

Appraisal of Sites of Special Significance

*By J Gilmour, B.Sc. & J Hooper, B.Sc.
Environment Guernsey*



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Abbreviations used in this document:

SSS	Site of Special Significance
RAP	Rural Area Plan (review No.1 December 2005)
UAP	Urban Area Plan (Review No.1 July 2002, as amended Feb 2007, May 2009 and April 2010)
SNCI	Site of Nature Conservation Importance
SSSI	Site of Special Scientific Interest (one type of designation for a protected area in the UK)
JNCC	Joint Nature Conservation Committee (a statutory adviser to UK Government and devolved administrations)
GBRC	Guernsey Biological Records Centre, a joint initiative between the States of Guernsey Environment Department and La Société Guernesiale, run by Environment Guernsey

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1. Introduction

The States of Guernsey Planning Division has commissioned Environment Guernsey to produce an appraisal of sites to be listed under a new form of designation, Sites of Special Significance (“SSSs”). In 2003, the Scientific Committee of La Société Guernesiaise reviewed the Rural Area SNCIs at the request of the then Island Development Committee (David & Gilmour, 2003) and, in 2006, the Scientific Committee and Environment Guernsey undertook a similar review of the Urban Area SNCIs at the request of the Environment Department (David & Ozanne, 2006).

The review guidance requires the appraisal to consider the botanical, zoological, or any other interest of potential SSSs as the sites will be listed based on these criteria. This review is based on the records and reports held at the GBRC along with the field knowledge of the two authors.

2. Method

The Ratcliffe criteria have been used, based on the definitions as defined in JNCC’s SSSI Guidelines, Part 1, 2013 and using the JNCC’s recommended reduced range. These guidelines have been adhered to closely in order to provide robustness to the appraisal. JNCC also describes some of the problems encountered in using the Ratcliffe criteria and the importance of expert knowledge of the sites - both vital for understanding the methodology.

The Ratcliffe criteria used in this review are typicalness, fragility, size, diversity, naturalness, rarity, ecological coherence, potential value and recorded history (of management). This will be the primary categories for assessing whether or not the site or area have sufficient interest to be designated as a SSS. Each of these criteria has been scored on a scale of 1-3, other than ‘recorded history’ in instances where we are not aware of any records of past management. The scoring will not relate to the whole area of a site, as no site is uniform in its characteristics, but is used to score the significant habitats i.e. those that represent the ecological importance of the area.

However, this does not cover all areas of interest for designating a SSS. Other areas of interest that can be considered include archaeological, geological, scientific, cultural or any other interest. These areas of interest will be the subjects of further research by the Environment Department at a later date. However, many of the sites appraised within this paper (for having botanical, scientific and zoological interest) also have a degree of archaeological, geological and cultural interest. Where this occurs, the interest is noted for information only and does not contribute to recommendations to designate an area as SSS.

2.1 Typicalness

‘The selection process aims to choose sites with examples of habitats and species which are not only typical (or characteristic) of that ecosystem, but are also the best examples available’ (JNCC).

Our scoring:

3 = typical of that habitat in Guernsey and of exceptional quality

2 = experienced a loss of quality or some parts have changed significantly recently

1 = not typical or is recently developed (such as St Saviour’s Reservoir)

2.2 Fragility

'The criterion of fragility is also applied generally, as a measure of the intrinsic sensitivity of habitats and species to natural process change or human impact, combined with the probability of such impact arising. The capacity to restore a habitat may be a better measure of fragility than any other single factor or criterion. In general, the more complex an ecosystem is, the greater the difficulty of restoring it to its original richness and complexity. It is sometimes possible to restore the physical conditions of former habitats, but it is generally more difficult to restore the full range of processes, functions and species over meaningful timescales. For some fragile habitats, the re-creation of destroyed habitats is technically very difficult and therefore far more expensive than retaining them in the first place (and for some habitats it is impossible on any realistic time-scale, if at all)' (JNCC).

