Development of Buzza Garage on Brownfield Infill Site

STATEMENT of BIODIVERSITY ENHANCEMENT

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Background

The conversion of Buzza garage into a family home with a wildlife-friendly garden is proposed. It is important to acknowledge the importance of preserving and enhancing the wildlife on Scilly so great care needs to be taken during the building works.
The intention the new local plan (Policy LC9 as written currently) is to ensure homes seeking planning permission are of a modest size with no net loss of biodiversity.

Objectives

This document sets out the measures to be taken to ensure biodiversity net-gain with contributions made by;

- **Retaining a garden and borders with some of the vegetation currently on site.**
- **Adding further vegetation to the garden to provide wildlife-friendly habitats.**
- **Adding further refuge, food sources and water to the garden for a range of wildlife species.**
- **Adding supplementary nesting and roosting boxes onto the outside of the building itself.**
- **Adding a 'living garden' to provide refuge and food to a range of wildlife species.**
- **Ensuring biosecurity measures in place to prevent the incursion of non-native species which threaten native species on the islands.**

The application site

The application site is located on a brownfield infill site, located in Hugh Town, St Mary's (SV9053310416) (see red square on image below).

Habitats surrounding the application site

- The garage lies within the Built-Up Areas Boundaries (2011) published by the Office for National Statistics.
- The garage lies within a scattering of properties of varying size, some having gardens that contain mature shrubs, specimen trees and low-level hedges.
- Immediately to the east lies Buzza Hill, an area of open grassland and scrub which adjoins to the south east the Porthcressa allotments consisting of small vegetable plots enclosed by low-level Pittosporum (*Pittosporum tenufolium*) hedges.
- Further south east the habitat becomes more open, with many drystone walls surrounding improved pasture or unimproved grassland at Penninis Head SSSI approximately 450m away

- Immediately to the south lies the beach of Porthcressa, with its rocky cliff outcrops which provides access to the small mature woodland on the east side of the Garrison approximately 500m away
- The Garrison itself provides a mosaic of coastal grassland and scrub and small scattered shelterbelts, providing suitable foraging habitat in places.

Impact zones

For context, these nearby SSSI Impact Risk Zones are; Lower Moors, Higher Moors and Peninnis Head SSSIs. Impact to these nearby zones would be considered in large-scale residential developments and therefore **this development is not likely to impact surrounding SSSIs.**

The garage and brownfield infill site

The application site comprises of a detached, granite single-storey former garage (total area 32m) on an area of scrub vegetation. The biodiversity value of both the building and vegetation are considered in their current state, in order for a robust approach to enhance the biodiversity during and after development.

Zinc corrugated sheets form the roof, clad the southern gable end and 50% of the western aspect; one area has fascia boards; the remaining western aspect is granite stone partially obscured by Ivy; the eastern aspect is built into the slope and comprises solely of granite stone approximately 1 metre high.

The garage is sitting in an area of vegetation. On the northern boundary of this open area is a low-lying granite stone wall, dominated by Ivy (*Hedera helix*) and a relatively sparse hedge of Pittosporum (*Pittosporum tenufolium*) and brambles (*Rubus fruticosus).*

Biodiversity

Bats

All species of bats receive special protection under UK law making it a criminal offence under Schedule 5 section 9 (4) (b) and (c) of the Wildlife and Countryside Act 1981 (as amended) to “intentionally or recklessly disturb a bat at a roost” or “intentionally or recklessly obstruct access to a roost” and under Regulations 43 (1) and (2) of the Conservation of Habitats and Species Regulations 2017 (The Habitat Regulations) to “deliberately disturb a bat in a way that would affect its ability to survive, breed or rear young, or affect the local distribution or abundance of the species; or to “damage or destroy a roost” without first having obtained the relevant licence for derogation from The Habitat Regulations from the Statutory Nature Conservation Organisation (the SNCO – Natural England in England).

The Isles of Scilly have the most southern population of Common Pipistrelle *(Pipistrellus pipistrellus)* bats in the United Kingdom. There are four bat species recorded within the 2km of the

site; Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Nathusius Pipistrelle (*Pipistrellus nathusii*) and Brown Long-eared Bat (*Plecotus auritus*). Two known roosts lie within 500m of the proposed development. Any loss of roosting, commuting or foraging sites could have a detrimental effect on this species distribution as a whole and cause a net loss in biodiversity on the islands.

