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By Liv Rickman at 5:04 pm, Feb 08, 2024

PRELIMINARY ECOLOGICAL ASSESSMENT

LAND AT TELEGRAPH, ST MARY'S, ISLES OF SCILLY



Client: Duchy of Cornwall

Our reference: 22-11-1

Planning reference: Report produced in advance of submission

Report date: 5th February 2024

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Executive Summary

Overview

The Land at Telegraph, St Mary's was subject to a Preliminary Ecological Assessment (PEA) and Preliminary Bat Roost Assessment (PRA) in December 2023 / January 2024.

This report outlines the results of the PEA as well as recommendations and proposed mitigation measures arising from the ecological baseline.

Proposals

The proposed works involve the construction of residential dwellings along with associated landscaping, utilities and infrastructure within an existing pasture field. A soakaway will be created in a separate field to the south with a pipe route connecting with the development site – these areas will be subject to temporary impacts only.

Ecological Assessment

The proposals would result in the removal of the majority of the pasture field within which the dwellings are to be constructed. The soakaway field and intervening pipe route would be subject to short-term disturbance for the installation of soakaways.

A boundary wall is situated along the northern boundary. It would be removed and recontoured as part of the works. The remainder of the boundary features would be largely unaffected aside from a minor removal from the western boundary wall to provide access.

The proposals have the potential to impact upon nesting birds and rabbits associated with boundary features and the offsite evergreen shelter belt. An offsite garage which lies immediately on the western boundary of the site has the potential to support roosting bats which, whilst not directly impacted by the proposed works, have the potential to be disturbed during construction and occupation phases of the project if present. There is also a low risk of bats finding transient or occasional roosting opportunities within the northern boundary wall.

Recommendations

Recommendations provided in this EA report will ensure that impacts to protected species are avoided and a Biodiversity Net Gain is secured. These measures include:

- Measures to protect nesting birds including timing of works;
- Measures to protect bats and other species during works to the northern boundary feature;
- Measures to protect retained habitats including boundary and onsite features;
- A methodology to dismantle the existing wall and restore to a Cornish Hedge along the northern boundary;
- Measures to ensure that rabbits are not killed, injured or entombed;
- A further bat survey on the offsite garage building and development of measures necessary to ensure that any roost identified is protected and retained;
- Design of external lighting to minimise light-spill on retained habitats to provide dark corridors and continued suitability of foraging resources for bats and invertebrates;
- An assessment of Biodiversity Net Gain to demonstrate how a net gain will be achieved;

- Development of a Landscaping Plan to detail habitat creation and management measures which would secure the BNG in the long-term;
- Installation of bird and bat boxes within the final development;
- Measures to restore the habitats temporarily impacted by the installation of the soakaway;
- Measures to control or minimise the risk of non-native invasive species spreading within our outside of the site.

Report Status

This EA report represents a comprehensive baseline to support a Planning Application with regards to ecological receptors.

There are however additional documents which should either be submitted alongside the report or conditioned in any permission granted in order to secure the mitigation and enhancement measures. These include:

- A **Construction Ecological Management Plan (CEMP)**;
- A **Bat Survey Report** with regards to the offsite garage building on the northern boundary;
- A **Lighting Plan** showing details of proposed external lighting;
- A **Biodiversity Net Gain** assessment demonstrating how 10% minimum gain will be achieved;
- A **Landscaping Plan** detailing habitat creation and management measures which would secure the BNG in the long-term;
- **Habitat Enhancement Plans** showing the specification and location of bird and bat boxes within the final development.

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1. Introduction

1.1. Project Overview

The development site under consideration is a horse-grazed pasture field near Telegraph, St Mary's in the Isles of Scilly. The temporary works to construct a soakaway involve further areas of grassland and scrub to the south.

The proposals relate to the construction of new housing and associated utilities and landscaping along with a soakaway.

The proposed works considered in this assessment were identified in the plan "Llewelyn Parker Lowe: 4340 - 13" provided by the client.



Map 01 – Site location indicated by the red circle. The field where the new development will be constructed is indicated. Reproduced in accordance with Google's Fair Use Policy.

2. Site Location and Description

2.1. Site Location

The development site comprises a grassland field near Telegraph, St Mary's, Isles of Scilly. The National Grid Reference for the centre of the site is SV 91313 12099 (see Map 1).

2.2. Site Description

The development site is approximately 0.35 hectares (ha) in size and is dominated by a horse-grazed pasture fields with stone wall boundaries. The redline enclosing the soakaway occupies a further 0.7ha of fields containing grassland and scrub along with intervening boundary features to the south.

