



**Preliminary Ecological Appraisal & Protected Species Survey  
Report**

Site:

Old Secondary School, St Mary's, Isles of Scilly

Grid Reference: SV 9070 1062

29<sup>th</sup> September 2015

Prepared for the Council of the Isles of Scilly by Kim Jelbert BSc (Hons), MSc, MCIEEM on  
behalf of Plan4Ecology

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## Summary

The Sweett Group on behalf of the Council of the Isles of Scilly, commissioned Plan4Ecology to undertake a Preliminary Ecological Appraisal (PEA) of land at the Old Secondary School, St Mary's, Isles of Scilly (OS Grid Ref: SV 9070 1062) in August 2015. The Council of the Isles of Scilly require planning permission to demolish the buildings on-site, and to subsequently re-develop the wider site. Detailed site proposals are not available at the time of writing. The initial site visit identified that further surveys for bats and mole cricket (*Gryllotalpa gryllotalpa*) were required to inform the planning application. The Sweett Group on behalf of the Council of the Isles of Scilly, commissioned Plan4Ecology to undertake the recommended further survey work in August 2015. This Preliminary Ecological Appraisal and Protected Species Survey report comprises an extended Phase 1 Habitat survey, a detailed invasive plant survey, and detailed surveys for bats and mole cricket. The report also assesses the potential of the site to support other legally protected species; and describes and evaluates the results of the PEA in accordance with the 'Guidelines for Preliminary Ecological Appraisal' (CIEEM, 2012).

The site, measuring c. 0.6 ha, is located within Hugh Town on the Island of St Mary's, Isles of Scilly. The site comprises two former school buildings, associated gardens and amenity areas (tennis/ basketball court and rank grassland, formally lawn). There are three features of ecological importance on-site: native species-poor hedgerows without trees (UK BAP priority habitats); neutral semi-improved grassland; and dense scrub. The site has potential to support nesting birds (Section 1 WCA); foraging and commuting bats; hedgehog, invertebrate and amphibian species (UK BAP). Ecological constraints and opportunities are detailed on the accompanying 'Ecological Constraints and Opportunities Plan' (ECOP) (below). Mitigation recommendations to minimise impact on features of ecological importance are summarised below:

- **Hedgerows:** Retain and protect hedgerows on-site. Protect retained hedgerows during construction and operational use of the site by leaving a 2m development free buffer at the base of each hedgerow. Where hedgerow loss is unavoidable, there must be no net loss and ideally a net gain, post development.
- **Neutral semi-improved grassland & dense scrub:** Where possible retain and protect neutral semi-improved grassland/ dense scrub. Where loss of these features is unavoidable, incorporate native species-rich grassland/ tree and shrub planting elsewhere on-site post-development.
- **Invasive plants:** the site supports the invasive plant Montbretia (Schedule 9 WCA). An invasive plant method statement must be prepared prior to commencement of site works.
- **Birds & hedgehog:** Vegetation clearance/ hedgerow removal/ demolition of buildings must be timed to avoid the period when these species will be present or susceptible to harm.
- **Bats:** Minimize impact on bats by incorporating a sensitive lighting scheme, designed by a lighting designer in consultation with a bat ecologist.
- **Monitoring & Enhancement:** There is opportunity to enhance the value of the site for biodiversity. See the accompanying 'Ecological Constraints and Opportunities Plan' (ECOP) (below). Ecological monitoring of the site post-development is recommended.

Provided that the mitigation recommendations are successfully implemented, **the residual impact of the proposed development is considered to be zero with potentially some positive outcomes for biodiversity.** Demolition of the East and West Building can continue as scheduled in January 2016. This report must be updated following provision of the detailed site plans for the wider site.

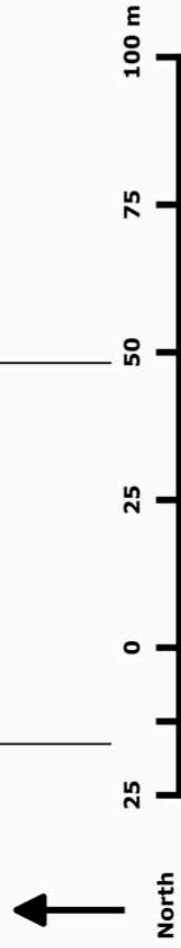


**Opportunity:** There is an opportunity to achieve a net gain of hedgerow habitat on-site post-development. New sections of hedgerow can form functional and aesthetic landscape features (i.e. garden boundaries), which will enhance the biodiversity value of the site. New sections of hedgerow must support native tree and shrub species, and must be protected by a development free buffer (c. 2m in width) to be of significant ecological

**Constraint:** Neutral semi-improved grassland provides habitat for invertebrate and bird species, lesser white-toothed shrew, hedgehog (UK BAP) and foraging habitat for bat species (EPS; UK BAP). A landscape plan comprising native species-rich grassland and native tree and shrub planting should be incorporated post-development.

Constraint & Opportunity: The invasive plant *Crocosmia x crocosmiiflora* (Wildlife & Countryside Act (1981) Schedule 9) is sparsely distributed across the site. A method statement to control this species will be prepared prior to commencement of works.

SI Semi-improved grassland  
Dense scrub  
Introduced shrub





## 1.0 Introduction

### 1.1 Background & Purpose of Survey

The Sweett Group on behalf of the Council of the Isles of Scilly, commissioned Plan4Ecology to undertake a Preliminary Ecological Appraisal (PEA) of land at the Old Secondary School, St Mary's, Isles of Scilly (OS Grid Ref: SV 9070 1062) in August 2015. The Council of the Isles of Scilly require planning permission to demolish the buildings on-site, and subsequently to re-develop the site. Detailed site proposals are not available at the time of writing. A location plan (also showing the designated sites of nature conservation importance) is provided at Appendix 1. The site comprises two former school buildings, associated gardens and amenity areas (tennis/ basketball court and rank grassland, formally lawn). Hedgerows dominated by non-native species enclose the east and west site boundaries. The Phase 1 Habitat distribution is shown on Map 1 in Section 3.2 below. Habitat in the wider area comprises a mixture of urban habitat (Hugh Town, St Mary's), coastal habitat (beach, rock, scree, coastal grassland and heathland), fen, marsh and swamp, neutral semi-improved grassland and arable fields enclosed by hedgerows. Minor habitats include scrub, woodland, bracken and unimproved grassland.

### 1.2 Site Location & Description

The site, measuring c. 0.6 ha, is located within Hugh Town on the Island of St Mary's, Isles of Scilly. Hugh Town is located on the western most peninsular of St Mary's. A location plan is provided at Appendix 1.

### 1.3 Proposed Site Plans

The Council of the Isles of Scilly require planning permission to demolish the buildings on-site (East and West Building as shown on Map 1 in Section 3.2 below), and subsequently to re-develop the site. Detailed site proposals are not available at the time of writing. Demolition of the buildings is scheduled for January 2016.

### 1.4 Project Administration

<b>Site Name:</b>	The Old Secondary School, St Mary's, Isles of Scilly
<b>OS Grid Reference:</b>	SV 9070 1062
<b>Site Owner:</b>	The Council of the Isles of Scilly
<b>Planning Authority:</b>	The Council of the Isles of Scilly
<b>Reference Number:</b>	P4E268
<b>Survey Dates:</b>	13 <sup>th</sup> August 2015 (extended Phase 1 Habitat survey) 13 <sup>th</sup> & 14 <sup>th</sup> August; 3 <sup>rd</sup> and 21 <sup>st</sup> September 2015 (bat emergence/ re-entry surveys) 14 <sup>th</sup> – 21 <sup>th</sup> August 2015 (bat remote monitoring of East Building) 14 <sup>th</sup> – 17 <sup>th</sup> August; & 22 <sup>nd</sup> – 25 <sup>th</sup> September 2015 (bat remote monitoring survey of site) 3 <sup>rd</sup> and 4 <sup>th</sup> September 2015 (mole cricket surveys) 3 <sup>rd</sup> and 21 <sup>st</sup> September 2015 (bat activity surveys)
<b>Surveyors &amp; Relevant Licence Numbers:</b>	Kim Jelbert BSc (Hons), MSc, MCIEEM (Bat licence no: 2015-10444-CLS-CLS; Barn owl licence no. CL29/00037; Dormouse licence no: CLS02144); Mark Tunmore BSc (Hons) MCIEEM: (Bat licence no: 2014-333-CLS-CLS)



## 2.0 Methodology

This assessment has been carried out in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Institute of Ecology and Environmental Management (IEEM, 2012) (now the Chartered Institute of Ecology and Environmental Management, CIEEM); the Bat Surveys: Good Practice Guidelines produced by the Bat Conservation Trust (Hundt, 2012); and BS42020-2013 Biodiversity – Code of Practice for Planning & Development, as adopted by local planning authorities (British Standard, 2013).

### 2.1 Preliminary Ecological Appraisal

The Preliminary Ecological Appraisal comprised a desk study, a site survey and a report. The desk study is a search of all ecological records and site designations held by the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS, to 2011) within a 1km radius of the site.

The survey comprised an extended Phase 1 Habitat Survey, and a detailed invasive plant survey of all land within the site boundary, and up to 7m beyond the site boundary where access was available. The site is defined as all land within the black site boundary as shown on Map 1 at Section 3.2.

The Phase 1 Habitat survey identifies the habitats present and their associated plant species (JNCC, 2010), and assesses the potential of the site to support protected species. The invasive plant survey comprises a search for plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981 as amended) on-site and within 7m of the site boundary (where access was available).

This report describes and evaluates the ecological interest of the site, identifies potential impacts that the works may have on wildlife and provides recommendations to mitigate/compensate for these impacts, in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (IEEM (now CIEEM), 2012). Possible enhancements are also detailed. The likely value of ecological features is determined within a geographical context in accordance with the CIEEM Guidelines for Ecological Impact Assessment (IEEM, 2006). Value is assigned in decreasing order of importance as followed: International, UK, National (England), Regional (southwest), County (Cornwall), Parish, Local and within the immediate vicinity of the site. The report also includes the results of detailed surveys for bats and mole cricket (*Gryllotalpa gryllotalpa*), and describes and evaluates the interest of the site for these species/ species groups.

### 2.2 Preliminary Bat & Bird Assessment

A visual assessment of the buildings on-site was undertaken on the 13<sup>th</sup> and 14<sup>th</sup> August; and 3<sup>rd</sup> September 2015. The ecologist assessed the suitability of the buildings and surrounding habitat to support bats and birds. A high-power torch was used to illuminate all accessible areas of the building with potential to support roosting bats and roosting/ nesting birds. The ecologist searched for signs of bats and birds including droppings, staining, feeding remains, bird nests, barn owl pellets and liming (dropping). Accessible crevices with potential to conceal a roosting bat were inspected using an endoscope.

### 2.3 Bat Emergence/ Re-entry Surveys and Remote Monitoring of Buildings

An emergence/ re-entry survey of the East and West Buildings was undertaken on the 13<sup>th</sup> and 14<sup>th</sup> August; and the 3<sup>rd</sup>, 4<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> September 2015. Two ecologists were required to cover all elevations of each building. On each occasion surveyor 1 used a BatBox Duet detector and an



Anabat SD1, and surveyor 2 used a BatBox Duet and an Anabat Express. Each detector type uses a different method of detecting; the BatBox Duet uses heterodyne and frequency division; and the Anabat Express and Anabat SD1 use frequency division. These methods of detection are described below:

- Frequency division: this method automatically and continuously records bat calls at all frequencies, and makes them audible to the human ear by dividing the call frequency by 10. Calls are played in real time and can be readily identified with sound analysis.
- Heterodyne: this method identifies bat calls echolocating at the frequency set by the operator but will fail to/ or only partially record bat calls outside this frequency.