Summary of bat presence/absence survey by IOSWT

Please see the 'Preliminary Ecological Appraisal (PEA)' and 'Preliminary Roost Assessment (PRA)' reports

On 7th June 2019, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of The Old Boat Shed, Hugh Town, St Mary's, Isles of Scilly (BS18-2019). The characteristics of the building suggested a few features potentially suitable for roosting bats such as crevices (see images below); **the PRA deemed the property 'low' roost potential.**

On 25th June IOSWT carried out a subsequent dusk emergence survey to support the findings of the PRA. **The dusk emergence survey found no evidence of roosting bats within the proposed development site, with the main activity around the proposed development considered to be low, consisting primarily of commuting and foraging behaviour.**

The recommendations in the PEA and PRA suggests no further surveys and no requirement to obtain an EPS license. The report recommends that there are no constraints to the planning proposal if the following are adhered to; **avoidance measures during demolition and construction phase, mitigation and enhancement in the form of provision of new potential roost sites.**

Reasonable Avoidance Measures (RAM)

As there is a low risk that bats may roost within the building using it as a night roost when weather may halt feeding, prior to demolition, precautions should be taken to reduce the probability of committing an offence. **The owners Mr Fletcher and Ms Pearson will ensure RAM are undertaken;**

a) Demolition works will avoid the main breeding and mating season of pipistrelle bats, with works undertaken 1st September - 1st May.
b) Ensure all workers on site are made familiar with bat legislation and agree to work in accordance with and fully follow best practice measures .
c) Prior to demolition carry out 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.
d) Individual bats may be found in/under cladding, between timber boards, between corrugated sheeting.

e) In the unlikely event that a bat is found, halt work and call IOSWT (01720 422153) for advice.

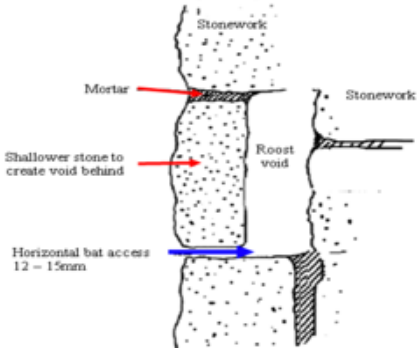
Bat roost enhancement recommendations

- All new roofing felt laid to be traditional Type 2 bitumen felt, as modern breathable membranes have been shown to kill bats.
- Roosting provision that could be provided as long-term replacement for the loss of roosts for crevice dwelling species;

a. In the form of 2 roof line access tiles, one for each aspect (east and west).

b. In the form of selecting 10 tiles on each roof aspect (20 in total) and raising their leading edge by 25mm (using mortar) to create a wedge-shaped crevice that provides access to the underlying felt, to provide further potential roost space.

c. In the form of creating artificial voids in any proposed granite stone or granite block fascia though in-line bat boxes (insert these on a northern, southern or western aspect) or the using uneven sized stone to create roost .



d. Free-standing bat boxes on three aspects (north, south and west).

These items can be sourced at **Habibat**. Tel: 01642 724626. Web: www.habibat.co.uk

Further biodiversity enhancement for bats

- Plant ‘bat friendly’ vegetation to enhance the hedgerow to the north and the immediate area surrounding the development, to encourage foraging bats

List of species taken from the Bat Conservation Trust Leaflet: "*Encouraging Bats. A Guide for Bat Friendly Gardening and Living*" (BCT 2015)[10]
*Plants marked * are hybrids or exotics that may be useful in the garden*