2.3. Local Landscape Setting

The site is set on the boundary between existing conurbations comprising Telegraph to the west and MacFarland's Down to the north. MacFarland's Down is a small linear development of detached dwellings - 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 landscape to the west, beyond the dwellings, comprises a small block of cultivated fields used for growing flowers which are linked to a small shelterbelt by mature hedgerows of Pittosporum. 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. Beyond these cultivated fields to the north are open headlands, consisting of a mosaic of coastal grassland, heathland and scrub which are grazed for conservation purposes.

Due south and to the south-east, 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 two wetland SSSIs.

East of the site are pasture and cultivated fields bounded by hedgerows. This habitat extends 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 five 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** – Encompassing the coastline around St Mary’s and situated 450m to the north-west at its closest point, the SAC is 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** – Encompassing the coastline around St Mary’s and situated 450m to the north-west at its closest point, the SPA 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.
- **Higher Moors and Porth Hellick Pool SSSI** – Situated 950m south of the proposed development lies Higher Moors SSSI – a topogenous mire designated for several rare and notable plant species including bog pimperl, star sedge and marsh St John’s-wort.

- **Watermill Cove SSSI** – Situated 950m to the east is designated for predominantly geological rather than ecological interest - its cliff exposures of Quaternary sediments, that show the sequence of changes in the climate and environment during the Quaternary period.
- **Porthloo SSSI** – Situated 700m to the west is 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.

2.5. Planning Context

2.5.1. National Planning Context

The **National Planning Policy Framework (NPPF)**¹ sets out the Government's policies on conserving and enhancing habitats and biodiversity through the planning system in paragraphs 174 to 182. Whilst these policies are primarily expected to be incorporated into development planning documents at regional and local scales, they are also of material consideration for individual planning applications.

Paragraph 174 states that:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'*

Paragraph 180 states that:

When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts),*

¹ National Planning Policy Framework (Crown Copyright, 2023)

adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate*

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. 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 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 Conservation³.

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. Desktop Survey

A full desktop study was undertaken for the presence of bats based on the list of roosts and other records held by the Isles of Scilly Bat Group.

A full records centre search was not undertaken for other ecological groups, 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 include aerial photography to identify the presence of habitats 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.

3.2. Vegetation and Habitat Assessment

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 survey methodology⁵. 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.

3.3. Bats

The Preliminary Bat Roost Assessment (PRA) comprised a survey of onsite and adjacent structures and vegetation 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 was carried out in accordance with relevant Best Practice methodology⁶.

⁴ <http://defra.magic.gov.uk>

⁵ JNCC (2010). Handbook for Phase 1 Habitat Survey: A technique for environmental audit – Field manual

⁶ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London

3.4. 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.

3.5. 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 at this site.

3.6. Surveyor Competence

The PEA and PRA surveys were undertaken by James Faulconbridge MRes MCIEEM trading as IOS Ecology. James is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM); he is a Licensed Bat Worker (Class Licence Level 2) and has 15 years' experience undertaking a range of ecological surveys and assessing the factors that affect ecology in relation to construction and the built environment.

3.7. Survey Dates

The PRA and PEA surveys were both undertaken on 14th December 2023 with additional survey of the proposed soakaway site undertaken on 26th January 2024.

3.8. 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 1km of the Survey Site.

3.9. 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. Habitats

The habitats described are illustrated in Map 03 and described below.



Map 03 – Showing the broad habitats identified within the site. Reproduced in accordance with Google’s Fair Use Policy.

4.1.1. Development Field

The development site is situated to the north and is dominated by a semi-improved grassland field used for horse grazing at the time of survey.

The sward is grass dominated with species including perennial rye (*Lolium perenne*), red fescue (*Festuca rubra*), common bent (*Agrostis capillaris*) and couch (*Elymus repens*) with a lower frequency of cock’s foot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*).

Herbaceous species include corn spurrey (*Spergula arvensis*), ribwort plantain (*Plantago lanceolata*), common vetch (*Vicia sativa*), creeping buttercup (*Ranunculus repens*), cats-ear (*Hypochaeris radicata*), clover (*Trifolium sp.*), and ivy-leaved speedwell (*Veronica hederaceae*). Yarrow (*Achillium millifolium*) and sheep’s sorrel (*Rumex acetosella*) are occasional around the peripheries whilst broadleaf dock (*Rumex obtusifolius*) occurs where there is greater disturbance from trampling.

The field has rows of daffodils (*Narcissus sp.*) indicating a historic use for bulb farming. This would indicate that the grassland sward has not been a continuous presence but is likely to have been ploughed and agriculturally managed for bulb planting in the past before reversion to pasture.

4.1.2. Shelterbelt

An offsite shelter belt lies to the east of the development site. The shelterbelt is predominantly karo (*Pittosporum crassifolium*) and lodgepole pine (*Pinus contorta*) with occasional coprosma (*Coprosma repens*). The shrubs are to 5-6m in height with some pine trees reaching 8-10m.