The initial visual assessment was undertaken on a cool (c. 14°C), showery day on the 13<sup>th</sup> August 2015. The emergence surveys were undertaken during suitable weather conditions; these are described below:

- 13<sup>th</sup> August 2015 (dusk): showery – persistent heavy rain with full cloud (8), and a temperature of 13.0°C at the beginning of the survey, and 12 at the end of the survey; in accordance with the Beaufort Scale, wind was a moderate breeze.
- 14<sup>th</sup> August 2015 (dawn): dry with full cloud (8), and a temperature of 13°C at the beginning of the survey, and 13°C at the end of the survey; in accordance with the Beaufort Scale, wind was a moderate breeze.
- 3<sup>rd</sup> September 2015 (dusk): dry with full cloud (8), and a temperature of 14.5°C at the beginning of the survey, and 14.2°C at the end of the survey; in accordance with the Beaufort Scale, wind was no greater than a light breeze.
- 4<sup>th</sup> September 2015 (dawn): dry with full cloud (8), and a temperature of 13°C at the beginning of the survey, and 13.2°C at the end of the survey; in accordance with the Beaufort Scale, wind was no greater than light breeze.
- 21<sup>st</sup> September 2015 (dusk): dry with full cloud (8), and a temperature of 13.4°C at the beginning of the survey, and 13.5°C at the end of the survey; in accordance with the Beaufort Scale, wind was no greater than light breeze.
- 22<sup>nd</sup> September 2015 (dawn): dry with no cloud (0), and a temperature of 11.9°C at the beginning of the survey, and 11.5°C at the end of the survey; in accordance with the Beaufort Scale wind was a moderate breeze.

To provide more detailed information about bat activity in the East Building, a remote monitoring survey was carried out between the 14<sup>th</sup> – 21<sup>st</sup> August 2015. Remote monitoring equipment (Anabat Express) was installed within the single large roof void running the length of the north elevation of the building (location where bat droppings were observed). The detector was set to record continuously overnight (30 minutes prior to sunset until 30 minutes after sunrise) for a total of 7 nights. The Anabat Express uses the frequency division method of detecting as described above.

## **2.4 Bat Activity and Remote Monitoring Survey of Site**

**Bat Activity Surveys:** Bat activity surveys were undertaken to determine how bats use the site. The c. 0.6 hectare site was assessed as supporting habitat of low quality for bats; in accordance with the Bat Surveys Good Practice Guidelines (Hundt, 2012) two dusk bat activity surveys were undertaken during the bat active season (March - September). All activity surveys were carried out during suitable weather conditions.

In accordance with the Bat Surveys Good Practice Guidelines (Hundt, 2012), all dusk activity surveys commenced 10 minutes before sunset and concluded 2 hours after sunset. These timings



will record early emerging bats and those that emerge from their roost later in the evening. The bat activity survey comprised a mixture of 'transects' and 'point counts' as described in Hundt (2012). Predetermined 5 minute survey points, were chosen along a predetermined route (referred to as a transect) to permit a quantitative evaluation of the results (see Map 2). In accordance with Hundt (2012) the route was reversed on the second occasion (21<sup>st</sup> September 2015). At each 5 minute survey point, and along the transect between survey points, bat activity was recorded. The surveyor recorded bat calls, and noted whether the bat(s) was foraging or commuting, time of bat pass, and if possible the direction of travel. The location of point counts and the transect route is shown on Map 2. In accordance with the 'Bat Surveys Good Practice Guidelines' (Hundt, 2012) the level of survey effort at the site achieved a transect effort index of 4.4 hours/ hectare; this exceeds the level of survey effort usually required for a site of this size and character.

**Bat Remote Monitoring Survey:** In accordance with the 'Bat Surveys Good Practice Guidelines' (Hundt, 2012), a bat remote monitoring survey was undertaken to achieve a greater understanding of bat usage of the site. Two remote monitoring surveys were undertaken during the bat active season (August and September 2015). One remote monitoring device was placed in suitable habitat within the site to record bat activity for a period of 3 nights during each of the two monitoring periods. The detector was programmed to switch on 30 minutes before sunset, and switch off at sunrise. The results were analysed using the sound analysis program AnalookW 4.1 to determine the date, time and species of bat recorded.

## 2.5 Mole Cricket Survey

A daytime and evening mole cricket survey was carried out in September 2015. On the evening of the 4<sup>th</sup> September 2015 a mole cricket song was played via a laptop through an external speaker system to induce an audible response from any mole crickets present. The survey commenced one hour before sunset and continued until one hour after sunset. Details of survey dates and weather conditions appear below:

4<sup>th</sup> September 2015 (19.10 – 21.10) - force 3 northerly; dry; 6/8 cloud cover; 16 to 13.5°C.

5<sup>th</sup> September 2015 (10.15 – 12.15) - force 3 northerly; dry; sunny intervals; overcast; 6/8 cloud cover; 16°C.

A ground search was also carried out on the 5<sup>th</sup> September 2015; during this survey the ecologist searched for characteristic mole cricket surface runs and burrows amongst ground vegetation. Several items of debris, such as boarding and litter bins, which had been lying on the ground for a long period of time, were also raised to search for basking mole crickets. Casual listening for mole cricket was also carried out during the various bat surveys (3<sup>rd</sup>; 4<sup>th</sup>; 21<sup>st</sup> and 22<sup>nd</sup> September 2015).

## 2.6 Limitations

**Preliminary Ecological Appraisal:** There was free access to all areas of the site. August is a suitable time of year to undertake vegetation surveys (Phase 1 Habitat and invasive plant surveys), as many species will be flowering and therefore readily identifiable. Weather conditions during the survey were warm and dry with occasional showers and a light breeze (latter in accordance with the Beaufort Scale); temperature was in line with seasonal norms. There are no limitations to the vegetation survey associated with weather conditions.



Mole cricket: Whilst the weather conditions and survey times were not the balmy summer evenings that would have been the ideal, a reasonable effort was made to produce evidence of mole cricket presence within a site supporting sub-optimal habitat.

Bat Emergence/ Re-Entry Surveys: Three bat emergence/ re-entry surveys of the East and West Buildings were undertaken. The first survey of the West Building was undertaken at dusk in largely rainy conditions (dry at the start of the survey, followed by light and then persistent rain). The first survey of the East Building was undertaken at dawn in suitably dry and warm weather conditions; however, persistent, sometimes heavy rain preceded the dawn survey overnight. The weather conditions during/ preceding these surveys have potential to have prevented bats from exiting/ entering the East and West Buildings. This limitation was addressed by undertaking two further bat emergence/ re-entry surveys during suitable weather conditions.

Remote Monitoring Survey of Buildings: The remote monitoring detector will only record the calls of bats using the roof void, and therefore is unlikely to record those species/ individuals using crevices on the building exterior. The remote monitoring detector will not record bat calls if the bats do not echolocate inside the roof void. This limitation was addressed by undertaking three bat emergence/ re-entry surveys.

Bat Activity and Remote Monitoring of Site: There was free access to all areas of the site. All surveys were undertaken during suitable weather conditions, during the optimum period (June – August) of the bat active season (March – September inclusive) and were undertaken in accordance with the 'Bat Surveys Good Practice Guidelines' (Hundt, 2012). There are no limitations associated with weather conditions or timing of the surveys. The level of survey work undertaken is considered to give a good assessment of the site's value for bats, particularly given the small size of the site.

The calls of three bat species are notoriously difficult to record: the brown long-eared bat (*Plecotus auritus*) has a quiet echolocation call, and the horseshoe bats (*Rhinolophus hipposideros* & *R. ferrumequinum*) have highly directional calls. All three species can be easily missed during bat detector surveys.

Ecological features can change over time, particularly if site management/ use changes. Typically Preliminary Ecological Appraisals and protected species surveys are valid for one year (until July 2016).

## 2.7 Declaration

"The information, evidence and advice, which I have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology & Environmental Management's (CIEEM) Code of Professional Conduct. I confirm that the opinions expressed are my true and professional bona fide opinions."

**Name:** Kim Jelbert BSc (Hons), MSc, MCIEEM

**Signed:** 



### **3.0 Assessment Results**

#### **3.1 Designated Sites and Local Conservation Initiatives**

The site is not designated as a site of nature conservation importance. There are five designated site of nature conservation importance within a 1km radius of the site boundary; these are listed below:

- The Isles of Scilly Complex Special Area of Conservation (SAC) is a coastal designation, located approximately 100.1m north of the northern most site boundary. The Isles of Scilly Complex SAC is designated as such primarily due to the presence of Annex I habitats (reefs, mudflats and sandflats).
- The Lower Moors Site of Special Scientific Interest (SSSI) is located approximately 273m southeast of the southern most site boundary. This site is designated as a SSSI due to the mosaic of wetland habitats presence, and their importance for wildlife (notably bird species).
- The Peninnis Head SSSI is located approximately 576m south of the southern most site boundary. This site is designated as a SSSI due to the notable headland cliffs and presence of maritime heathland, grassland and scrub, and associated wildlife.
- The Peninnis Head to Dry Ledge Marine Conservation Area (MCA) is located approximately 592m south of the most southern site boundary. This site is designated as a MCA to compliment the existing SAC, and protect species and habitats not protected under the SAC.
- The Porthloo SSSI is located approximately 705m northeast of the northern most site boundary. This site is designated as a SSSI due to its geological value.

The proposed development site is considered to be sufficiently distant for the proposed constructional activities not to impact the designated sites described above.

#### **3.2 Site Description**

The site comprises two former school buildings (Figures 1 & 2), associated gardens and amenity areas (tennis/ basketball court and rank grassland, formally lawn) (Figure 3 & 4). Hedgerows dominated by non-native species enclose the east and west site boundaries. The Phase 1 Habitat distribution is shown on Map 1 in Section 3.2 below. Habitat in the wider area comprises a mixture of urban habitat (Hugh Town, St Mary's), coastal habitat (beach, rock, scree, coastal grassland and heathland), fen, marsh and swamp, neutral semi-improved grassland and arable fields enclosed by hedgerows. Minor habitats include scrub, woodland, bracken and unimproved grassland.





Figure 1: The Old Secondary School, St Mary's, Isles of Scilly – East Building.



Figure 2: The Old Secondary School, St Mary's, Isles of Scilly – West Building.





Figure 3: Old Secondary School, St Mary's - view south over former tennis / basketball court to neutral semi-improved grassland and scrub habitat beyond.

A total of seven Phase 1 Habitats were recorded on-site during the Phase 1 Habitat survey: dense scrub (A2.1); scattered trees (A3); neutral semi-improved grassland (B2.2); introduced shrub (J1.4); introduced species-poor hedgerow without trees (J2.1.1); wall (J2.5); and bare ground (J4) (see Map 1 below for the Phase 1 Habitat Distribution).

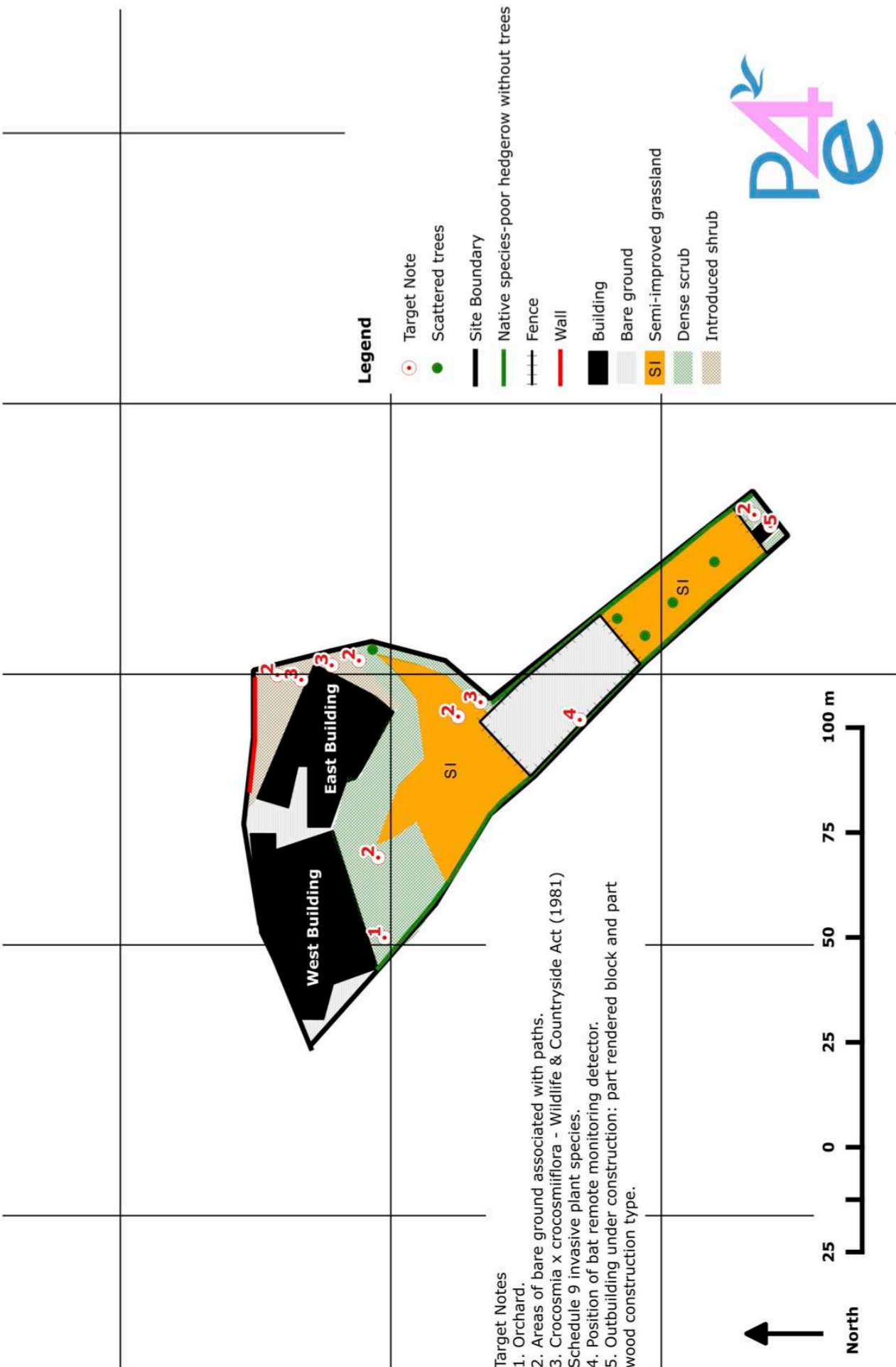
Of the habitats on-site: neutral semi-improved grassland, scrub habitat (comprising native plant species) and native species-poor hedgerow are considered to be of ecological value.