Flowers for Borders	Flowering period
*Aubretia	Spring to early summer
Bluebell	Spring
*Candytuft	Summer to autumn
*Cherry pie	Summer to autumn
Corncockle	Summer to autumn
Corn marigold	Summer to autumn
Corn poppy	Summer to autumn
*Echinacea	Summer to autumn
*Evening primrose	Summer to autumn
Field poppies	Summer
*Honesty	Spring
*Ice plant 'Pink lady'	Early autumn
Knapweed	Summer to autumn
Mallow	Summer to autumn
*Mexican aster	Summer to autumn
*Michaelmas daisy	Summer to autumn
*Night-scented stock	Summer
Ox-eye daisy	Summer
*Phacelia	Summer to autumn
*Poached egg plant	Summer
Primrose	spring
*Red valerian	Summer to autumn
Scabious	Summer
St John's wort	Spring
*Sweet William	Summer
*Tobacco plant	Summer
*Verbena	Summer to autumn
*Wallflowers	Spring to early summer
Wood forget-me-not	Spring
Yarrow	Early summer
Herbs	**Flowering period**
Angelica	Summer
Bergamot	Summer to early autumn
Borage	Spring to early autumn
Coriander	Summer
Fennel	Summer to early autumn
Feverfew	Summer to early autumn
English marigold	Summer
Hyssop	Summer to early autumn
Lavenders	Summer
Lemon balm	Summer

- Create a mini-pond, this will attract flying insects which spend part of their lifecycle as nymphs in water or in pond vegetation, which will provide a food source for bats

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981. 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.

Summary of ecological appraisal by IoSWT

On 7th June 2019, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA). During this survey, no evidence of nesting birds were found.

Recommendations

If any demolition is 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 any nests are identified, works that would disturb the adults, the nest, or young must be postponed until all young have fledged.

IoSWT concluded, **other than bats, if the recommendations given in this report regarding nesting birds are adhered to, there should be no further ecological constraints to the proposals**

Further biodiversity enhancement for birds

The following actions will be undertaken to enhance breeding and foraging opportunities.

Understanding breeding bird species which may use the site

By understanding which bird species may use the site, the types of feed, bird feeder design and nest boxes can be planned for. Species which will be present in nearby gardens will be passerines including house sparrows; wrens; great tits and blue tits; goldfinch; starlings; thrushes; robins; blackbirds; dunnocks; collared doves; including more specialist species which can be encouraged e.g. greenfinch; and in autumn migratory birds looking for food e.g. waxwings.

Food

- Select feeders and bird food dependent on the bird species present/being attracted e.g. sunflower seeds for goldfinch.
- Ensure the correct location e.g. near to cover for safety away from cats and birds of prey.
- Clean the feeders regularly, and ensure no overspill of food which encourages rats.
- Grow bird-friendly plants with berries e.g. blackberries for local birds and autumn migrating birds.
- Plant insect-friendly plants (listed above) to provide pollen for flying insects which many of these species of birds feed upon.

Water

- Place a bird bath in the garden for birds to drink from and bath in.
- Clean bird baths regularly.
- Create a mini-pond, this will attract flying insects which spend part of their lifecycle as nymphs in water or in pond vegetation, which will provide a food source for birds, and water for drinking and bathing in.

Nestboxes

- Use nest boxes designed for the target species on the outside of the building

- Ensure nest holes are the correct size e.g. the entrance hole size depends on the species; 25mm for blue tits; 28mm for great tits; 32mm for house sparrows; 45mm for starlings, 100mm high open from for robins.
- Place these net boxes in the correct places. E.g. boxes for tits, sparrows and starlings need to be 2 – 4 m high; face the box between north and east avoiding strong sunlight and wettest winds; tilt the box forward slightly so that any driving rain will hit the roof; make sure the birds have a clear flight path.
- Use a house sparrow nestbox 'terrace', as they are colonial nesters so the nest box is split into chambers for these social birds.

House sparrow terrace www.shopping.rspb.org.uk

Roosting sites

a. Provide roosting pockets for these passerines to roost and shelter from weather and predators.

Roosting pocket. www.shopping.rspb.org.uk

Flowering plants and vegetation

There are rare species of flowering plants on Scilly, some of which are the designating features of nearby SSI's and SPA's.

Summary of ecological appraisal by IoSWT

On 7th June 2019, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) for bats, they also reported on vegetation growing on the property which would attract flying insects, the food source of bats.

No vegetation of conservation interest was found on the site.