The understory is very dense and dark due to the evergreen shrubs, with abundant deadwood and brash from pruning. There is vegetation at the edges where light penetrates – here can be found typical woodland edge species common in the locality such as red campion (*Silene dioica*), cow parsley (*Anthriscus sylvatica*) and foxglove (*Digitalis purpurea*) along with bramble (*Rubus fruticosus*) and honeysuckle (*Lonicera periclymenum*). Occasional gorse (*Ulex europaea*) shrubs are also recorded along with species from the adjacent grassland fields.

4.1.3. Cornish Hedge / Stone Wall

The site is bounded on the northern, southern and western edges by stone walls or Cornish Hedges with intermediate characters in places.

The boundary feature along the northern periphery of the field, fronting onto Pungies Lane, develops a characteristic Cornish Hedge construction to the east, but is a stone wall on the site boundary. Regardless, it supports abundant mosses, lichens, polypody ferns (*Polypodium agg.*) and navelwort (*Umbilicus rupestris*). In places, there is honeysuckle and bramble along with ivy (*Hedera helix*) growing over. Occasional non-native species such as coprosma are present, along with abundant three-cornered leek (*Allium triquetrum*).

On the southern side of this field, the stone wall is unmanaged and overgrown with bramble and grasses both through and within. The flora is similar to the pasture field though with more ruderal and woodland edge species, including foxglove and red campion, as well as further invasive species such as montbretia (*Crocsmia x crocosmiiflora*) and variegated Italian arum (*Arum italicum*) as well as bracken (*Pteridium aquifolium*) and nettle (*Urtica dioica*). There is a mature offsite karo hedge along the majority of this wall.

The western boundary is a generally well-pointed stone wall. Non-native species growing within cracks in the pointing include Escallonia (*Escallonia rubra*), houseleek (*Aeonium sp.*) and agapanthus (*Agapanthus africanus*) with three-cornered leek, alexanders (*Smyrniolum olusatrum*) and nasturtium (*Tropaeolum majus*). Mosses, lichens and ferns are well-represented.

4.1.4. Non-native Hedgerow

There are recently planted karo hedges along the northern boundary with establishing specimens to 1.5-2m in height. The understory is largely drawn from the species found in the wall to the north with alexanders, bramble, three-cornered leek and cleavers (*Galium aparine*).

4.1.5. Soakaway Field

The soakaway field lies to the south of the main development field. It is heavily grazed by horses such that the sward is a consistent low height throughout, aside from areas around food and water provision where the ground is poached by excessive trampling.

The botanical species list is constrained by the season and by the heavily grazed nature of the sward, but included common bent, red fescue, cock's foot and Yorkshire fog along with ribwort plantain, cat's ear, white clover, daisy (*Bellis perennis*), creeping buttercup (*Ranunculus repens*) and bird's foot trefoil (*Lotus corniculatus*). The sward is variable in relative composition, with some areas heavily grass dominated indicating historical improvement, whilst others show a greater abundance of herbaceous species.

Some areas appear to be impacted by the grazing density and subsequent damage to the sward, with nutrient rich patches supporting broadleaf dock, common nettle and charlock (*Sinapis arvensis*) occurring particularly towards the western boundary. The edges closest to the boundary are often shadier and support red campion and arum lily (*Arum maculatum*).

In the north-eastern corner of the site is an area of scrub. This area is dominated by dense mounds of bramble with gorse and occasional self-set karo.

The northern boundary of the field is marked by a Cornish Hedge has shrubs including gorse growing through and within; however it has been cut back almost to the stones at the time of survey. Other shrubby species may be present.

The feature supports a typical range of bryophytes, polypody ferns and navelwort along with honeysuckle, bramble and ivy. Non-native species including three-cornered leek and alexanders are frequent within the stones.

4.1.6. Soakaway Route

The land between the development site to the north, and the soakaway site to the south, is dominated by an unmanaged grassland with abundant mounds of bramble developing within the sward.

The sward itself is dominated by grasses including cock's foot, Yorkshire fog and bent grass along with herbaceous species such as lesser celandine (*Ranunculus ficaria*), wild carrot, creeping buttercup, germander speedwell (*Veronica*

chamaedrys), hogweed, ribwort plantain and yarrow. Three-cornered leek can also be found in the sward.

A minor area of land was outside of the accessed land but was visible from the boundary – these are two back gardens which appear to have the same grassland sward though with varying degrees of management. There are karo hedges bounding the gardens as well as a Cornish palm (*Cordyline australis*) within this grassland.



Photo 01 – Showing the northern stone boundary wall to the west of the site.



Photo 02 – Showing the northern stone boundary wall offsite to the east where it takes on the character of a Cornish Hedge.