Introduced shrub, wall, bare ground and scattered trees are considered to be of negligible ecological value. **NB:** these features may have potential to support protected species, notably nesting birds. Introduced shrub planting comprise abundant African lily and aeonium species; frequent hebe species and New Zealand flax; and occasional echium species, Montbretia and purple loose-strife. Wall habitat comprises frequent navelwort, biting stonecrop, red valerian and Hart's tongue fern; occasional African lily, aeonium, red fescue, hebe and hairy-tare; and locally frequent purple loose-strife, ivy and creeping bent. The site supports a small number of scattered trees; these are currently immature (< 1.7m high) with the exception of a near mature Monterey Pine located on the east site boundary. Bare ground habitat is present in the former tennis / basketball court and on the pathways; vegetation is sparse and typified by frequent annual meadow grassland and occasional procumbent pearlwort. Buck's-horn plantain occurs rarely within bare ground habitat.

The assemblage of vascular plant species associated with each habitat including Latin names is provided in the Table at Appendix 2. A description of notable habitats and species is provided below.



Map 1: Old Secondary School, St Mary's, Isles of Scilly - Phase 1 Habitat Distribution





### 3.3 Notable Habitats

#### Scrub (A2.1):

Dense scrub is present on the embankment to the rear (south) of the East and West Buildings, and at the southern most point of the site as shown on Map 1 above. Vegetation comprises abundant English elm and bramble; frequent European gorse and New Zealand cabbage palm; occasional hawthorn, small tree mallow, garden privet, apple and wild cherry; and locally frequent bracken. Herbaceous vegetation comprises frequent African lily, false brome; occasional red campion; and locally frequent field bindweed, ivy and weld. Like much of the scrub habitat on St Mary's, vegetation comprises a mixture of native and introduced species.

Scrub habitat increases the structure and diversity of vegetation on-site, and likely provides habitat for wildlife, notably nesting birds.

Scrub habitat is considered to be of biodiversity value within the **immediate vicinity of the site**.

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building will likely require some scrub removal but can largely be undertaken without extensive scrub clearance. In the absence of appropriate mitigation (see Section 4.1 below for recommendations), subsequent development of the wider site has potential to negatively impact scrub habitat on-site. Mitigation will include some compensatory planting of native vegetation post-development.

#### Neutral semi-improved grassland (B2.2)

Neutral semi-improved grassland occurs in the former amenity areas to the south of the East and West Buildings. The sward is described as neutral semi-improved grassland but has characteristics of coastal grassland, as would be expected on the coastal Island of St Mary's, Isles of Scilly. The sward is typified by dominant red fescue; abundant cock's foot; frequent common couch and ribwort plantain; and locally frequent Yorkshire fog, false brome, buck's-horn plantain and creeping bent. Herbaceous species present include frequent dandelion and wild carrot; occasional African lily, black knapweed, sea purslane, crepis species, fennel, hogweed and curled dock; and locally frequent yarrow, creeping buttercup and bracken.

The sward occurs as a mosaic with exposed granite boulders and bare ground associated with the paths and tennis/ basketball court.

Neutral semi-improved grassland increases the structure and diversity of vegetation on-site, and provides potential habitat for wildlife, notably lesser white-toothed shrew, hedgehog and invertebrates. However, neutral semi-improved grassland is unlikely to qualify as a UK BAP priority habitat for conservation (Lowland dry acid grassland or lowland meadow).

Neutral semi-improved grassland is considered to be of biodiversity value within the **immediate vicinity of the site**.

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building is unlikely to impact neutral semi-improved grassland habitat on-site. In the absence of appropriate mitigation (see Section 4.1 below for recommendations), subsequent development of the wider site will result in a loss (extent not known) of neutral semi-improved grassland. Mitigation will include seeding landscaped parts of the site with a native species-rich grassland mix, suitable for the coastal locality.

#### Hedgerows (Native species-poor without trees - J2.1.2):



The native species-poor hedgerows are present along the east and west site boundaries. These hedgerows are dominated by Australian ivy, an introduced non-native species. Whilst Australian ivy is not listed as an invasive plant species under Schedule 9 of the Wildlife and Countryside Act (1981) this species forms a near monotypic stand, which likely reduces the biodiversity value of the site and wider area. Other hedgerow vegetation is typified by abundant ivy and bramble; frequent hogweed, hawthorn and English elm. Australian ivy potentially obscures some of the smaller herbaceous species typically associated with hedgerow habitat.

Hedgerows on-site connect to scrub and garden habitat off-site, and in turn to woodland and hedgerows; this represents a potential corridor through which wildlife can travel. Hedgerows on-site are likely to qualify as the UK Biodiversity Action Plan (BAP) Priority Habitat 'hedgerow'. These hedgerows likely provide habitat for wildlife, and increase the structure and diversity of vegetation on-site.

Hedgerows on-site are considered to be of up to **local biodiversity value**.

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building is unlikely to impact hedgerow habitat on-site. In the absence of appropriate mitigation (see Section 4.1 below for recommendations), subsequent development of the wider site has potential to negatively impact hedgerow habitat on-site.

### 3.4 Notable Species

Notable species and species groups with potential to use the site are described below:

#### **Amphibians:**

The ERCCIS desk study revealed six records for amphibian species within a 1km radius of the site. These comprised four records for common frog (*Rana temporaria*), and two records for common toad (*Bufo bufo*). The site provides suitable foraging habitat and hibernation sites for amphibians but lacks standing water with potential to support breeding populations.

The site is considered to be importance for amphibians **within the immediate vicinity of the site**.

#### **Bats**

##### Preliminary Bat (also Bird) Assessment of Buildings:

The Old Secondary School is located within Hugh Town on the Island of St Mary's, Isles of Scilly. The immediate area enclosing the site is urban in character with semi-natural habitat including woodland, scrub and coastal habitat present within 150m of the site. Furthermore, the site connects to semi-natural habitat off-site via garden and scrub habitat. Buildings within 100m of the site are predominantly period properties; these buildings have potential to support roosting bats.

The site supports three buildings: East Building, West Building and a shed adjacent to the southern most site boundary:

The shed appears to be under construction/ subject to on going repair works. This building has negligible potential to support roosting bats.

The West Building is of concrete block and wood panel construction with stone cladding on parts of the lower storey. The West Building has a flat roof containing a narrow (c. 0.5m high) void, which



appears to extend the length of the building, or certainly over much of it. The West building also supports a network of cellars over exposed rock. It was possible to search the interior of the West Building including the cellars in its entirety. No evidence of roosting bats was observed during the visual inspection of the West Building. It was however, not possible to search the 0.5m high void above the suspended ceilings and flat roof above. This limitation was addressed by undertaking three bat emergence/ re-entry surveys.

The East Building is of block construction and rendered externally with stone chippings. The building supports corrugated composite tiles over a single large roof void measuring c. 2.2m in height. Internally the roof void supports Rockwool between the joists, beneath which sits a suspended ceiling; bitumen roofing felt lines the corrugated composite tiles. The roof void supports abundant cobwebs and is not boarded out. This roof void was fully accessed on the 3<sup>rd</sup> September 2015. A scattering of bat droppings (likely brown long-eared bat (*Plecotus auritus*)) was observed throughout the roof void of the East Building. The East Building also supports a large vaulted area over the southern most section of the building.

Both the East and West Buildings support several potential bat access points; these include gaps under tiles and holes in bargeboards. The space beneath fascia boards, loose tiles and roof voids provide potential roost sites for bats. Detailed bat emergence/ re-entry surveys, and remote monitoring surveys were undertaken to determine if bats currently use the West and East Buildings on-site. The results of these surveys are detailed below.

Bat Emergence/ Re-Entry Surveys and Remote Monitoring of Buildings: No bats were observed to emerge from/ re-enter the West or East Building during the three bat emergence/ re-entry surveys. The remote monitoring detector installed within the void of the East Building (location where bat droppings observed) did not record any bat calls during the seven day monitoring period. These surveys show that bats do not currently use the West and East Buildings on-site.

Bat Activity Survey of Wider Site: The bat activity survey on the 3<sup>rd</sup> September 2015 recorded one species: common pipistrelle. Common pipistrelle was recorded at transect points 1 and 5 (8 passes in total), and between transect points 9 and 10 as shown on Map 2. The seven bat passes at transect point 1 likely reflected bats commuting from their roost within Hugh Town to foraging habitat outside of the town. The single bat pass at transect point 5, and between transect points 9 and 10 is indicative of a foraging bat. The bat activity survey on the 21<sup>st</sup> September 2015 recorded one pass by a single common pipistrelle bat at transect point 5. This pass is indicative of a foraging bat. The level of bat activity, and diversity of species recording during the bat activity surveys, indicates very low usage of the site by one bat species.

Remote Monitoring of Site: The bat remote monitoring surveys for the periods 14<sup>th</sup> – 17<sup>th</sup> August 2015; and the 22<sup>nd</sup> – 25<sup>th</sup> September 2015 recorded two bat species on-site: common pipistrelle and soprano pipistrelle. Soprano pipistrelle was recorded once on two separate occasions on the 17<sup>th</sup> August and the 23<sup>rd</sup> September 2015. Common pipistrelle was recorded on each night during both survey periods, with the highest level of activity (145 bat passes) being recorded on the night of the 15<sup>th</sup>/ 16<sup>th</sup> August 2015. The detailed results are presented in Table 1 and Table 2 below:



Table 1: Bat Remote Monitoring Survey Results (14<sup>th</sup> – 17<sup>th</sup> August 2015)

Night	Species	Passes	Times
14th - 15th August 2015	Pp	3	01:32
15th - 16th August 2015	Pp	145	21:07 - 05:23
16th - 17th August 2015	Pp	27	21:11 - 05:17
	Ppyg	1	04:19

Table 2: Bat Remote Monitoring Survey Results (22<sup>nd</sup> – 25<sup>th</sup> September 2015).

Night	Species	Passes	Times
22nd - 23rd September 2015	Pp	5	21:05 - 23:56
	Ppyg	1	03:14
23rd - 24th September 2015	Pp	6	19:41 - 04:55
24th - 25th September 2015	Pp	50	19:53 - 02:07

Site Evaluation for Bats: The ERCCIS desk study revealed that two species (39 records) have been recorded within a 1km radius of the site boundary (ERCCIS, 2015); there is one record for brown long-eared bat (*Plecotus auritus*) (UK BAP priority species; European Protected Species, EPS); and 38 records for common pipistrelle bat (*Pipistrellus pipistrellus*) (EPS). The detailed bat activity and remote monitoring surveys have shown that the hedgerows on-site provide foraging habitat and commuting routes for common pipistrelle bat and soprano pipistrelle. The level of bat activity, and diversity of species recorded during the bat activity surveys, indicates low usage of the site by a small number of bat species.