Grassland needs active management to remain diverse i.e. to have a wide range of flowering plants and provide a habitat for a good variety of insects. Management in natural environments would be grazing (in modern times, the most natural habitats still grazed by wild animals are places such as the Serengeti in Africa, European wild grazing herds having been wiped out by man). Hay cutting and/or grazing have maintained areas of diverse grasslands in the modern landscape. These need to take place annually otherwise grassland quickly becoming rank and bracken, scrub and trees invade and take over. Thus grasslands are very vulnerable to neglect. Once species-rich grassland has been neglected, it takes years for the grassland to recover, even with the reinstatement of appropriate management.

Within grassland types, the fragility varies: it takes 10 times as long for unimproved dry grassland to recover from disturbance or disruption (e.g. inappropriate management) than it takes unimproved wet grassland to do so (Derek Wells, pers. comm.). This observation highlights the potential scale of the problem in trying to restore certain habitats.

Unimproved grasslands are also vulnerable to being 'improved' using artificial fertilisers to increase the economic return (at least in the short-term). Where artificial fertilisers have been applied, the effects can be very long-lived: nitrates flush out relatively quickly, but phosphates can stay for hundreds of years in the soil. The loss in diversity after application is very fast and some areas where fertilisers have been applied 20 + years ago, have still not returned to their previous diverse state and show no signs of developing greater diversity over time.

Of other habitats locally, heath is the next most fragile habitat, but can survive a longer period of neglect.

Our scoring:

3 = all sites with 'high/medium diversity' dry grassland – or equivalent - within the site (due to their high level of fragility relative to other habitats)

2 = all sites with 'high/medium diversity' grassland within the site or shallow water that needs management such as removal of shading trees i.e. requiring some management

1 = all sites where it is considered that the habitat is robust & needs no active management (in practice this is only the intertidal zone)

2.3 Size

'A site must be large enough for it to be viable, to provide adequate suitable habitat, be resistant to internal changes in the vegetation composition and structure, be robust to adverse edge effects, to loss of species and to colonisation by invasive species. Sites that are very small or fragmentary can be designated if they are able to protect the special interest concerned and maintain its viability' (JNCC).

'The size of a species population on a site can be a useful measure of importance, especially for species which are colonial or show some degree of aggregation either for breeding or at other times of year. Sites with populations of Red Data Book plant species should be evaluated for inclusion within SSSIs' (JNCC).

Our scoring:

(Using a log scale developed by David & Gilmour, 2003)

3 = ≥ 2 on the logarithmic scale (≥ 100 ha)

2 = 1-1.99 on the log scale (10-99.99 ha)

1 = .1-.99 on the log scale (1-9.99 ha)

Sites less than this size have not been considered in this review.

2.4 Diversity

'Diversity tends to be valued positively as it increases, but it has to be considered in relation to scale. Comparisons on this criterion are valid only between examples within the same community and not between different communities. Diversity of animal or plant species within each main taxonomic group is an important criterion' (JNCC).

Previous research by David & Gilmour (2003) and David & Ozanne (2006), along with the 2010 Habitat Survey and records held at the GBRC, has been used as well as field data to assess diversity.

The most diverse habitats in Guernsey (excluding sub-tidal marine habitats) are intertidal rocks and unimproved grasslands. Unimproved grasslands are our equivalent of equatorial rainforests (J. Pinel pers. comm.) as these have such high diversity compared to any other land habitats locally. Scrub and woodland have little diversity here, as there is no ancient woodland extant and therefore also no source from which a variety of species could colonise any secondary woodland.

Our scoring:

3 = ≥ 5 'diverse' habitats &/or ≥ 200 plant species in the target habitats (excluding common, opportunistic species and non-natives); and/or ≥ 100 bird species recorded; and/or known for its insect diversity

2 = 2-4 diverse habitats &/or 100- 199 plant species as above; 50-99 bird species recorded; known for some significant insects

1 = 1 diverse habitat &/or ≤ 100 plant species as above; ≤ 50 bird species recorded; known for a few significant insects

2.5 Naturalness

'Three key aspects of naturalness are habitat continuity, similarity to the original natural habitats, and the capacity for natural processes to occur. Sites with long histories and little modification should be valued highly. Native species are generally considered to be the valuable elements of the plant or animal community on a site' (JNCC).