Photo 03 – Showing the pasture field



Photo 04 – Showing the overgrown hedge with dense brambles on the southern boundary of the pasture field



Photo 05 – Showing the western boundary wall with the offsite garage behind.



Photo 06 – Showing the shelterbelt viewed from the east.



Photo 07 – Showing the dense, dark understorey of the shelterbelt



Photo 08 – Showing the tussocky grassland field with bramble mounds through which the soakaway route passes.



Photo 09 – Showing the back gardens through which the soakaway route passes.



Photo 10 – Showing the horse-grazed soakaway field with the scrub visible beside the boundary.

4.2. Bats

4.2.1. Background Data

The desk study does not identify any records of bats previously roosting within the site.

A data search revealed information on five species of bat recorded on St Mary's. 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 are recorded during the summer period but these are thought to be itinerant or migratory individuals – no roost has been confirmed and the encounter frequencies do not suggest a breeding population.

A common pipistrelle roost was recorded within McFarland's Down in 2014 in a garage approximately 110m to the north of the site, with further transient/day roosts recorded associated with properties over 500m away to the east.

4.2.2. PRA Results (Trees)

The only trees which could be impacted by the works are those in the offsite shelterbelt. These trees do not appear to be of an age or condition to support roosting bats based on the visibility available – this includes all aspects of the trunks which face directly onto the site. However the potential for individual pine trees within the interior to support roosting opportunities cannot be ruled out due to the density of the evergreen shrub vegetation.

No other trees suitable for use by roosting bats were noted.

4.2.3. PRA Results (Buildings)

There are no buildings within the site itself.

There is an offsite garage on the western boundary, the rear of which faces directly onto the site. The garage was not comprehensively surveyed due to access restrictions; however the western aspect has a fascia board which has gaps beneath in places. This has the potential to support roosting bats and could be indirectly impacted by the proposals due to its proximity to the site.



Photo 11 – Showing the garage immediately offsite adjacent to the stone wall on the western boundary. The gaps beneath the fascia are indicated.



Photo 12 – Showing a closeup of the fascia board with a gap indicated.

4.2.4. PRA Results (Walls)

There are limited examples of bats roosting in drystone walls and Cornish hedges but this has been recorded in several instances. The low number of records may reflect the considerable extent of these features and the infrequency of surveys or other opportunities to identify roosting bats.

The drystone walls onsite do provide occasional niches which are of a size and shape to provide Potential Roosting Features (PRF). These are too widespread to individually describe but are present throughout the features.

4.2.5. Foraging and Commuting Habitat

The site is likely to provide a foraging resource for local common pipistrelle populations as part of a wider landscape. The ecotone between the grassland fields and the offsite shelterbelt are likely to be used by common pipistrelle which favour 'edge' habitat.

The field boundaries and developing karo hedges, and especially the shelterbelt, are likely to be used by commuting bats to navigate between roosts and foraging habitat in the wider landscape.

4.3. Birds

4.3.1. Nesting Habitat

The following onsite habitats are likely to support nesting birds during the breeding season:

- Trees and shrubs associated with the non-native shelter-belt, including bramble and other climbers and scrub at the margins;
- The under-grazed margins of the grassland field, found beyond the electric fence;
- The stone walls and Cornish Hedge;
- The rough grassland, bramble scrub, shrubs and hedges on the soakaway route;
- The scrub in the corner of the soakaway field.

These are likely to support a common assemblage of farmland and peri-urban bird species.

4.3.2. Foraging Habitat

All habitats on site are likely to provide foraging habitat for common bird species as part of a wider resource landscape.

4.4. Other Ecological Receptors

There is evidence of **rabbit burrows** in the following onsite habitats:

- The boundaries of the non-native shelter-belt;
- The stone walls and Cornish Hedge;
- The soakaway route and soakaway field.

The habitats onsite are likely to support a wide range of **invertebrates**, as well as common small mammal species such as **white-toothed shrew**.

5. Evaluation

5.1. Proposals

The proposed works were identified in the plan “Llewelyn Parker Lowe: 4340 – 13” provided by the client.

These include the construction of new homes with associated hard and soft landscaping, access and utilities. There will be temporary disturbance to land within the soakaway route and soakaway field to install the drainage infrastructure – the habitats will be restored following the completion of the works. The proposals do not indicate an impact to the shelterbelt aside from a reduction in the overhanging canopy facing the site.

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.

The proposals would represent a small increase in the residential population of the island, but the distance to the designated sites and the relatively small proportional increase in access in relation to the recreational pressure from tourists during the summer would be negligible.

5.2.2. Habitats

The proposals would lead to the long-term, irreversible loss of the pasture field through conversion to residential and associated landscaping use. Whilst fragments of the pasture grassland will be retained and enhanced, the majority will be lost.