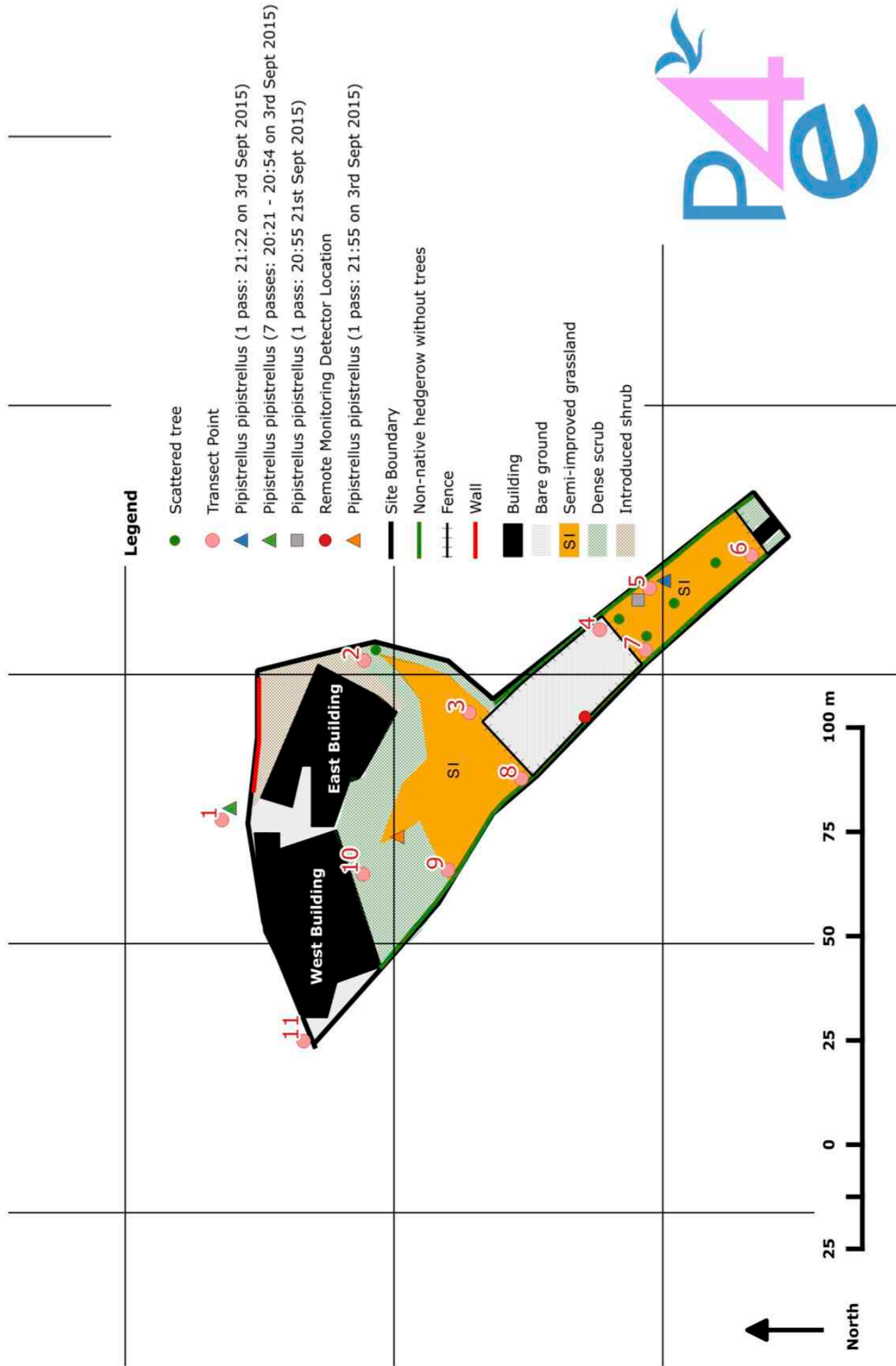
The detailed bat emergence and re-entry surveys of the buildings have shown that the buildings on-site do not support roosting bats. In accordance with the Bat Surveys: Good Practice Guidelines (Hundt, 2012), the small site is considered to support habitat of low quality for foraging and commuting bats.

In the UK all bat species are European Protected Species (EPS) protected under both UK and European Legislation; for further information on legal protection see Appendix 3.

The site is considered to be of importance for bats **within the immediate vicinity of the site.**



Map 2: Old Secondary School, St Mary's, Isles of Scilly - Bat Activity Survey Map





## Birds

One hundred and five bird species with potential to use / pass over the site have been recorded within a 1 km radius of the site boundary; these are listed in a table at Appendix 4. Of these species thirty-four (see species marked with an '\*' in table at Appendix 4) have some potential to breed within scrub and hedgerow habitat on-site. Species of conservation value with potential to breed within hedgerows on-site include house sparrow, song thrush, mistle thrush (RSPB Red List; UK BAP), whitethroat, bullfinch, grey wagtail and dunnoek (RSPB Amber List). Species of conservation value with potential to nest within inaccessible parts/ on the roof of the East and West Buildings include startling, lesser black-backed gull and herring gull. The remaining species, may forage within, or pass over, the site on occasion.

The visual inspection of the East and West Building recorded two dead starlings within the East Building, and one dead swallow within the West Building. No evidence of nesting activity was observed indicating that these individuals had entered the buildings via an open window and had become trapped.

Commonly occurring species observed during the site visit include wren, chaffinch, linnet, greenfinch, tree pipit, house sparrow and blackbird. This is not a comprehensive list as a bird survey was not carried out, and merely provides an indication of the conspicuous species present on the day of survey.

All birds are legally protected whilst nesting under the Wildlife & Countryside Act 1981, as amended.

The site is considered to be of **importance within the immediate vicinity of the site for birds.**

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building, if undertaken during the bird nesting season (March – September inclusive), has potential to impact nesting birds (if present). Demolition is scheduled for January 2016; therefore impacts on breeding birds are not anticipated. Development of the wider site will inevitably require some vegetation clearance, which if undertaken during the bird nesting season (March – September inclusive) has potential to negatively impact breeding birds.

## Other Mammals

**Hedgehog:** There are sixteen records for hedgehog (*Erinaceus Europaeus*) (UK BAP priority species) within a 1km radius of the site. Hedgerows and associated neutral semi-improved grassland provide potentially suitable foraging, resting and hibernation sites for hedgehog. The site is considered to be of **'importance within the immediate vicinity of the site' for hedgehog.**

**Lesser white-toothed shrew:** A dead lesser white-toothed shrew (*Crocidura suaveolens*) was found on-site during the site visit on the 13<sup>th</sup> August 2015. The site supports suitable habitat for lesser white-toothed shrew. This species has no special conservation status or legal protection; trapping and killing of shrews requires a licence.

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building, is unlikely to impact hedgehog. Development of the wider site will inevitably require some vegetation clearance and ground works, which if undertaken during the hedgehog hibernation period (October – May inclusive) has some potential to disturb this species.

## Invertebrates

The ERCCIS desk study revealed one record for mole cricket (*Gryllotalpa gryllotalpa*). Mole cricket is both a BAP Priority Species and is listed as a RDB1 (Endangered) by Shirt (1987), as well as being protected under Schedule 5 of the Wildlife and Countryside Act, 1981. It is listed in the Red Data Book for Cornwall and the Isles of Scilly (CISFBR, 2009), where it is described as 'likely to be



extinct in Cornwall'. The species traditionally prefers open, sunny, free-draining loamy soils (usually with a fluctuating water table), areas of short turf and occasionally disturbed ground (Pinchen, 2004/2005) and is often considered a species of marshy habitat, although it is also known to occur in gardens and allotments. Once relatively widespread in southern England and Wales it declined dramatically in the twentieth century and is now known only from the Channel Islands and the New Forest. The site was assessed as having some limited potential to support mole cricket. Detailed mole cricket surveys were therefore undertaken to determine the likely importance of the site for this species. No records of mole cricket were made and no evidence of surface runs or burrows was found during the site surveys. This species is therefore considered likely to be absent from the site.

The ERCCIS desk study revealed records for 108 other invertebrate species of conservation importance within a 1km radius of the study site (see species list at Appendix 5). The site however, lacks those features typically associated with the most diverse invertebrate fauna (heathland, wetland, standing water and bare ground) and given the small size of the site (0.6 ha) and sub-optimal habitat present, detailed surveys for 'invertebrate species' were not considered necessary. Species observed during the various site visits include *Nomophila noctuella* (micro-moth), *Scaeva pyrastris* (hoverfly), *Margaritia sticticalis* (micro-moth), *Gymnoscelis rufifasciata* (macro-moth), *Pararge aegeria* (butterfly), *Bombus terrestris* (bumblebee), *Episyrphus balteatus* (hoverfly), *Chortippus brunneus* (grasshopper), *Chortippus parallelus* (grasshopper), *Vanessa cardui* (butterfly), *Pieris brassicae* (butterfly), *Maniola jurtina* (butterfly), *Aglais urticae* (butterfly), *Eristalis tenax* (hoverfly), *Eristalis pertinax* (hoverfly), *Xestia xanthographa* (macro-moth) and *Autographa gamma* (macro-moth). This is not a comprehensive list as a detailed invertebrate survey was not carried out, and merely provides an indication of the conspicuous species present on the day of survey.

Habitats within the wider area (wetland, heathland, coastal habitats and woodland) are likely to be of significantly greater value for invertebrate species than the habitats present on-site. Overall the site is likely to support a range of common and widespread invertebrate species.

The site is considered to be of '**importance within the immediate vicinity of the site' for invertebrates.**

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building is unlikely to impact invertebrate populations on-site. Development of the wider site will inevitably require some vegetation clearance and extensive ground works. Whilst these activities have potential to impact invertebrate populations on-site, impacts are likely to be short-term. Follow the mitigation recommendations for invertebrates in Section 4.2 below.

### **Vascular Plants**

The ERCCIS desk study revealed a large number of records for vascular plant species within a 1km radius of the site. Of these 25 plant species have some potential to occur on-site. These are presented in the table at Appendix 6 and are considered unlikely to have been overlooked. Sixty-two plant species were recorded on-site during the site survey; this is in line with the number of species that would be expected at a site of this size and character. Neutral semi-improved grassland is the most floristically diverse habitats on-site. One species of conservation importance was recorded on-site during the survey:

Small tree mallow (*Lavatera cretica*) is listed as a rare and scarce species (not based on IUCN criteria); and as Nationally rare in the Red Data Book Cornwall and Isles of Scilly (2009), but is considered an 'introduced non-native species' in this locality (BRC, accessed September 2015).



The site is considered to be of **importance for vascular plant species within the immediate vicinity of the site.**

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building is unlikely to impact plant populations. Development of the wider site will inevitably require some vegetation clearance and extensive ground works, which have potential to impact plant populations on-site. However, these impacts are likely to be short-term. Follow the mitigation recommendations for vascular plants in Section 4.2 below.

### **Invasive Plants**

The site supports one invasive plant species: Montbretia (*Crocasmia x crocosmiiflora*). This species is present within introduced shrub and scrub habitat on-site as shown on Map 1 at Section 3.2 above. Montbretia is listed on Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence to cause it to spread to the wild. The ERRIS desk study revealed many records for nine other Schedule 9 invasive plant species within a 1km radius of the site. These are listed as follows: three cornered garlic (*Allium triquetrum*), water fern (*Azolla filiculoides*), purple dew plant (*Disphyma crassifolium*), Japanese knotweed (*Fallopia japonica*), wall cotoneaster (*Cotoneaster horizontalis*), Japanese rose (*Rosa rugosa*), yellow archangel (*Lamium galeobdolon subsp. argentatum*), entire leaved cotoneaster (*Cotoneaster integrifolius*) and Himalayan cotoneaster (*Cotoneaster simonsii*).

### **Non-Vascular Plants**

A specialised survey for non-vascular plants, bryophytes and lichens, was outside the scope of this study. The desk study revealed a large number of records of lower plant species within a 1km radius of the site. Those species of conservation importance and with some potential to occur within habitats on-site are listed in the table at Appendix 7.

The site lacks those features such as metalliferous mining waste, with potential to support the most diverse and important assemblages of lower plants. In the absence of these features, the small 0.6 ha site is considered unlikely to support an important assemblage of lower plants.

The site is therefore considered to be of no greater value for non-vascular plants than '**within the immediate vicinity of the site**'.

The detailed site proposals are not available at the time of writing. Demolition of the East and West Building is unlikely to impact populations of lower plants. Development of the wider site will inevitably require some vegetation clearance and extensive ground works, which have potential to impact lower plant populations on-site. However, these impacts are likely to be short-term. Follow the mitigation recommendations for lower plants in Section 4.2 below.