The most natural habitats locally are shingle, the various intertidal habitats and soft and hard cliffs. These are likely to continue indefinitely without interference.

The next most 'natural' habitats are open dune, dune slack, dune and coastal grasslands where the presence of rabbits can maintain them indefinitely (where myxomatosis does not reduce the population too greatly). These are also sites with long histories.

No saltmarsh in Guernsey is truly natural: indeed it is unrecognisable as 'true saltmarsh' because saltwater ingress is controlled in nearly all sites and freshwater is extracted upstream as well, creating sub-optimal conditions.

All woodland and scrub is recent secondary: most dating to post first world war or second world war abandonment of land or plantings. It is often left alone, but is not similar to good 'natural' versions of these habitats and many wooded areas contain non-native Sycamore.

Heath and most grassland need regular grazing or cutting to continue.

Swamp (reed beds) is mostly recent, coming from the abandonment of wet grassland and will become wet scrub or woodlands if no management takes place.

Most standing water in Guernsey is recent and artificial, having been dug for watering cattle, created for water storage or the result of 19th and early 20th century commercial quarrying.

Our scoring:

3 = habitat continuity, similarity to the original natural habitats and the capacity for natural processes to occur

2 = two of the above

1 = one of the above

2.6 Rarity

'Habitats that are rarer are given higher priority, simply because options and opportunities for conserving them are more limited and if all such habitats are lost, so too are the species and processes associated with them' (JNCC).

The following table has been used for assessment of rare habitats and is adapted from a table in 'Red Data Book for Guernsey' (Gilmour & David, in prep). The ratings are 3 for under 49.9 ha, 2 for 50-99.99 (except for semi-improved grassland – see below), 1 for 100-199.99.

Table 1.
Areas of Vegetation Types in Guernsey.
(from IDC/Environment Dept. Phase 1 Habitat Surveys.)

	1999		2010				
Habitat Classification	Area (ha)	%of land	Area (ha)	% of land	Change in Area	Change in % of GSY's land	Rating (2003 comparative)
Dune Heath	1.27	0.02	0.00	0.00	-1.27	-0.02	3*
Dune Slack	2.86	0.05	0.47	0.01	-2.39	-0.04	3 (3)
Marginal Vegetation	0.00	0.00	0.66	0.01	0.66	0.01	3 (n/a)
Open Dune	1.29	0.02	1.36	0.02	0.07	0.00	3 (3)
Saltmarsh	0.45	0.01	1.55	0.02	1.10	0.02	3 (3)
Coastal Heathland	2.70	0.04	1.57	0.02	-1.12	-0.02	3 (3)
Unimproved Grassland	3.11	0.05	2.05	0.03	-1.05	-0.02	3 (3)
Soft Cliff	5.02	0.08	2.57	0.04	-2.45	-0.04	3 (3)
Swamp	14.54	0.23	15.24	0.24	0.70	0.01	3 (3)
Shingle	13.45	0.21	16.31	0.26	2.86	0.04	3 (3)
Standing Water	41.62	0.65	50.26	0.79	8.64	0.14	2 (2)
Hard Cliff	27.57	0.43	58.50	0.92	30.93	0.49	2 (2)
Marshy Grassland	90.74	1.43	60.95	0.96	-29.79	-0.47	2 (2)
Coastal Grassland	61.60	0.97	74.03	1.16	12.43	0.20	2 (2)
Dune Grassland	74.29	1.17	84.36	1.33	10.08	0.16	2 (2)
Semi-improved Grassland	351.81	5.53	192.30	3.02	-159.51	-2.51	2** (1)
Semi Natural Broadleaved Woodland	131.38	2.07	197.58	3.11	66.20	1.04	1 (1)
Total for the Island	3919	61.64	4287	67.42	475.03	5.77	

* included in coastal heathland in 2003 - in practice this would not change the score

** The largest area in 2010 was at the airport (49ha (see Henney, 2010)), but since then the extension of the runway and associated works has damaged much of this and there is an intention to reseed some, if not most of the airfield, so the likely amount now is around 143.3 ha+. It is now one of the most threatened habitats locally.