The offsite shelter belt would be retained provided measures are put in place to protect the features during the construction process. Reduction in the overhanging canopy on the site side would represent standard management of a feature such as this. In the long-term, there is the potential for increased disturbance of this feature through proximity of residents, lighting and pets.

The perimeter walls would be largely retained with a minor removal of a section of the western boundary to permit access. There would however be a significant remodelling of the northern boundary wall/Cornish hedge to facilitate access and provide appropriate visibility splays. There is the potential for this to be restored fully and enhanced in the long-term through recreation of the original feature; however in the short term this would lead to significant disturbance of the species associated with the feature. The change of use of the overall site may result in changes to the management of boundaries to the new residential field. The karo hedge along the wall is likely to be removed in places to permit the re-

modelling of the boundary feature – this non-native species is over-represented within the islands and could be replaced with a more appropriate species.

The habitats within the soakaway route and soakaway field will be subject to short-term removal though the habitats will be restored following the completion of works. No long-term impacts are predicted.

5.2.3. Bats

The PRA surveys did not identify any onsite buildings or trees which would provide suitable roosting opportunities for bats.

The survey did identify an adjacent offsite roosting opportunity associated with the garage unit. If this building is used as a roost, the proposed development would have the potential to cause disturbance to the roost during the construction and operational phase if the roost were not taken into account and appropriate measures put in place. This disturbance could arise through noise, resident/contractor presence, inappropriate lighting and obstruction to flight lines/drop zones.

The boundary walls are considered to have a very low risk of use by roosting bats based on the balance of evidence available at the time of writing. The risk of disturbance impact arising from the potential presence of a roost in a retained wall would not rise to the level which would justify further surveys given the low likelihood of use. However the remodelling of the northern boundary wall could result in killing/injuring of bats present within the wall in the unlikely event of their presence, and this more serious impact would justify the recommendation of measures to control risk.

The proposals would retain the offsite shelter belt and field boundaries – this would ensure that commuting routes, flight lines and the higher value foraging habitats would be retained. The minor reduction in suitable foraging habitat arising from the conversion of grassland to residential use is likely to be relatively minor given the scale of impact within the wider foraging context.

Inappropriate lighting of the boundaries and shelter belt have the potential to negatively impact the suitability of these features for use by foraging or commuting bats.

5.2.4. Birds

The site provides various suitable habitats for use by common nesting bird species, primarily associated with the shelter belt and the boundary features including ungrazed margins.

If works affect these features during the breeding season, they would result in the short-term disturbance, damage or destruction of nests and the potential killing of adults or chicks/eggs if measures are not taken to avoid this.

In the long term, based on the plans provided, it is likely that the new structures and garden vegetation would offer an increase in the availability of nesting habitat, though additional habitat boxes can be installed to secure this and offer a net enhancement.

There would be a short-term reduction in the availability of suitable foraging habitat for nesting birds during the construction phase, but this is likely to be of low significance. In the long term, the new homes and gardens are likely to result in similar or potentially enhanced foraging resources for local bird populations.

5.2.5. Other Species

Ground works and clearance could impact upon rabbits if their burrows are within or extend beneath the works area. This could lead to killing, injuring or entombment in the absence of an appropriate working methodology.

6. Recommendations

6.1. Further Survey Requirements

6.1.1. Overview

The ecological baseline presented in this report is considered to be sufficient to assess the impact of the proposals upon ecological receptors, with the exception of the potential for roosting bats to make use of the adjacent offsite building.

The presence, or otherwise, of protected species is a material consideration in the context of planning; however in this instance, the only potential is for disturbance during construction or post-development interference impacts such as lighting. This can be addressed through appropriate lighting; landscaping; or a Construction Ecological Management Plan (CEMP) which are all within the scope of Planning Conditions to secure without requirement for modification of the overall proposals.

6.1.2. Bat Emergence Survey

It is recommended that two dusk emergence surveys are carried out on the southern aspect of the offsite garage building during the main bat activity season, in line with the specifications set out in the relevant Best Practice Guidance⁸.

It is recommended that a Planning Condition is attached to any permission granted which requires the submission of the results of the survey to the Planning Authority. Recommendations for landscaping, lighting or CEMP should be clearly identified in this report and details submitted either alongside or within the appropriate document to ensure that any roosts and associated bat populations are protected during construction and occupation of the site.

6.2. Timing of Works

6.2.1. Nesting Birds

The onsite vegetation including both the development and soakaway sites offer suitable nesting habitat for breeding birds. In order to ensure legislative compliance, the contractors undertaking the works must ensure that nesting birds are not disturbed in accordance with requirements under the Wildlife and Countryside Act (1981)⁹.