## 4.0 Mitigation Recommendations

### 4.1 Habitats

Introduced shrub, wall, bare ground and scattered trees are considered to be of negligible ecological value. There is therefore no specific requirement to mitigate loss of/ disturbance to these habitats. NB: habitats of negligible biodiversity value may support legally protected species (see Section 4.2 below for species mitigation recommendations). The features of ecological value on-site are the native species-poor hedgerows without trees (J2.1.2), neutral semi-improved grassland (B2.2), and dense scrub (A2.1). Mitigation recommendations are provided below:

- **Hedgerows:** Demolition of the East and West Buildings is unlikely to impact hedgerows on-site. Development of the wider site will likely impact hedgerow habitat. The detailed site proposals are not available at the time of writing. Retain and protect hedgerows on-site. Protect retained hedgerows during construction and operational use of the site by leaving a 2m development free buffer at the base of each hedgerow. This can be achieved by installing high-visibility protective fencing/ tree protection fencing at least 2m, or where trees are present, a crown's width, from the base of each retained hedgerow during construction (latter in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction*). Where hedgerow loss is unavoidable, there must be no net loss and ideally a net gain, post development. Using the materials from the removed sections of hedgerow construct new lengths of hedgerow elsewhere on-site. New hedgerows should be planted with native trees and/or shrubs and should directly connect to retained hedgerows on-site. Suitable native tree and shrub species include English oak, hawthorn, blackthorn, hazel, dogwood, field maple, wild cherry (deciduous species), holly, European gorse, wild privet, common box, juniper and yew (evergreen species). NB: yew is poisonous if ingested.
- **Neutral semi-improved grassland:** Demolition of the East and West Buildings is unlikely to impact neutral semi-improved grassland on-site. Development of the wider site will likely impact neutral semi-improved grassland habitat. Where possible retain and protect neutral semi-improved grassland. Where loss of this feature is unavoidable, incorporate native species-rich grassland elsewhere on-site.
- **Dense scrub:** Demolition of the East and West Buildings is likely to require some minor scrub clearance. Development of the wider site will likely require extensive scrub clearance. Where possible retain and protect scrub habitat. Where loss of this feature is unavoidable, incorporate native tree and shrub planting elsewhere on-site. Suitable native tree and shrub species are detailed above under hedgerows.

### 4.2 Species

The site has potential to support the following protected species/ species of conservation importance: bat, amphibian, nesting birds, hedgehog, invertebrate and plant species. Follow the mitigation below to avoid/ mitigate impact upon these species:

- **Bats (roosting):** The detailed surveys of the buildings (visual inspection, remote monitoring and bat emergence/ re-entry surveys) revealed no evidence of current use by bats. Demolition of the East and West Buildings is unlikely to impact bats. Demolition can therefore proceed without restrictions relating to bats; however, it is important to note that although no current evidence of roosting bats was found, absence cannot be assumed. A precautionary approach should therefore be adopted. The building contractors should be made aware that bats can roost unseen within the building structure. If during demolition a bat/s is uncovered, the bat must not be handled and



works must stop immediately (as soon as it is safe to do so). Advice must be sought from an experienced bat ecologist (Plan4Ecology: 01326 218839) or Natural England (tel: 01872 245045). See Section 2.3 for relevant legislation.

- **Bats (foraging and navigating):** in accordance with the Bat Surveys: Good Practice Guidelines (2012) the site has been assessed as being of 'low' habitat quality for foraging and commuting bats. Detailed surveys comprising two bat activity and remote monitoring surveys confirmed that bats use the site for foraging and navigating. Detailed site plans are not available at the time of writing. Development of the wider site will likely require artificial lighting. Artificial lighting of hedgerows can sever bat commuting routes, and prohibit foraging. Minimize impact on bats by incorporating a sensitive lighting scheme, designed by a lighting designer in consultation with a bat ecologist. Lighting must be designed to ensure that retained/ newly created hedgerows are not lit. This can be achieved by using directional lighting to ensure that light spill remains below or near the horizontal; by using narrow spectrum bulbs that emit minimal ultra-violet light; by minimising height of lighting columns; by using embedded road lights where possible; and by avoiding / restricting use of column lighting to 'high risk' stretches of road (i.e. pedestrian crossings).
- **Hedgehog:** all excavated pits associated within the proposed development must be covered overnight and all trenches must have sloping planks (no greater than 45° angle) placed in them as a means of escape so that animals will not become trapped.
- **Amphibians, invertebrates and plant species (vascular and non-vascular):** follow mitigation detailed above for habitats.
- **Birds:** The detailed site proposals are not available at the time of writing. Demolition of the East and West Buildings between March and September inclusive has potential to impact any birds that may be nesting. Demolition should therefore be scheduled for winter (November to February inclusive). If this is not possible, then an ecologist should visually inspect the buildings for nesting birds prior to demolition.
- **Birds and Hedgehog:** Development of the wider site will inevitably require some vegetation clearance, and extensive ground works. To prevent injury and disturbance to nesting birds and hedgehog, vegetation will be removed in two phases: Phase 1) vegetation will be cut to 200mm above ground level during the winter months (November – February inclusive); this will leave enough vegetative cover in place to conceal any hibernating hedgehogs and importantly will avoid the period when birds might be nesting in the vegetation. Phase 2) remove any stone-faced, earth centred hedgebanks between May and September inclusive to avoid the winter period when hedgehog will be hibernating. If the works cannot be timed as described above, then an ecologist must search the vegetation by hand, immediately before clearance, and oversee ground works.
- **Invertebrates, amphibians, lower plants and hedgehog:** Maximize the value of the site for invertebrates, lichen, amphibians, reptiles and hedgehog by providing piles of deadwood and stones piles in landscaped areas post-development.
- **Mole cricket:** The mole cricket is a very distinctive insect and being large in size is conspicuous to the untrained eye. There have been several recent records of the species being found in Britain during gardening and construction activities, although these have proved to be the result of importation from Europe/Africa. In the unlikely event that a mole cricket is found during construction activities, work must stop immediately (as soon as it is safe to do so) and advice sought from Plan4Ecology (tel: 01326 218839).
- **Invasive plants:** A method statement for the control of non-native plant species will be prepared prior to commencement of site works. Montbretia can be removed by digging to remove underground corms and aerial parts; these are then crushed (e.g. with a garden



roller) and laid out thinly to dry for 4 weeks, ideally on a sheet of corrugated iron (or, if possible, burn on-site). It is likely there will still be some new growth later in the season; wipe these leaves with Glyphosate the following October.

### 4.3 Opportunity for Biodiversity Enhancements

The biodiversity value of the site could potentially be enhanced by successfully implementing the following recommendations:

- Construct new stone-faced earth centred hedgerows to achieve a net gain of hedgerows on-site. To be of significant biodiversity value these must connect to retained hedgerows on-site, and exceed in value new hedgerows required to mitigate any loss of hedgerow.
- Make provision for nesting birds and roosting bats within any proposed new buildings. This can be achieved by incorporating bat boxes / tubes, and bird boxes within the fabric of the buildings. Plan4Ecology can provide detailed advice on available products and their installation upon request.
- Avoid planting invasive plant species listed on Schedule 9 WCA within landscaped areas post-development.
- Removal/ control of Montbretia (Schedule 9 WCA) on-site has potential to enhance the ecological value of the site, and will protect semi-natural habitats in the wider area from degradation arising from the introduction of these invasive species.

### 4.4 Further surveys

No further surveys are recommended.

### 4.5 Monitoring

Ecological monitoring of the site during construction will be required to inform the Construction Environmental Management Plan (CEMP) and any planning conditions. Ecological monitoring of the site post-development is required to ensure that the adopted mitigation is successfully implemented. Monitoring in the 1<sup>st</sup> and 3<sup>rd</sup> year after completion of the development is recommended.

### 4.6 Residual Impacts

Provided that the mitigation recommendations are successfully implemented, **the residual impact of the proposed development is considered to be zero with some positive outcomes for biodiversity.** Demolition of the East and West Building can continue as scheduled in January 2016. This report must be updated following provision of the detailed site plans for the wider site.



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**Appendix 1: Location of Site & Designated Sites of Nature Conservation Importance.**





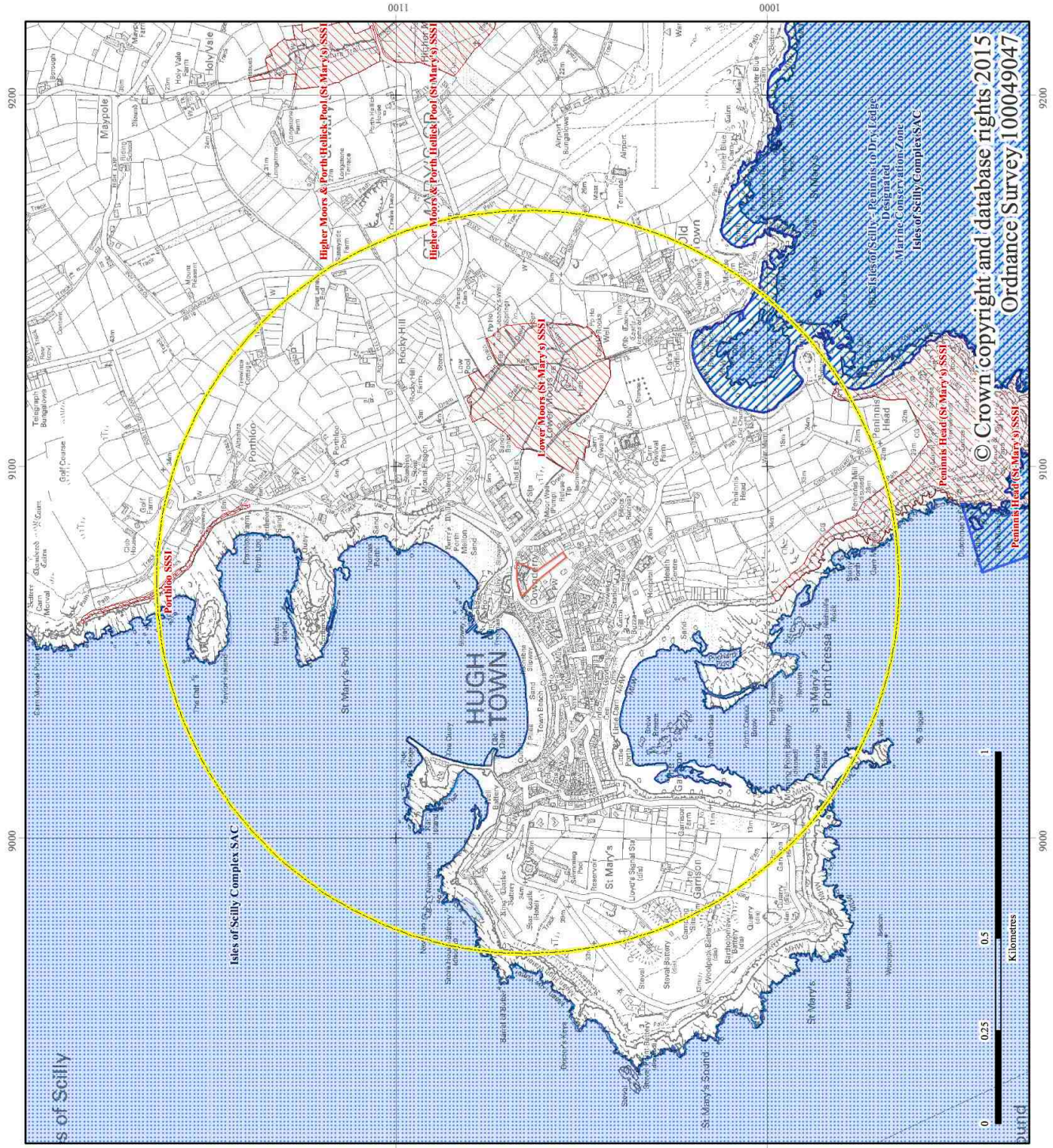
# ENVIRONMENTAL RECORDS CENTRE For Cornwall and the Isles of Scilly

Five Acres, Ales, Trew, Cornwall, TR4 9DJ.  
Phone 01872 240777 or Fax 01872 225 476,  
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## Plan4Ecology Council of the Isles of Scilly P4E268 Old Secondary School, St Mary's SV 90688 10646, 1000m radius Showing Selected Designations and Features of Conservation Interest

