same aspect, the remaining box to face the opposing aspect to provide varying environmental conditions that bats can take advantage of.

5.5.3 Compensation - Hedgerow

Most bat species use 'edge' habitat, such as navigational landmarks, feeding opportunities and protection from predators. Loss of hedgerows can make it more difficult for bats to hunt and survive. As part of any good development, linear features such as tree lines and hedges should be retained, if this is not possible then compensatory planting should be considered wherever possible.

It is recommended that if permission is granted to remove the eastern boundary hedgerow, compensatory planting in the form of two 'native' boundary hedges between the 3 new dwellings should be provided, along with the planting of 3 native 'standard' trees approximately 10m apart along the length of the eastern boundary.

5.5.4 Enhancement – Hedgerow

Trees and shrubs provide food for birds, mammals and invertebrates. To enhance the development and to provide a small 'net gain' in biodiversity all replacement hedgerows and standard trees should consist of native species, known to be present on the islands, or were once present on the islands. To enhance the hedgerow for bats and birds, species such as Oak, Birch, Hawthorn, Blackthorn, Crab Apple and Hazel could be planted.

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APPENDIX A – BAT CONTACTS SURVEY TABLE

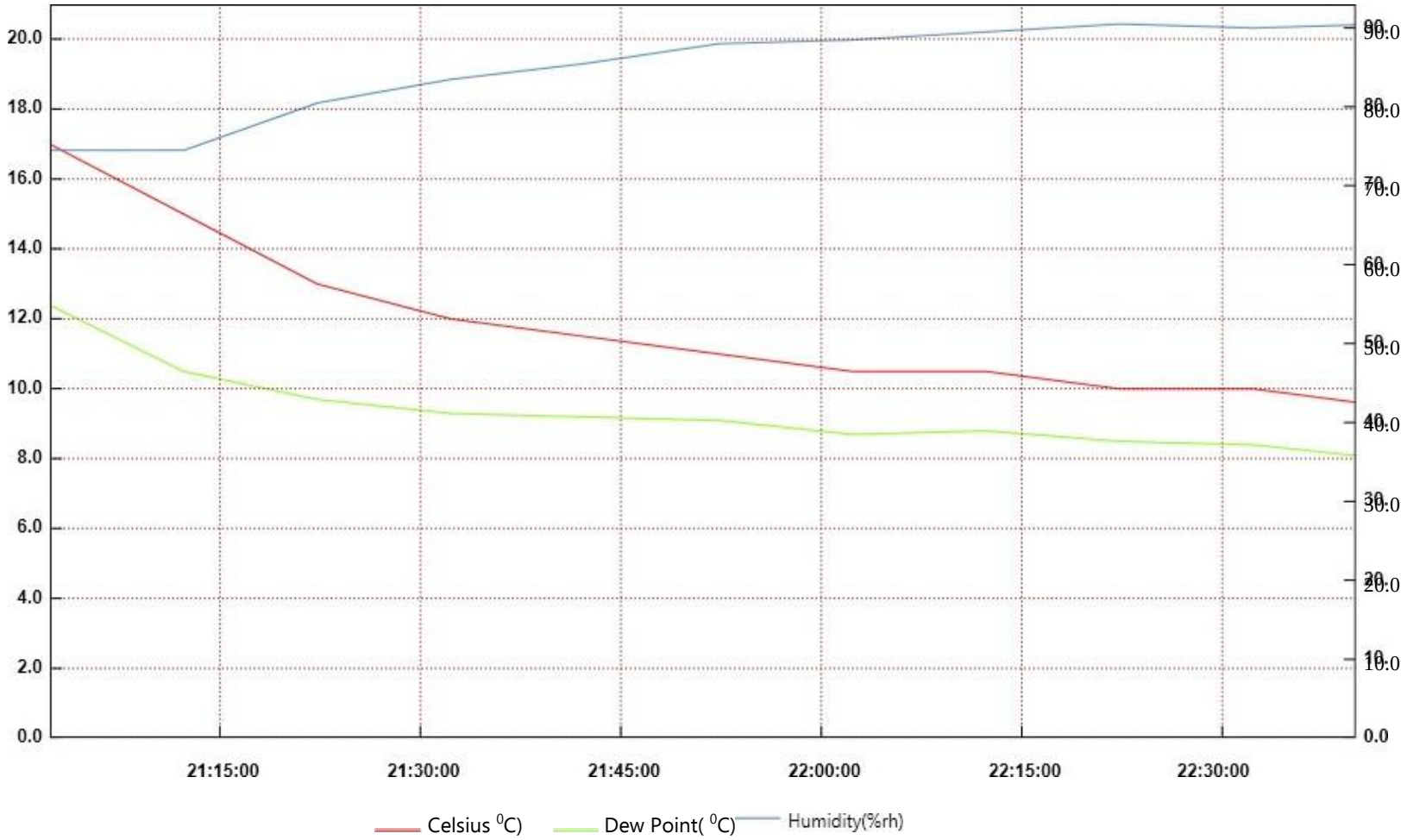
Date:	**19/5/20 – 1st Dusk emergence survey**			
Survey Type:	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Night vision camera**
Location:	N to S, Unseen, Unseen, Unseen, Unseen, Unseen, Unseen, S to W from adjacent property, Unseen (fb), Unseen, Unseen, Unseen, Unseen (fb) and unseen	N to S, unseen, unseen, unseen, S to N, N to S, unseen, N to S, N to S, unseen, S to N, S to N, N to S, unseen, unseen, unseen, unseen, unseen, unseen	N to S, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen	No contacts recorded
Exit/Entry point:	None recorded	None recorded	None recorded	None
Time(s):	**21:28**; 21:29; 21:45; **21:50**; 21:52; **21:53**; **21:54**; **21:55**; 21:56; **22:00**; 22:02; **22:03**; **22:07**; **22:09**(x3); **22:17**; **22:23** & **22:30**	21:30; **21:50**; **21:53**; **21:54**; **21:55**; 21:59; **22:00**; **22:03**; 22:04; **22:07**; **22:09** (x2), 22:13; **22:17**; 22:20; **22:23**; **22:30**; 22:32 & **22:34**	**21:28**; 21:47; **21:55**; **22:00**; **22:07**; **22:09**; 22:14; **22:17**; **22:23** & **22:34**	None contacts recorded
Species of bat:	Common pipistrelle	Common pipistrelle	Common pipistrelle	None recorded
Roost present:	None confirmed	None confirmed	None confirmed	None confirmed