The most reliable means of ensuring nesting birds are not impacted by the works is for clearance and development works affecting relevant areas to be conducted outside the bird breeding season of March to September inclusive. Development

⁸ Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition). The Bat Conservation Trust, London

⁹ HMSO (1981). *Wildlife and Countryside Act 1981* (as amended). HMSO, London.

works can be undertaken outside of the breeding season without constraints relating to breeding birds.

If works affecting nesting sites are undertaken outside of the nesting season to a stage where the nesting habitat is removed, then breeding birds will find alternative offsite nesting opportunities. In this way, works begun during the winter can proceed into the spring/summer with a minimal risk of causing disturbance or damage.

If works are scheduled to commence during the breeding season, a nesting bird survey would need to be carried out by a suitably qualified person prior to commencement. Careful observation of any potential nesting sites would be required to ensure that the parent birds are not visiting a nest and provisioning the young. 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 areas must be delayed until the chicks have fledged the nest.
- Once it is confirmed that nests are absent or no longer active, the relevant features should be dismantled carefully and by hand as a precaution.

Measures to protect retained habitats which might support nesting birds should be built into the CEMP. This may include barriers where required, and signs identifying areas where contractors should avoid. This should be advised by the ecologist, as required.

6.2.2. Bats

The works affecting the northern boundary feature should be undertaken outside of the main active season. The evidence available indicates that roosts within drystone walls and similar features are more typically summer roosts; therefore targeting works between November and March would be advisable.

This would broadly coincide with the recommended timeframe for nesting birds and would permit the wall to be taken down at an optimal time to avoid or minimise the risk to both species.

6.3. Lighting

The external lighting for the new development should aim to minimise the use of lighting to the extent compatible with public safety requirements.

The use of cowls or other mechanisms to control and constrain lighting to the target areas should be considered to minimise light pollution.

The retained onsite and offsite features, as well as new areas of landscaping, should remain as dark habitats and corridors wherever possible to ensure that the habitats are suitable for bats and invertebrates which are sensitive to light pollution.

6.4. Cornish Hedge

The northern boundary feature has the character of a Cornish Hedge offsite to the east, but the stretch which runs along the proposed development area is a drystone wall.

The removal of sections of the wall to re-contour the boundary feature would allow this to be restored to a Cornish Hedge which would provide an elevated ecological resource along with a more locally appropriate boundary feature.

The removal of stones should be undertaken carefully and by hand where possible in order to minimise the risk of killing or injuring of bats, small mammals or other species present within the hedge. This should also allow stones with abundant mosses and lichens to be set aside and restored to the exterior of the new wall to facilitate the restoration of an ecologically functional feature.

A Method Statement for the dismantling of the existing feature and its subsequent restoration in line with best practice¹⁰ should be produced prior to works taking place and included within the CEMP – this could be conditioned in any approval granted at the discretion of the Planning Authority.

6.5. Biodiversity Net gain

The project should secure a Biodiversity Net Gain through appropriate landscaping and habitat creation. This is to ensure compliance with Local Plan policy OE2. This should be measured using the Biodiversity Metric published by DEFRA.

Landscaping should be designed in conjunction with ecological input in order to ensure that the proposals will result in deliverable, long-term habitat creation appropriate to the site and the local landscape setting.

The plan to secure Biodiversity Net Gain should be submitted alongside the application, or conditioned in any approval granted at the discretion of the Planning Authority.

6.6. Landscaping

The landscaping design for the scheme should focus on species native and endemic to the Isles of Scilly. This involves a restricted range of tree and shrub species compared with the diversity found in mainland UK.

The establishing karo hedge along the northern boundary should be removed and replaced with native hedgerow species which would provide a significantly enhanced ecological function compared with the non-native windbreak species.

¹⁰ <http://www.cornishhedges.co.uk/PDF/lookafter.pdf>

Where practicable, grassland areas should be retained within the site in order to allow the existing native sward to persist post-development. Where this cannot be achieved, for example where areas are irreparably damaged by storage works, the restoration of a native and endemic sward should be targeted. This could be achieved by spreading a green hay from a local or onsite sward over the ground to be restored. Generic seed mixes should be avoided in favour of endemic, locally sourced species.

A selection of trees should be planted within the new development – the species chosen should have due regard to the species native or established on the islands as well as the degree of exposure to wind and winter storms which will be associated with the location. Fruit trees including Scillonian varieties (such as Scilly Pearl) or south-western varieties (such as Cornish Aromatic, Cornish Pine or Devonshire Quarrendon) would provide a resource for wildlife as well as food for new residents and could also be considered.

The following tree and shrub species are either native to the islands, or have been introduced elsewhere in the past eg. the Lower Moors Extension managed by the Wildlife Trust, such that they would not be a novel presence.