Vegetation recorded in the grassland immediately surrounding the building included; Fennel (*Foeniculum vulgare*), Alexanders (*Smyrnium olusatrum*), Garden Nasturtium (*Tropaeolum majus*), Bramble (*Rubus fruticosus*) and Cleavers (*Galium aparine*). Flowering plants included; Sea Radish (*Raphanus raphanistrum*), Hedge Mustard (*Sisymbrium officinale*), Common Fumitory

(*Fumaria officinalis*), Spotted Medick (*Medicago arabica*), Common Vetch (*Vicia sativa*) and Smooth Tare (*Vicia tetrasperma*).

Recommendations

IOSWT recommended to plant vegetation which attracts bats (see image above on the species recommended by the Bat Conservation Trust).

Further biodiversity enhancement for flowering plants and vegetation

Enhancing vegetation biodiversity will in turn attract feeding insects, which support bats, birds, the endemic Scilly shrew or Lesser white-toothed shrews (*Crocidua suaveolens*), and naturalised hedgehogs (*Erinaceus europaeus*). Vegetation will be enhanced in the following ways;

a. Retain the species of vegetation and flowering plants identified by IoSWT as currently on the site in margins and borders around the build. Their seeds will remain in the seedbank and seeds from these plants can also be collected on island and replanted.
b. Do not bring non-native plants into the site, but source them on island. Some of these plants are 'naturalised' on the Islas of Scilly and deemed part of the biodiversity.
c. Ensure peat-free compost is used.
d. A 'living roof' with succulents is part of the design plans. These succulents have been naturalised on Scilly or from local providers such as https://www.scillysucculents.co.uk/

Hedgerows, trees, stonewalls

There are no trees or maintained hedgerows on the site. There is one area which may have been a hedge at some point which is now a bramble thicket. Granite stones currently form the west side of the build and these will be recycled into the proposed build.

Further biodiversity enhancement for hedgerows, trees, stonewalls

a. There is no room for planting hedges and trees on the property, but granite from the west side of the building will be recycled into proposed build. This will provide crevices for roosting bats, nesting birds, insects and wall growing plants.
b. If hedges or tress are ever planted, they will only be trimmed and cut in January/February (when birds are not nesting) and only every few years. Follow guidelines https://www.ios-wildlifetrust.org.uk/tree-hedge-management

Invertebrates

Further biodiversity enhancement for invertebrates

a. Insect-friendly plants listed above will provide pollen for flying insects - bees, butterflies and moths to name a few.
b. Do not bring non-native plants into the site, but source them on island. Some of these plants are 'naturalised' on the Islas of Scilly and deemed part of the biodiversity.
c. Build 'bug hotels' for hibernation and breeding insects
d. Ensure peat-free compost is used.
e. The granite wall and wall-growing plants will provide crevices for refuge and pollen for insects.
f. The 'living roof' will provide refuge and pollen for insects.
g. Use pesticide-free products in the garden
h. Create a mini-pond, this will attract flying insects which spend part of their lifecycle as nymphs in water or in pond vegetation.

i. Create a compost heap for invertebrates including woodlice and worms. Compost heaps are also a great way to turn waste material from the kitchen and garden back into wholesome compost to put back on the garden.


Bug hotel www.shopping.rspb.org.uk


Bee hotel www.shopping.rspb.org.uk

Mammals

The two other species of mammals (excluding bats) which could be found on brownfield sites are Scilly shrew or Lesser white-toothed shrews (*Crocidua suaveolens*) and hedgehogs (*Erinaceus europaeus*)

Scilly shrew

Scilly shrew or Lesser white-toothed shrews (*Crocidua suaveolens*) are endemic. They are insectivorous, feeding on insects.

Hedgehog

Hedgehogs (*Erinaceus europaeus*) are not native to the islands, they could be classed as naturalised by some parties and classed as invasive and a threat to ground nesting wading birds and seabirds by other parties. Hedgehogs were introduced to Scilly in the 1980s. On St Mary's they are currently not part of any 'invasive species action plan' but instead, due to their declines of over 90% on the mainland, Scilly may become a stronghold. A hedgehog has been recorded foraging on this site by a neighbour, so this site is likely to be part of a wider foraging area.

Further biodiversity enhancement for shrews

a. Plant insect-friendly plants (listed above) to provide pollen for flying insects, their food source.
b. Bug hotels and dry-stone walls will provide refuge for insects, their food source.
c. Do not use pesticides
d. Create a compost heap for invertebrates including woodlice and worms which shrews feed on.