- Legend**
- Old Secondary School Study Area
  - Ramsar Sites (Important Wetlands)
  - Special Protection Areas (SPA)
  - Special Areas of Conservation (SAC)
  - candidate Special Areas of Conservation (cSAC) Marine
  - Marine Conservation Zones (MCZ)
  - recommended Marine Conservation Zones (rMCZ)
  - Sites of Special Scientific Interest (SSSI)
  - National Nature Reserves (NNR)
  - Local Nature Reserves
  - County Wildlife Sites (CWS)
  - County Geology Sites
  - Site Status
    - Notified
    - Proposed
  - Roadside Audit - Biological Sites
  - Roadside Audit - Earth Science Sites
  - Ancient semi-natural
  - Ancient replanted woodland
  - Ancient cleared woodland
  - Cornwall Wildlife Trust Reserves
  - Woodland Trust Reserves
  - RSPB Reserves
  - National Trust Ownership
  - Location of Site

Scale 1:10,000 at A3 14/VIII/2015  
Author: Laura Fox



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Ordnance Survey 100049047



## Appendix 2: Phase 1 Habitat Vascular Plant List.

Latin Name	Common Name	Dense scrub (A2.1)	Neutral semi-improved grassland (B2.2)	Introduced shrub (J1.4)	Native species-poor hedgerow without trees (J2.1.2)	Wall (J2.5)	Bare ground (J4)
<i>Achillea millefolium</i>	Yarrow		LF				
<i>Agapanthus praecox</i>	African lily	F	O	A		O	
<i>Agrostis stolonifera</i>	Creeping bent		LF			LF	
<i>Aeonium urbicum</i>	Introduced aeonium			A		O	
<i>Atriplex portulacoides</i>	Sea-purslane		O				
<i>Beta vulgaris</i>	Beet		F				
<i>Brachypodium sylvaticum</i>	False brome	F	LF			O	
<i>Capsella bursa-pastoris</i>	Shepherd's purse		R				
<i>carpobrotus acinaciformis</i>	Hottentot fig		R				
<i>Centranthus ruber</i>	Red valerian					F	
<i>Centaurea nigra</i>	Black knapweed		O				
<i>Cerastium fontanum</i>	Common mouse-ear		R				
<i>Convolvulus arvensis</i>	Field bindweed	LF			F		
<i>Cordyline sp.</i>	New Zealand cabbage palm	F					
<i>Corylus avellana</i>	Hazel	R			LF		
<i>Crataegus monogyna</i>	Hawthorn	O			F		
<i>Crepis sp.</i>	Hawk's-beard		O				
<i>Crocsmia x crocosmiiflora</i>	Montbretia			O			
<i>Dactylis glomerata</i>	Cock's-foot		A				
<i>Daucus carota</i>	Wild carrot		F				
<i>Echium species</i>	Echium species			O			
<i>Elytrigia repens</i>	Common couch		F				
<i>Festuca rubra</i>	Red fescue		D			O	
<i>Foeniculum vulgare</i>	Fennel		O				
<i>Geranium molle</i>	Dove's-foot crane's-bill		R				
<i>Hebe sp.</i>	Hebe			F		O	
<i>Hedera helix</i>	Ivy	LF			A	LF	
<i>Heracleum sphondylium</i>	Hogweed, cow parsnip		O		F		
<i>Holcus lanatus</i>	Yorkshire fog		LF				
<i>Lavatera cretica</i>	Small tree-mallow	O	O				



Latin Name	Common Name	Dense scrub (A2.1)	Neutral semi-improved grassland (B2.2)	Introduced shrub (J1.4)	Native species-poor hedgerow without trees (J2.1.2)	Wall (J2.5)	Bare ground (J4)
<i>Ligustrum ovalifolium</i>	Garden privet	O					
<i>Lysimachia nummularia</i>	Creeping-Jenny		R				
<i>Lythrum salicaria</i>	Purple-loosestrife			O		LF	
<i>Malus domestica</i> agg.	Cultivated apple	O					
<i>Muehlenbeckia complexa</i>	Australian ivy	LF	LF	LF	D		O
<i>Petasites fragrans</i>	Winter heliotrope			LF			
<i>Phormium</i> sp.	New Zealand flax			F			
<i>Asplenium scolopendrium</i>	Hart's tongue	O				F	
<i>Pinus radiata</i>	Monterey pine	R					
<i>Plantago coronopus</i>	Buck's-horn plantain		LF				R
<i>Plantago lanceolata</i>	Ribwort plantain		F				
<i>Plantago major</i>	Greater plantain		R				
<i>Poa annua</i>	Annual meadow grass					O	F
<i>Polypodium vulgare</i>	Common polypody					R	
<i>Prunus avium</i>	Wild cherry	O					
<i>Pteridium aquilinum</i>	Bracken	LF	LF				
<i>Quercus robur</i>	Pedunculate oak		R				
<i>Ranunculus repens</i>	Creeping buttercup		LF				
<i>Reseda luteola</i>	Weld	LF	R				
<i>Rubus fruticosus</i> agg.	Blackberry/bramble	A			A		
<i>Rumex crispus</i>	Curled dock		O				
<i>Sagina procumbens</i>	Procumbent pearlwort						O
<i>Sedum acre</i>	Biting stonecrop			LF		F	
<i>Silene dioica</i>	Red campion	O		O			
<i>Sonchus oleraceus</i>	Smooth sow-thistle		O			R	
<i>Taraxacum officinale</i> agg.	Dandelion		F			R	
<i>Trifolium pratense</i>	Red clover		R				
<i>Trifolium repens</i>	White clover		LF				
<i>Ulex europaeus</i>	European gorse	F			O		
<i>Ulmus procera</i>	English elm	A			F		
<i>Umbilicus rpestris</i>	Navelwort					F	
<i>Vicia hirsuta</i>	Hairy tare			O		O	
<i>Vicia species</i>	Vetch species		R				

DAFOR is a nominative scale where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. L = Locally



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## Appendix 3: Relevant Legislation and Planning Policy

### Protected Habitats, Species and Designated Sites

- The Conservation of Habitats and Species Regulations (HM Government, 2010) (as amended) encompasses Special Areas of Conservation (SACs) and provides additional protection for Special Protected Areas (SPA's), RAMSAR sites and European Protected Species (EPS).
- The Countryside and Rights of Way (CROW) Act (HM Government, 2000) provides additional protection for Sites of Special Scientific Interest (SSSIs) and threatened species; under the CROW Act (2000) Local Authorities have a statutory duty to consider UK BAP priority habitats and species as part of planning applications.
- The Hedgerows Regulations (1997) protects ecologically/ historically important hedgerows.
- The Natural Environment and Rural Communities (NERC) Act (HM Government, 2006) bestows a legal duty on public authorities to conserve biodiversity.
- The Wildlife and Countryside Act (HM Government 1981, as amended) encompasses the protection of wildlife (fauna and flora), SSSIs, SPAs, National Nature Reserves (NNRs) and RAMSAR sites.

**Birds:** In Britain the nests (whilst in use or being built) and eggs of wild birds are protected against taking, damage and destruction under the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981).

Some species (i.e. barn owl) are also listed on Schedule 1 of the Wildlife and Countryside Act (HM Government, 1981 as amended); it is an offence to:

- Intentionally capture, injure or kill a Schedule 1 listed species;
- Intentionally or recklessly disturb a Schedule 1 listed species whilst nesting;
- Intentionally or recklessly disturb a dependent young Schedule 1 listed species.

**European Protected Species (EPS) (Bat):** EPS are listed on Annex IV(a) of the European Communities Habitats Directive.

In Britain protection of EPS is achieved through their inclusion on Schedule 2 of the Conservation and Habitats Regulations 2010, Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 12 of the Countryside and Rights of Way Act 2000 (HM Government, 1981, 2000 & 2010).

As a result of this statutory legislation it is an offence to:

- Deliberately capture, injure or kill an EPS;
- Intentionally or recklessly disturb an EPS in its place of rest/ breeding site;



- Intentionally or recklessly damage, destroy or obstruct access to a EPS place of rest/ breeding site (even if the EPS is not occupying the resting / breeding place at the time);
- Possess or sell or exchange an EPS (dead or alive) or part of an EPS.

### **Statutory Designated Sites**

**Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)** are of International nature conservation importance.

**Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)** are of National importance. Development proposals with potential to affect a SAC, SSSI or NNR require permission from Natural England.

**Local Nature Reserves (LNRs)** are protected from development; the Local authority is responsible for LNRs.

### **Non-Statutory Designations**

Non-statutory sites include **County Wildlife Sites (CWS), County Geology Sites (CGS), Roadside Verge Audit Biological Sites** and **Ancient Woodlands**. CWSs and CGSs are of at least county importance for wildlife/geology in the Isles of Scilly; all are given increased protection through the planning process.

**Biodiversity Action Plans (BAPs)**: BAPs distinguish National and County level priority habitats and species for conservation. The Local Authority has a duty to conserve UK BAP priority habitats and species under Section 74 of the CRoW Act (2000).

**Red Data Books & Lists**: detail the status of species in relation to threat.

### **Planning Context**

The local planning authority has a statutory obligation to consider impacts upon protected species resulting from development. Planning permission will not be granted with outstanding ecological surveys, and if applicable an appropriate mitigation plan (except under exceptional circumstances as set out in ODPM Circular 06/2005).

**National Policy**: The National Planning Policy Framework (NPPF) (2012) supersedes Planning Policy Statement 9 (PPS9), though note that Government Circular 06/05 is still in use. Chapter 11 of the NPPF (2012) 'conserving and enhancing the natural environment' is detailed below:

109. The planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.



110. In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.

111. Planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value. Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land.

112. Local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality.

113. Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged.

Distinctions should be made between the hierarchy of international, national and locally designated sites so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.

114. Local planning authorities should:

- set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure; and
- maintain the character of the undeveloped coast, protecting and enhancing its distinctive landscapes, particularly in areas defined as Heritage Coast, and improve public access to and enjoyment of the coast.

115. Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty.

The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.

116. Planning permission should be refused for major developments in these designated areas except in exceptional circumstances and where it can be demonstrated they are in the public interest. Consideration of such applications should include an assessment of:

- the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
- the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and
- any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

117. To minimise impacts on biodiversity and geodiversity, planning policies should:

- plan for biodiversity at a landscape-scale across local authority boundaries;



- identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;
- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;
- aim to prevent harm to geological conservation interests; and
- where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.

118. When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have 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;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites:
  - potential Special Protection Areas and possible Special Areas of Conservation;
  - listed or proposed RAMSAR sites; and
  - sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed RAMSAR sites.

119. The presumption in favour of sustainable development (paragraph 14) does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.

120. To prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location. The effects (including cumulative effects) of pollution on health, the natural environment or general amenity, and the potential sensitivity of the area or proposed development to adverse effects from pollution, should be taken into account. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.



121. Planning policies and decisions should also ensure that:

- the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;
- after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site;
- adequate site investigation information, prepared by a competent person, is presented.

122. In doing so, local planning authorities should focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution control regimes. Local planning authorities should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.

123. Planning policies and decisions should aim to:

- avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

124. Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.