(fb) – feeding buzz

Date:	**– 2nd Dusk emergence survey**			
Survey Type:	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Night vision camera**
Location:	Unseen, N to S	Unseen, N to S	Unseen	No contacts recorded
Exit/Entry point:	None recorded	None recorded	None recorded	None
Time(s):	22:07 and 22:12	22:07 and 22:12	22:08	
Species of bat:	Common pipistrelle	Common pipistrelle	Common pipistrelle	None
Roost present:	None confirmed	None confirmed	None confirmed	None confirmed

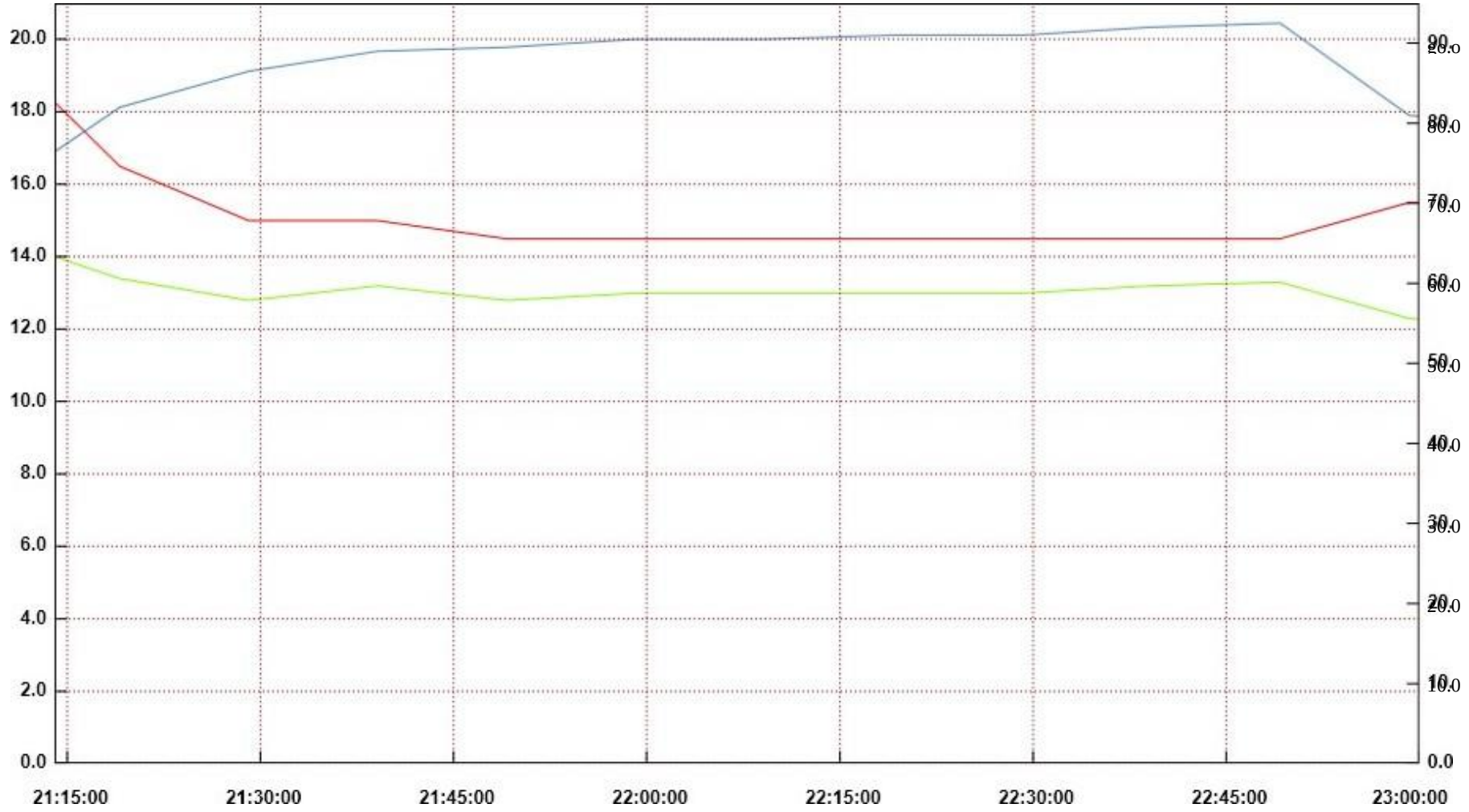
APPENDIX B – Environmental Data

Seaview – 19-5-20



From: 19 May 2020 211:00 - 19 May 2020 22:40:00

Seaview – 7-7-20



9

Celsius ^{0}C Dew Point(^{0}C) Humidity(%rh)

From: 07 JULY 2020 21:14:00 - 07 JULY 2020 23:00:00