Table 02. Recommended species for a residential development

Species	Growth Form
Silver birch	Small tree
Crab apple	Small tree
Rowan	Small tree
Hawthorn	Shrub
Holly	Shrub
Hazel	Shrub
Wild privet	Shrub

Where practicable, a pond could be developed to provide an aquatic resource for wildlife – this could be considered in conjunction with swales or SUDS systems to manage runoff and water.

6.7. Soakaway Restoration

The land to be impacted by the installation of the soakaway field and pipe route should be restored to it's previous condition following the completion of works. This could involved removal of turf to be set-aside and restored in the case of short-term works; however where this is not practicable, restoration to grassland should be achieved by natural regeneration where possible.

If this is not appropriate, seed mixes should be locally sourced where possible, and tailored to the species native on the islands.

6.8. Habitat Boxes

Habitat boxes can be installed within the new development. These could include either stand-alone or integral bat boxes and bird nesting habitat within the new buildings.

Where stand-alone boxes are selected, these should be fixed following the manufacturer's recommendations and using the fixings provided. Care must be taken to ensure that the boxes are secure and stable in high wind conditions.

6.8.1. Bird boxes

A minimum of **5 bird boxes** should be installed, with more included where appropriate. The locations would need to have due regard to public hygiene or public nuisance concerns, for example avoiding locations where droppings could impact upon residents.

The precise specification for enhancement should be developed in order to maximise the ecological provision whilst avoiding any material impact upon the aesthetics or character of the new buildings. The species targeted should be those which are confirmed to breed on the island and are present within the more developed location of the site. Suitable options are outlined below:

- Swallow nest boxes could be incorporated in eaves or gables – these should be in a location with a good 'fly in' for parents provisioning the nest and in a location with minimal risk of disturbance;
- 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 good likelihood of occupation if they were positioned close to the shelterbelt.

Any boxes should be either integrated into the construction design, or mounted securely at a height of at least 3m above the ground in areas without high levels of public presence which could cause disturbance.

There are many examples of integrated box designs to minimise the aesthetic impact and these could be considered where appropriate. A valuable resource is 'Designing for biodiversity: A technical guide for new and existing buildings'¹¹ – this is published by the Bat Conservation Trust (BCT) in conjunction with RIBA and covers habitat box provision specifications for both bats and birds.

¹¹ 'Designing for biodiversity: A technical guide for new and existing buildings' (RIBA Publishing 2013, 2nd edition)

It is recommended that proposals for the installation or integration of bird nesting boxes are either submitted as part of the application, or conditioned in any approval granted at the discretion of the Planning Authority.

6.8.2. Bat boxes

A total of **4 bat boxes** should be integrated into the new buildings, with more included where appropriate. The locations would need to have due regard to resident nuisance concerns, for example avoiding locations where droppings could accumulate on window ledges. They would also need to be sited facing onto boundary or other vegetated features to maximise the chance of occupation.

The boxes selected should be suitable for use by common pipistrelle bats – the dominant species found on St Mary’s.

It is recommended that integral boxes are used which fit discreetly within the construction of the buildings and would not represent an obtrusive presence.

It is important that the boxes are not lit by external lights such as security lights.

It is recommended that proposals for the installation or integration of bat roosting boxes are either submitted as part of the application, or conditioned in any approval granted at the discretion of the Planning Authority.

6.9. Rabbits

Rabbits are covered under the Wild Mammals Act 1996¹² which prevents causing unnecessary suffering. If works impact or block burrows, this could lead to killing, injuring or entombment which would contravene the legislation.

A pre-commencement survey should be undertaken to identify any rabbit burrows which would be directly or indirectly impacted by the proposals. If the burrows are active, they should be evacuated from the burrows prior to works proceeding. Measures to achieve this in a humane manner include excavation with hand tools, or use of ferrets to flush the rabbits out. This should be undertaken between October and February when there will not be dependent kittens in the tunnels. Where there is uncertainty regarding the active use of a warren, trail cameras could be used to establish activity.

A Method Statement detailing the measures which would be put in place for this site clearance should be produced prior to works taking place and included within the CEMP – this could be conditioned in any approval granted at the discretion of the Planning Authority.

¹² HMSO (1996) Wild Mammals (Protection) Act 1996. HMSO, London.

6.10. Invasive Species

Under the Wildlife and Countryside Act, 1981¹³, 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 is ubiquitous across the islands and its low-level presence on the site is commonplace. Montbretia is an easily identifiable invasive species which is present on the site as a small number of readily identifiable plants which could be easily removed and destroyed as part of the project.

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 practices during demolition and construction should be designed to ensure this.

6.11. Survey Validity and Update

The surveys were completed in December 2023 / January 2024. Many species are transient in their use of habitats, and apparently minor changes in condition or use of the site can affect suitability. However in the absence of significant changes in condition or use of the site, the nature and character of the site suggest that:

- The PEA assessment can be considered valid for a period of 12 months after the survey was completed, until January 2025.