125. By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.



**Appendix 4: List of Bird Species Recorded within a 1 km Radius of the Site (ERCCIS, 2015).**

<b>Scientific name</b>	<b>Vernacular name</b>	<b>International Designation</b>	<b>National Designation</b>	<b>Legal Designation</b>
<i>Hirundo rustica</i>	Swallow	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Larus argentatus</i> *	Herring Gull	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern	
<i>Oenanthe oenanthe</i>	Wheatear	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Passer domesticus</i> *	House Sparrow		Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Troglodytes troglodytes</i> *	Wren	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Turdus merula</i> *	Common Blackbird	Birds Directive, Annex 2.2	Global Red list status, Lower risk - least concern	
<i>Turdus philomelos</i> *	Song Thrush	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Larus fuscus</i> *	Lesser Black-backed Gull	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Sturnus vulgaris</i> *	Starling	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern	
<i>Acrocephalus scirpaceus</i>	Reed Warbler		Global Red list status, Lower risk - least concern	
<i>Apus apus</i>	Swift		Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Buteo buteo</i>	Common Buzzard	EC Cites, Annex A Convention on Migratory Species, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Ficedula hypoleuca</i>	Pied Flycatcher	Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Muscicapa striata</i>	Spotted Flycatcher	Bern Convention, Appendix 2 Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Phylloscopus collybita</i> *	Common Chiffchaff		Global Red list status, Lower risk - least concern	
<i>Regulus regulus</i> *	Goldcrest	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Sylvia atricapilla</i> *	Blackcap		Global Red list status, Lower risk - least concern	
<i>Carduelis chloris</i> *	Greenfinch	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Emberiza aureola</i>	Yellow-breasted Bunting	Bern Convention, Appendix 2		
<i>Erithacus rubecula</i> *	Robin	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Fringilla coelebs</i> *	Chaffinch		Global Red list status, Lower risk - least concern	
<i>Parus major</i> *	Great Tit	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Prunella modularis</i> *	Dunnock	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Streptopelia decaocto</i> *	Collared Dove	Birds Directive, Annex 2.2	Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Cuculus canorus</i>	Cuckoo		Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41	
<i>Falco columbarius</i>	Merlin	Bern Convention, Appendix 2 Birds Directive, Annex 1 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Phoenicurus ochruros</i>	Black Redstart	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Accipiter nisus</i>	Sparrowhawk	EC Cites, Annex A Convention on Migratory Species, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Acrocephalus schoenobaenus</i> *	Sedge Warbler		Global Red list status, Lower risk - least concern	
<i>Alauda arvensis</i>	Skylark	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern	
<i>Anthus petrosus</i>	Rock Pipit	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Anthus pratensis</i>	Meadow Pipit	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Anthus trivialis</i>	Tree Pipit	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Buteo buteo</i>	Buzzard	EC Cites, Annex A Convention on Migratory Species, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Carduelis carduelis</i> *	Goldfinch	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Circus aeruginosus</i>	Marsh Harrier	Birds Directive, Annex 1 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Circus cyaneus</i>	Hen Harrier	Birds Directive, Annex 1 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Columba oenas</i> *	Stock Dove	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Columba palumbus</i> *	Woodpigeon	Birds Directive, Annex 2.1	Global Red list status, Lower risk - least concern	
<i>Corvus corax</i>	Raven		Global Red list status, Lower risk - least concern	
<i>Corvus frugilegus</i>	Rook	Birds Directive, Annex 2.2	Global Red list status, Lower risk - least concern	
<i>Corvus monedula</i> *	Jackdaw	Birds Directive, Annex 2.2	Global Red list status, Lower risk - least concern	
<i>Dendrocopos major</i>	Great Spotted Woodpecker	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Emberiza schoeniclus</i>	Reed Bunting	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Falco peregrinus</i>	Peregrine	Bern Convention, Appendix 2 Birds Directive, Annex 1 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Falco subbuteo</i>	Hobby	Bern Convention, Appendix 2 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Falco tinnunculus</i>	Kestrel	Bern Convention, Appendix 2 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Ficedula parva</i>	Red-Breasted Flycatcher	Birds Directive, Annex 1	Global Red list status, Lower risk - least concern	
<i>Fringilla montifringilla</i>	Brambling		Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Gallinago gallinago</i>	Snipe	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.1 Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Jynx torquilla</i>	Wryneck	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Larus canus</i> *	Common Gull	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Larus marinus</i> *	Great Black-Backed Gull	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Locustella naevia</i>	Grasshopper Warbler		Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Motacilla cinerea</i> *	Grey Wagtail	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Motacilla flava</i> subsp. <i>flavissima</i>	Yellow Wagtail		Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Phoenicurus phoenicurus</i>	Redstart	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Phylloscopus collybita</i> *	Chiffchaff		Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Phylloscopus sibilatrix</i>	Wood Warbler		Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Phylloscopus trochilus</i>	Willow Warbler		Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Pyrhula pyrrhula</i> *	Bullfinch		Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Riparia riparia</i>	Sand Martin	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Saxicola rubetra</i>	Whinchat	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Scolopax rusticola</i>	Woodcock	Convention on Migratory Species, AEWA Annex II Birds Directive, Annex 2.1 Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Streptopelia turtur</i>	Turtle Dove	Birds Directive, Annex 2.2 EC Cites, Annex A	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Sylvia communis</i> *	Whitethroat		Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Sylvia curruca</i>	Lesser Whitethroat		Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Turdus iliacus</i>	Redwing	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Turdus pilaris</i>	Fieldfare	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Turdus viscivorus</i> *	Mistle Thrush	Birds Directive, Annex 2.2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Acrocephalus palustris</i>	Marsh Warbler		Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Anthus campestris</i>	Tawny Pipit	Bern Convention, Appendix 2 Birds Directive, Annex 1	Global Red list status, Lower risk - least concern	



<b>Scientific name</b>	<b>Vernacular name</b>	<b>International Designation</b>	<b>National Designation</b>	<b>Legal Designation</b>
<i>Bombycilla garrulus</i>	Waxwing	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Caprimulgus europaeus</i>	Nightjar	Bern Convention, Appendix 2 Birds Directive, Annex 1	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Certhia familiaris</i>	Treecreeper	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Cettia cetti</i>	Cetti's Warbler		Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Coccothraustes coccothraustes</i>	Hawfinch	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	



<b>Scientific name</b>	<b>Vernacular name</b>	<b>International Designation</b>	<b>National Designation</b>	<b>Legal Designation</b>
<i>Corvus corone</i>	Carrion Crow	Birds Directive, Annex 2.2	Global Red list status, Lower risk - least concern	
<i>Crex crex</i>	Corncrake	Bern Convention, Appendix 2 Birds Directive, Annex 1 Convention on Migratory Species, Appendix 2 Convention on Migratory Species, AEWA Annex II	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1 Wildlife and Countryside Act 1981, Schedule 9 Part 1
<i>Emberiza citrinella</i>	Yellowhammer	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Emberiza pusilla</i>	Little Bunting	Bern Convention, Appendix 2		
<i>Hippolais polyglotta</i>	Melodious Warbler		Global Red list status, Lower risk - least concern	
<i>Loxia curvirostra</i>	Common Crossbill	Bern Convention, Appendix 2	Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Global Red list status, Lower risk - least concern	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Luscinia megarhynchos</i>	Nightingale	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Serinus serinus</i>	Serin	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Sylvia borin</i>	Garden Warbler		Global Red list status, Lower risk - least concern	
<i>Tyto alba</i>	Barn Owl	Bern Convention, Appendix 2 EC Cites, Annex A	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1 Wildlife and Countryside Act 1981, Schedule 9 Part 1
<i>Anthus spinoletta</i>	Water Pipit	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Circus pygargus</i>	Montagu's Harrier	Birds Directive, Annex 1 EC Cites, Annex A Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Delichon urbicum</i>	House Martin	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Motacilla flava</i>	Yellow Wagtail	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern	
<i>Bucephala clangula</i>	Goldeneye	Convention on Migratory Species, AEW Annex II Birds Directive, Annex 2.2 Convention on Migratory Species, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 2
<i>Emberiza rustica</i>	Rustic Bunting	Bern Convention, Appendix 2		
<i>Luscinia svecica</i>	Bluethroat	Bern Convention, Appendix 2 Birds Directive, Annex 1	Global Red list status, Lower risk - least concern	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Oenanthe pleschanka</i>	Pied Wheatear	Bern Convention, Appendix 2		



Scientific name	Vernacular name	International Designation	National Designation	Legal Designation
<i>Sylvia undata</i>	Dartford Warbler	Birds Directive, Annex 1	Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Near Threatened	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Prunella modularis</i> *	Hedge-sparrow	Bern Convention, Appendix 2	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Global Red list status, Lower risk - least concern	
<i>Streptopelia decaocto</i> *	Eurasian Collared Dove	Birds Directive, Annex 2.2	Global Red list status, Lower risk - least concern	
<i>Lullula arborea</i>	Woodlark	Birds Directive, Annex 1	Red data categories - birds (not based on IUCN criteria), Bird Population Status - amber Biodiversity Lists - England, England NERC S.41 Global Red list status, Lower risk - least concern Biodiversity Action Plan UK list of priority species, Priority Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	Wildlife and Countryside Act 1981, Schedule 1 Part 1
<i>Strix aluco</i>	Tawny Owl	Bern Convention, Appendix 2 EC Cites, Annex A	Global Red list status, Lower risk - least concern	



<b>Scientific name</b>	<b>Vernacular name</b>	<b>International Designation</b>	<b>National Designation</b>	<b>Legal Designation</b>
<i>Cyanistes caeruleus</i> *	Blue Tit	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	
<i>Emberiza calandra</i>	Corn Bunting		Red data categories - birds (not based on IUCN criteria), Bird Population Status - red Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Parus ater</i> *	Coal Tit	Bern Convention, Appendix 2	Global Red list status, Lower risk - least concern	



**Appendix 5: Invertebrate Species of Conservation Importance Recorded within a 1 km Radius of the Site (ERCCIS, 2015).**

Scientific name	Vernacular name	National Designation	Legal Designation
<i>Cupido minimus</i>	Small Blue	Biodiversity Lists - England, England NERC S.41 Red listing based on 2001 IUCN guidelines, Near Threatened Biodiversity Action Plan UK list of priority species, Priority Species	Wildlife and Countryside Act 1981, Schedule 5 Section 9.5a
<i>Hydraecia micacea</i>	Rosy Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Mecyna asinalis</i>	Coastal Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Pediasia contaminella</i>	Waste Grass-veneer	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Rhizedra lutosa</i>	Large Wainscot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Spilosoma lubricipeda</i>	White Ermine	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Spilosoma luteum</i>	Buff Ermine	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Lygephila cracca</i>	Scarce Black-neck	Red Listing based on pre 1994 IUCN guidelines, Rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Mecyna asinalis</i>	Coastal Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Acronicta rumicis</i>	Knotgrass	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Amphipyra tragopoginis</i>	Mouse Moth	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Ancylosis oblitella</i>	Saltmarsh Knot-horn	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Apamea remissa</i>	Dusky Brocade	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Arctia caja</i>	Garden Tiger	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Caradrina morpheus</i>	Mottled Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Chrysis fulgida</i>	Ruby-tailed Wasp	Red Listing based on pre 1994 IUCN guidelines, Endangered Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Diarsia rubi</i>	Small Square-spot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Dolicharthria punctalis</i>	Long-legged China-mark	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Eudonia delunella</i>	Pied Grey	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Hoplodrina blanda</i>	Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Hydraecia micacea</i>	Rosy Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Mecyna asinalis</i>	Coastal Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Melanchra pisi</i>	Broom Moth	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Meloe proscarabaeus</i>	Oil Beetle	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Mythimna comma</i>	Shoulder-striped Wainscot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Nymphalis polychloros</i>	Large Tortoiseshell	Red listing based on 2001 IUCN guidelines, Regionally Extinct Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	Wildlife and Countryside Act 1981, Schedule 5 Section 9.5a
<i>Oegoconia caradjai</i>	Straw Obscure	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Pechipogo strigilata</i>	Common Fan-foot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Pediasia contaminella</i>	Waste Grass-veneer	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Pelurga comitata</i>	Dark Spinach	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Rhizedra lutosa</i>	Large Wainscot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Scopula marginepunctata</i>	Mullein Wave	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Sphecodes miniatus</i>	Sphecodes miniatus	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Spilosoma lubricipeda</i>	White Ermine	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Spilosoma luteum</i>	Buff Ermine	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Timandra comae</i>	Blood-Vein	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Volucella zonaria</i>	Volucella zonaria	Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Eugnorisma glareosa</i>	Autumnal Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Malacosoma neustria</i>	Lackey	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Mecyna asinalis</i>	Coastal Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Nothris congressariella</i>	Cornish Groundling	Red Listing based on pre 1994 IUCN guidelines, Rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Rhizedra lutosa</i>	Large Wainscot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Meloe proscarabaeus</i>	Oil Beetle	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Anax parthenope</i>	Lesser Emperor	Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Ancylosis oblitella</i>	Saltmarsh Knot-horn	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Caradrina morpheus</i>	Mottled Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Dasytes virens</i>	Dasytes virens	Red listing based on 2001 IUCN guidelines, Near Threatened	
<i>Diarsia rubi</i>	Small Square-Spot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Ethmia bipunctella</i>	Bordered Ermel	Red Listing based on pre 1994 IUCN guidelines, Vulnerable	
<i>Idaea ochrata</i>	Bright Wave	Red Listing based on pre 1994 IUCN guidelines, Rare	
<i>Lasiommata megera</i>	Wall Butterfly	Red listing based on 2001 IUCN guidelines, Near Threatened Biodiversity Action Plan UK list of priority species, Priority Species Biodiversity Lists - England, England NERC S.41	
<i>Oegoconia caradjai</i>	Straw Obscure	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Pediasia contaminella</i>	Waste Grass-veneer	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Rhizodra lutos</i>	Large Wainscot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Sitochroa palealis</i>	Sulphur Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Xanthia icteritia</i>	Sallow	Biodiversity Action Plan UK list of priority species, Priority Species Biodiversity Lists - England, England NERC S.41	
<i>Acronicta rumicis</i>	Knotgrass	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Anax parthenope</i>	Lesser Emperor	Global Red list status, Lower risk - least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Arctia caja</i>	Garden Tiger	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Evergestis extimalis</i>	Marbled Yellow Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Evergestis extimalis</i>	Marbled Yellow Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Idaea degeneraria</i>	Portland Ribbon Wave	Red Listing based on pre 1994 IUCN guidelines, Rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Sitochroa palealis</i>	Sulphur Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Ethmia bipunctella</i>	Bordered Ermel	Red Listing based on pre 1994 IUCN guidelines, Vulnerable	
<i>Pelurga comitata</i>	Dark Spinach	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Diarsia rubi</i>	Small Square-spot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Hydraecia micacea</i>	Rosy Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Scopula marginepunctata</i>	Mullein Wave	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Meloe proscarabaeus</i>	Oil Beetle	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Sphcodes crassus</i>	Sphecodes crassus	Rare and scarce species (not based on IUCN criteria), Nationally Notable B Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Meloe proscarabaeus</i>	Oil Beetle	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Eumerus ornatus</i>	Eumerus ornatus	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Xanthandrus comtus</i>	Xanthandrus comtus	Rare and scarce species (not based on IUCN criteria), Nationally Notable Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Mecyna asinalis</i>	Coastal Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Melanchra pisi</i>	Broom Moth	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Nothris congressariella</i>	Cornish Groundling	Red Listing based on pre 1994 IUCN guidelines, Rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Xanthandrus comtus</i>	Xanthandrus comtus	Rare and scarce species (not based on IUCN criteria), Nationally Notable Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Nothris congressariella</i>	Cornish Groundling	Red Listing based on pre 1994 IUCN guidelines, Rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Arctia caja</i>	Garden Tiger	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Platycheirus immarginatus</i>	Platycheirus immarginatus	Rare and scarce species (not based on IUCN criteria), Nationally Notable Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Scopula marginepunctata</i>	Mullein Wave	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Spilosoma lubricipeda</i>	White Ermine	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Epistrophe euchroma</i>	Epistrophe euchroma	Red Listing based on pre 1994 IUCN guidelines, Rare	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Xanthandrus comtus</i>	Xanthandrus comtus	Rare and scarce species (not based on IUCN criteria), Nationally Notable Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Sitochroa palealis</i>	Sulphur Pearl	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Myrmedobia inconspicua</i>	Myrmedobia inconspicua	Rare and scarce species (not based on IUCN criteria), Nationally Notable B Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Diarsia rubi</i>	Small Square-spot	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Hoplodrina blanda</i>	Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Hydraecia micacea</i>	Rosy Rustic	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Scopula marginepunctata</i>	Mullein Wave	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Nothogeophilus turki</i>	Nothogeophilus turki	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Dichomeris alacella</i>	Lichen Sober	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Xanthandrus comtus</i>	Xanthandrus comtus	Rare and scarce species (not based on IUCN criteria), Nationally Notable Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Tyria jacobaeae</i>	Cinnabar	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Hydaticus transversalis</i>	Hydaticus transversalis	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	
<i>Protapion dissimile</i>	Protapion dissimile	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Liparus coronatus</i>	Liparus coronatus	Rare and scarce species (not based on IUCN criteria), Nationally Notable B	
<i>Blepharita adusta</i>	Dark Brocade	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
<i>Paragus tibialis</i>	Paragus tibialis	Rare and scarce species (not based on IUCN criteria), Nationally Notable	
<i>Arctia caja</i>	Garden Tiger	Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	