Continuous bracken, tall ruderal, and dune scrub have been omitted from the table as these are likely to represent areas where unimproved or semi-improved grassland or heathland has been abandoned and replaced by these habitats: thus they are a threat to the highly diverse habitats they replace, thereby leading to a loss in biodiversity.

We have also omitted planted woodland, as this often replaced more species-rich grassland, is a young, man-made habitat that can vary enormously in its value to wildlife depending on species composition and more land is being planted up over time. It therefore continues to represent a threat to species-rich habitats.

However, we recognise that such habitats are important: scrub and woodland are vital for many birds. 'Arable' is another habitat that, whilst common, is usually species-poor and

neither survey recorded species-rich arable fields, so that we cannot include it in the table, even though fields with a variety of 'weeds' are of some significance to birds.

The presence of species listed in the Red Data Book (Gilmour & David, in prep) is taken into this scoring.

Our scoring:

3 = presence of endangered species & highly threatened/scarce habitats (3 in table above)

2 = presence of vulnerable species; at risk habitats (2 in table above)

1 = presence of species with low populations and habitats not at immediate risk

2.7 Ecological coherence

This criterion refers to 'the functional importance of a site within the wider environment, at a range of scales -

It can be considered for the individual protected area: does the site meet the needs of the qualifying species and habitats found within it?

It forms part of a portfolio of SSSIs: does the site contribute to the SSSI series for those species and habitats?

It forms part of an ecological network: does the site contribute to a functional network of semi-natural habitat, with or without interacting protected areas' (JNCC).

Our scoring:

3 = meets needs; forms part of a series; forms part of ecological network

2 = two of the above

1 = one of the above

2.8 Potential value

'Sites can develop a substantially greater nature conservation value as a result of appropriate management or natural change over time. It is perhaps most appropriate to apply this criterion where part of a site, sometimes consisting of a different habitat, is in a poorer condition than the rest but its inclusion contributes strongly to the overall interest.... It is also important to recognise the need to create integrated national and regional networks which provide for the persistence of species' (JNCC).

Our scoring:

3 = Has great potential as parts of the site are in major need of restoration

2 = Management could be improved over part/whole of the site

1 = A few improvements would be beneficial.

2.9 Recorded history (of management)

'The recorded history of a site is a criterion used mostly comparatively, where a site with a better ecological data record or known and recorded management history may be seen as more valuable than one with no historical information' (JNCC). There is not sufficient information in most situations to apply this criterion to a great extent, other than perhaps the roadside hedgerbanks and douits/streams, both of which have had a historically continuous

maintenance in accordance with legal requirements. Thus, we have reduced the timescale requirements compared to what could be achieved in parts of the UK, where recorded management can be hundreds of years.

Our scoring:

3 = long history of recorded management > 50 years

2 = moderate history of recorded management stretching back 25-50 years

1 = short history known or some understanding of how the habitats were likely to be managed

0 = no history known

A separate table shows the additional criteria below, which are not part of the scoring for the SSSs, but provide guidance as to other significant aspects of these sites:

2.10 Archaeological/historical significance

We have included this as candidate SSS sites in Guernsey are considered not just to cover biodiversity, but also take into account archaeological and historical issues.

Our scoring:

3 = sites within the boundary that are of major archaeological and/or historical significance

2 = sites within the boundary of moderate archaeological and/or historical significance

1 = sites where the continuity of the landscape features is of significance in itself and where, due to lack of ploughing, there is the possibility of undisturbed sites.

0 = no known archaeological/historical significance- in practice none of the sites was scored at nought.

2.11 Geological significance

As above, the SSSs are intended to cover geological value where appropriate.

Our scoring:

3 = features within the boundary known to be of major geological significance

2 = features within the boundary of moderate significance - such as rock outcrops that enable analysis/investigations to take place

1 = features within the boundary of minor significance

0 = no known geological significance.