If Planning Permission is not applied for by this date, the ecology surveys should be updated as required.

6.12. Application Documents or Planning Conditions

It is recommended that the following documentation should be submitted alongside the application or incorporated into appropriate Planning Conditions if the LPA are minded to approve the application:

- **A Construction Ecological Management Plan (CEMP)** which includes:
 - Measures to protect nesting birds including timing of works;
 - Measures to protect bats and other species during works to the northern boundary feature;
 - Measures to protect retained habitats including boundary and offsite features;
 - A methodology to dismantle the stone wall and restore to a Cornish Hedge along the northern boundary;

¹³ HMSO (1981, as amended). Wildlife and Countryside Act 1981. HMSO, London.

- Measures to address or minimise the risk of spreading invasive non-native species including Montbretia and three-cornered leek;
- A methodology to restore the habitats temporarily impacted by the installation of the soakaway;
- Measures to ensure that rabbits are not killed, injured or entombed.
- A requirement for submission of **bat survey results** with regards to the offsite garage building and recommended measures to ensure that any roost identified is protected and retained during construction and occupation of the site;
- A **Lighting Plan** showing details of proposed external lighting which would minimise light-spill on retained habitats to provide dark corridors and continued suitability of foraging resources for bats;
- An assessment of **Biodiversity Net Gain** demonstrating how a net gain will be achieved;
- A **Landscaping Plan** detailing habitat creation and management measures which would secure the BNG in the long-term;
- **Habitat Enhancement Plans** showing the specification and location of bird and bat boxes within the final development.

Appendix 1 – Relevant Legislation

The Habitat Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) or the 'Habitat Regulations 2017 (as amended)', ensures wild animals of a European Protected Species and their breeding sites or resting places are protected under Regulation 43. Such wild animals of a European Protected Species include great crested newts, otters, dormice and all species of bat. It is an offence to deliberately capture, injure or kill any such wild animal and in the case of great crested newts, deliberately take or destroy their eggs. It is also an offence to deliberately damage or destroy a breeding site or resting place of any such wild animal.

Wild animals of a European Protected Species are also protected from disturbance under Regulation 43. Disturbance of such wild animals 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.

The Wildlife and Countryside Act (as amended) and Countryside and Right of Way Act (CRoW) Act 2000 (as amended)

The Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 (as amended) afford protection to wild birds in England and Wales under Part 1. It is an offence to intentionally kill, injure or take any wild bird. It is also an offence to intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built, or intentionally take or destroy their eggs. If the wild bird is included on the Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), it is additionally an offence to intentionally or recklessly disturb the wild bird whilst on the nest during the breeding season.

Certain species of animal, such as the water vole, are offered 'full protection' under the Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 (as amended) by being included in Schedule 5 in respect of certain offences under Section 9. Such offences include:

9(1) Intentional killing, injuring or taking of a Schedule 5 animal;

9(4a) Intentional or reckless damage to, destruction of or obstruction of any structure or place used by a Schedule 5 animal for shelter or protection;

9(4b) Intentional or reckless disturbance of a Schedule 5 animal occupying such a structure or place.

Widespread species of native reptiles occurring within England and Wales such as the adder or common lizard are protected against intentional killing and injuring under the Wildlife and Countryside Act 1981 (as amended) only. Animals of a European Protected Species are now only protected under offences 9(4a) and 9(4b) of Section 9, the main legislative tool covering such animals is under the 'Habitats Directive 2010 (as amended)'.

The Hedgerow Regulations 1997

Under the Hedgerow Regulations 1997, it is an offence to remove most hedgerows without the issuing of a Hedgerow Removal Notice from the Local Planning Authority. 'Important hedgerows' are those protected under the 1997 Regulations if they are over 30 years old and satisfy one of the criteria under Part II, Schedule 1, based on archaeology and history or wildlife and landscape.

In the case of 'Important' hedgerows, the Local Planning Authority will only issue a Hedgerow Removal Notice if there are sufficient circumstances to justify its removal. If sufficient circumstances do not exist then the Local Planning Authority will issue a Hedgerow Retention Notice and the 'Important' hedgerow will be protected under the 1997 Regulations. Unauthorised removal of the 'Important' hedgerow may result in a fine and/or a requirement for the hedgerow to be replaced.

Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 41 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six habitats of principal importance and 943 species of principal importance are included on the S41 list. The habitats and species on the S41 list are included within the UK Biodiversity Action Plan (UK BAP) as requiring conservation action. The requirement for action continues to be regarded as a conservation priority in the subsequent UK Post 2010 Biodiversity Framework. At a local level the actions and targets are still referred to as BAPs.