Scientific name	Vernacular name	National Designation	Legal Designation
<i>Meloe violaceus</i>	Oil Beetle	Biodiversity Action Plan UK list of priority species, Priority Species Rare and scarce species (not based on IUCN criteria), Nationally Notable B Biodiversity Lists - England, England NERC S.41	
<i>Gryllotalpa gryllotalpa</i>	Mole Cricket	Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Biodiversity Lists - England, England NERC S.41 Red Listing based on pre 1994 IUCN guidelines, Endangered Biodiversity Action Plan UK list of priority species, Priority Species	Wildlife and Countryside Act 1981, Schedule 5 Section 9.1 Wildlife and Countryside Act 1981, Schedule 5 Section 9.2 Wildlife and Countryside Act 1981, Schedule 5 Section 9.4a Wildlife and Countryside Act 1981, Schedule 5 Section 9.4b Wildlife and Countryside Act 1981, Schedule 5 Section 9.4c Wildlife and Countryside Act 1981, Schedule 5 Section 9.5a
<i>Clubiona genevensis</i>	Clubiona genevensis	Red Listing based on pre 1994 IUCN guidelines, Rare	
<i>Sunius bicolor</i>	Sunius bicolor	Red Listing based on pre 1994 IUCN guidelines, IUCN (pre 1994) - Insufficiently known Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species	



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<i>Gnorimus nobilis</i>	Noble Chafer	Red Listing based on pre 1994 IUCN guidelines, Vulnerable Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species	
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**Appendix 6: Plant Species of Conservation Importance with Potential to Occur on Site Recorded within a 1 km Radius of the Site (ERCCIS, 2015).**

Scientific name	Vernacular name	Location	National Designation
<i>Silene gallica</i>	Small-Flowered Catchfly	St Mary's, Sunnyside Farm	Biodiversity Lists - England, England NERC S.41 Red listing based on 2001 IUCN guidelines, Endangered Rare and scarce species (not based on IUCN criteria), Nationally scarce Biodiversity Action Plan UK list of priority species, Priority Species
<i>Chamaemelum nobile</i>	Chamomile	St Mary's, Hugh Town, street from Sallyport to Porthcressa	Biodiversity Lists - England, England NERC S.41 Red listing based on 2001 IUCN guidelines, Vulnerable Biodiversity Action Plan UK list of priority species, Priority Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Lavatera cretica</i>	Smaller Tree-Mallow	St Mary's	Rare and scarce species (not based on IUCN criteria), Nationally rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Teucrium chamaedrys</i>	Wall Germander	ST MARYS, GARRISON	Rare and scarce species (not based on IUCN criteria), Nationally rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Lotus angustissimus</i>	Slender Bird's-Foot-Trefoil	St Marys; Porthcressa, St Marys; grass and walls at beach	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red listing based on 2001 IUCN guidelines, Near Threatened Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species



Scientific name	Vernacular name	Location	National Designation
<i>Vicia bithynica</i>	Bythinian Vetch	ST MARYS	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red listing based on 2001 IUCN guidelines, Vulnerable Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Fumaria purpurea</i>	Purple Ramping-fumitory		Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Biodiversity Lists - England, England NERC S.41 Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Biodiversity Action Plan UK list of priority species, Priority Species
<i>Fumaria occidentalis</i>	Western Ramping-Fumitory	St Mary's, Sunnyside Farm	Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Hieracium aggregatum</i>	Hawkweed	St Marys	Red listing based on 2001 IUCN guidelines, Data Deficient Rare and scarce species (not based on IUCN criteria), Nationally rare



Scientific name	Vernacular name	Location	National Designation
<i>Polycarpon tetraphyllum</i>	Four-Leaved All-Seed	St Marys; St Marys; Sunnyside, Rocky Hill	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Ornithopus pinnatus</i>	Orange bird's-foot	St Marys; St Marys; near Old Town bay	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Briza minor</i>	Lesser Quaking-grass	St Mary's, Sunnyside Farm	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Calystegia sepium subsp. roseata</i>	Bindweed	St Marys; IOSET fields west of Porthloo Lane	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Daucus carota subsp. gummiifer</i>	Sea Carrot	St Mary's, triangle by Nowhere.	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Erodium lebelii</i>	Sticky Stork's-bill	HUGH TOWN, ST MARYS	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce



Scientific name	Vernacular name	Location	National Designation
<i>Polypogon monspeliensis</i>	Annual Beard-grass	BUZZA HILL, ST MARYS	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Lotus subbiflorus</i>	Hairy Bird's-Foot-Trefoil	St Marys; St Marys; steps to Garrison	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Scrophularia scorodonia</i>	Balm-leaved Figwort	ST MARYS - ROCKY HILL LANE	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Adiantum capillus-veneris</i>	Maidenhair Fern	St Marys; St Marys; Hugh Town	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Trifolium glomeratum</i>	Clustered Clover	St Marys; Thomas Porth, St Marys	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species



Scientific name	Vernacular name	Location	National Designation
<i>Poa infirma</i>	Early Meadow-Grass	St Mary's, Star castle	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Medicago polymorpha</i>	Toothed Medick	ALLOTMENTS, HUGH TOWN, ST MARYS	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Trifolium suffocatum</i>	Suffocated Clover	St Marys; St Marys; track to Tolman Point	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Erodium moschatum</i>	Musk Stork's-Bill	St Mary's, Sunnyside Farm	Red listing based on 2001 IUCN guidelines, Least concern Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Viola tricolor subsp. tricolor</i>	Pansy	BETWEEN NEWFORD HOUSE AND THE POND	Red listing based on 2001 IUCN guidelines, Near Threatened



**Appendix 7: Lower Plant Species of Conservation Importance with Potential to Occur on Site Recorded within a 1 km Radius of the Site (ERCCIS, 2015).**

Scientific name	Vernacular name	Group*	National Designation
<i>Sphaerocarpos michelii</i>	Micheli's Balloonwort	liverwort	Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Sphaerocarpos texanus</i>	Texas Balloonwort	liverwort	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red listing based on 2001 IUCN guidelines, Vulnerable Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Riccia crystallina</i>	Blue Crystalwort	liverwort	Rare and scarce species (not based on IUCN criteria), Nationally rare Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Chenia leptophylla</i>	Vectis-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally rare
<i>Didymodon umbrosus</i>	Shady Beard-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Ephemerum sessile</i>	Sessile Earth-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Fissidens limbatus</i>	Herzog's Pocket-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Fossombronia incurva</i>	Weedy Frillwort	liverwort	Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Fossombronia maritima</i>	Sea Frillwort	liverwort	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red listing based on 2001 IUCN guidelines, Near Threatened Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species



Scientific name	Vernacular name	Group*	National Designation
<i>Pleurochaete squarrosa</i>	Side-fruited Crisp-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Riccia crozalsii</i>	Ciliate Crystalwort	liverwort	Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Aspicilia epiglypta</i>	Aspicilia epiglypta	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Caloplaca cerina</i> var. <i>chloroleuca</i>	Caloplaca cerina var. chloroleuca	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Caloplaca littorea</i>	Caloplaca littorea	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Caloplaca maritima</i>	Caloplaca maritima	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Cladonia firma</i>	Cladonia firma	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Diplotomma chlorophaeum</i>	Diplotomma chlorophaeum	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce



Scientific name	Vernacular name	Group*	National Designation
<i>Pertusaria excludens</i>	Pertusaria excludens	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Pertusaria monogona</i>	Pertusaria monogona	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Pertusaria pluripuncta</i>	Pertusaria pluripuncta	lichen	Red listing based on 2001 IUCN guidelines, Near Threatened Rare and scarce species (not based on IUCN criteria), Nationally rare Red listing based on 2001 IUCN guidelines, Near Threatened Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Rinodina beccariana</i>	Rinodina beccariana	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Heterodermia japonica</i>	Coralloid Rosette-Lichen	fungus	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red listing based on 2001 IUCN guidelines, Near Threatened Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Lecania aipospila</i>	Lecania aipospila	lichen	Red listing based on 2001 IUCN guidelines, Least concern Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally scarce
<i>Bryum tenuisetum</i>	Yellow-tuber Thread-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Campylopus pilifer</i>	Stiff Swan-neck Moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce



Scientific name	Vernacular name	Group*	National Designation
<i>Bryum torquescens</i>	Twisting Thread-moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Tortula atrovirens</i>	Rib-leaf Moss	moss	Rare and scarce species (not based on IUCN criteria), Nationally scarce Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species
<i>Bryum archangelicum</i>	Archangelic Thread-moss	moss	Red listing based on 2001 IUCN guidelines, Least concern Rare and scarce species (not based on IUCN criteria), Nationally rare
<i>Tortula wilsonii</i>	Wilson's Pottia	moss	Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red Data Book Cornwall and Isles of Scilly (2009), Red Data Book Species Red listing based on 2001 IUCN guidelines, Endangered Rare and scarce species (not based on IUCN criteria), Nationally scarce Biodiversity Lists - England, England NERC S.41 Biodiversity Action Plan UK list of priority species, Priority Species