2.12 Cultural & landscape significance

This reflects the importance of a site to people living here as it reflects a 'sense of place' and is seen as what defines Guernsey. It is perhaps the most subjective of the criteria, but in part is based on landscape importance/value.

Our scoring:

3 = major cultural significance

2 = moderate cultural significance

1 = minor cultural significance

3 Issues considered when assessing the SSSs

Areas we particularly considered are:

3.1 Scoring

The nature of the evaluation process means that scoring will have a degree of subjectivity. In practice, a mixture of attributes has to be evaluated, which requires expert judgement stemming from a wide experience of the ecosystems, habitats and species in question (JNCC). However, we have used the scoring of quantifiable attributes as developed in previous reports (David & Gilmour, 2003; David & Ozanne, 2006).

The expertise of the current authors - a botanist/ecologist and an ornithologist/conservation land manager, covers more than these core areas of expertise and experience. The authors take an active interest in other areas of natural history, including amphibians, reptiles, insects, spiders, bats and other mammals. There is a combined experience of the majority of the sites considered in this review of at least 30 years. However, some areas are still known better than others: those belonging to La Société Guernesiaise and many belonging to the States and the National Trust of Guernsey are managed under contract by Environment Guernsey. Thus, there have been ample opportunities to record and monitor these environments.

Other areas in private ownership are less well known and the scoring of such land has been conservative where we consider current knowledge insufficient to enable higher values to be ascribed. This means that some sites potentially worthy of marginally higher scoring may have received lower values than might otherwise be the case. However, as this is a desk review, this is unavoidable.

3.2 Compound Sites

'Some habitats have been particularly prone to fragmentation. For example, there may be a group of individual fields of semi-natural grassland within a matrix of improved farmland within a valley. In such a case it is appropriate to consider these as component parcels of land within one SSSI, which we term a compound site... Mobile animals are likely to use the components as a single unit, possibly forming a metapopulation, so that the site will therefore help to conserve larger populations of those species. This approach may become increasingly important, given the development of the concept of ecological networks, which are intended to increase the resilience of isolated sites to pressures including climate change and fragmentation. In future, a compound SSSI might include all the key sites of a particular semi-natural habitat in a local area, as well as buffer land, linking land and restoration areas which will help to ensure ecological coherence' (JNCC).

3.3 Buffer Land

'Some habitats, especially dry ground types, may survive indefinitely as tiny islands within a highly modified surrounding environment. These small sites are, however, always vulnerable to 'edge' and 'overspill' effects such as spray drift of pesticides or wind-blow of fertilisers or atmospheric ammonia from surrounding farmland. Wet ground habitats are often influenced by the hydrology of a much larger area than the site itself, and drainage operations on the surrounding land can cause drying, or inflow of fertiliser from the catchment can result in

eutrophication. For some animals, the semi-natural habitat may be the breeding or roosting area, but surrounding farmland may provide the principal feeding areas' (JNCC).

Birds, whether breeding, migrating or wintering often require not just the 'best' areas, but areas to roost, shelter, feed etc., which may not be the same location or habitat. For example, birds that feed on the intertidal areas need to roost inland and shelter somewhere coastal during rough weather or over a high tide.

Guernsey is not only an important stopping off point on migration, hence the value of our wetlands and other rural land, especially Pleinmont, but also a wintering site: for some species this means throughout the non-breeding season whereas others require a place of refuge and food sources when there is cold weather in Continental Europe. If sites become too isolated, the numbers of birds that can benefit is dramatically reduced. This is one form of vulnerability that buffer land can mitigate. Also, if one area is experiencing temporary disturbance, buffer land can be vital to enable safe refuge.

Insects, such as bumblebees, often need to forage over a range of habitats, as they need food throughout the period from March to July/November (depending on the species). Hedgebanks are vital for feeding and nesting, but it would be impractical to make them into an SSS due to their linear and widespread nature. Thus, they can be seen as a type of buffer land, especially where they are part of old field patterns, as this would imply a lack of disturbance over a long time.