Further biodiversity enhancement for hedgehogs

a. Ensure gaps in fences and walls so hedgehogs have 'corridors' to move between foraging locations.
b. Plant the insect-friendly plants (listed above) to provide pollen for flying insects, their food source.
c. Bug hotels and dry stone walls will provide refuge for insects, their food source.
d. Install a hedgehog house in a quiet corner of the garden for roosting and hibernation.
e. Provide water for hedgehogs particularly in summer.
f. Do not use slug-pellets (slugs form a large part of hedgehog diets)

g. Create a compost heap for invertebrates including woodlice and worms which hedgehogs feed on.
h. If any sick hedgehogs are seen, report to IOS hedgehog rehabilitation expert Ro Bennett on 07979861609.

Hedgehog house www.shopping.rspb.org.uk

Amphibians

The only species of amphibian on St Mary's which could be attracted to an enhanced brownfield infill site is the common frog (*Rana temporaria*)

Common Frog

They can be found elsewhere on St Mary's in locations with ponds.

Further biodiversity enhancement for frogs

- Create a mini-pond, this will attract frogs.
- Create a 'frog den' where frogs can hibernate. These need to be in cool dark and damp places, safely away from predators.

Crate a mini-pond e.g. out of an old sink. Ideas at https://www.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/

Crate frog den. Ideas at https://www.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/

Aesthetics, landscaping and lawn

The garden area will also be landscaped to be aesthetically pleasing and in-keeping with neighbouring properties. The flowering plants previously listed will form flower beds. A grass lawn (grown from native grass seed and wild flower mix) for recreation also provides the soil and sward habitat for a range of species including invertebrates, birds and mammals.

Soil is a carbon sequester (second to the world's oceans). The soil in the garden will be improved by growing endemic plants; adding compost or other organic matter; not using artificial fertiliser.

Biosecurity considerations

IoSWT states under their biosecurity protocols https://www.ios-wildlifetrust.org.uk/biosecurity which species on Scilly are categorised in the following categories;

Native – animal or plant species indigenous to a place.
Non-Native – an introduced animal or plant species.
Naturalised species – an introduced species which has become established in the wild.
Invasive – an introduced animal or plant species which threatens native species (breeds/spreads quickly).

Biosecurity is about reducing the risk of introducing or spreading invasive non-native species (and other harmful organisms such as diseases). We will ensure biodiversity measures in the following ways;

- Ensure brown rats and house mice are not brought over in building materials in order to protect seabirds and wider wildlife. St Agnes and Gugh are rat-free since an eradication project in 2013, reduction in rodent pressure on St Mary's assists ongoing biosecurity. Ensure high risk freight items are checked for evidence of rodents prior to arriving on Scilly.
- To protect the islands elm trees, ensure that garden materials/wood is free from Dutch elm disease (a fungi) and elm zigzag sawfly (fly larvae) www.trees.org.uk
- To protect native ladybirds, ensure Harlequin ladybirds (non-native and predate native ladybird larvae) do not stow away in gardening materials. Source gardening materials on island, and if a harlequin ladybird is seen report to www.coleoptera.org.uk/coccinellidae
- If ever considering keeping bees, ensure that bees and equipment are free from varroa destructor (parasitic mite) www.nationalbeeunit.com

- Use local contractors, if external contractors are used, ensure their kits is cleaned and biosecure before arriving on Scilly.

Summary

To ensure biodiversity net-gain at this brownfield infill site, we the owners will;

- **Retain a garden and borders with some of the vegetation currently on site.**
- **Add further species of vegetation to the garden to provide wildlife-friendly habitats.**
- **Add further refuge, food sources and water to the garden for a range of wildlife species.**
- **Add supplementary nesting and roosting boxes onto the outside of the building itself.**
- **Add a 'living garden' to provide refuge and food to a range of wildlife species.**
- **Ensure biosecurity measures in place to prevent the incursion of non-native species which threaten native species on the islands.**

As wildlife lovers and a professional wildlife conservationist, we will do their utmost to ensure that biodiversity is enhanced, cared for and protected on this site.