Gardens can provide another form of buffer land as birds are increasingly dependent on artificial feeding and nesting to help get through adverse conditions. In the same way, a variety of insects rely on gardens for food for at least part of the year, as the general level of flowers in the intensively farmed landscape is often minimal, apart from the hedgebanks. Similarly Common Frogs are probably surviving locally because of garden ponds.

Thus, a range of sites are important, even if they are not 'valuable' individually, hence the concept of 'buffer land' to provide coherent ecosystems for a wider range of species. Buffer land has been considered on a site-by-site basis.

3.4 Habitat Corridors

These are a form of buffer, but in this case creating a 'bridge' between two areas of good habitat i.e. providing a link so that potentially both animals and plants can move between the areas. This reduces genetic isolation and improves the chances of maintaining viable populations.

Corridors, even where these are not good quality habitats but where protection is ensured, will increase the effectiveness of the best areas. They are also likely to increase in their diversity where appropriate management is put in place and maintained, thus further increasing their importance.

3.5 Recommendations Based on These Considerations

The recommendations below aim to maintain existing and include new buffer land and habitat corridors wherever possible to ensure that the SSSs are less fragmented than the SNCIs they replace, and form compound sites with much greater resilience to change and to give wildlife the best chance to survive and thrive.

With this in mind, we have included lanes and buildings within the boundaries, as we feel this creates less fragmentation. We realise that the gardens within the boundaries cannot be subject to the rules relating to an SSS, but would recommend that anyone in such areas is encouraged to view themselves as custodians and to have a sense of responsibility towards and pride in the SSS.

4 Appraisal

The following sites have been previously assessed and were subsequently short-listed as candidate sites for SSS designation (David & Gilmour, 2003; David & Ozanne, 2006). These are (listed alphabetically):

- Candie Cemetery & associated areas
- Cliffs
- Intertidal area around Guernsey
- La Claire Mare wetland 'orchid fields' RAP SNCI
- South Vazon/ La Grande Mare wetland "orchid fields" RAP SNCIs
- L'Ancrese Common RAP SNCI
- Les Vicheries, & La Rue Rocheuse, - wetland 'orchid fields' RAP SNCIs
- Lihou Island RAP SNCI
- Port Soif to the Vale Church - Sandy coastal RAP SNCIs
- St Sampson's Marais/Ivy Castle area UAP SNCIs

Additionally, other selected sites, currently designated as SNCIs, have been considered for designation as SSSs. This led to the inclusion of Hommet Headland SNCI in the list of recommended areas that are assessed below.

The sites have been assessed against the criteria, as outlined in the briefing document. In some cases, extensions to the sites have been considered to enable these habitats to function more effectively or to provide buffer zones and corridors. The States of Jersey had originally designated its protected sites based only on the 'best' areas, which were strictly confined and defined, thereby unintentionally excluding buffer zones and corridors. However, this ignored the edge effect and that many species need a complex of habitats & corridors. Habitat corridors are now being created in Jersey to ensure that the needs of a variety of animals are met and to avoid genetic isolation (J. Pinel pers. comm.).

We have placed the detailed descriptions in appendix 2. Their characteristics are described under the headings:

Representative of habitat, where we list the main habitats found and comment on their significance where relevant.

Biological/nature conservation value - for the plants and insects the information comes from the two reviews of the SNCIs (David & Gilmour, 2003; David & Ozanne, 2006) and the Red Data Book for Guernsey (Gilmour & David, in prep), which in turn based its assessment of the threatened status on both field work and the records held in the GBRC. The GBRC records have been checked for any areas or species not fully covered by the reports and to update information where possible. The information on birds comes from 'Important Sites for Birds in the Channel Islands' (Veron, 1997) and from field knowledge.

Archaeological/historical interest- a brief reference to major sites known is given, using the map layer created by Tanya Walls, assistant archaeologist for the States of

Guernsey and the following books & articles: Les Fouaillages and the Megalithic Monuments of Guernsey (I. Kinnes & J. Grant, 1983) and 'A catalogue of Cliffside Fortifications of Guernsey' by Mike Hill in Guernsey Connections (Sebire, 1998).

Geological interest –references were obtained from the Geological Map of Guernsey and the following books and articles: Outline and Guide to the Geology of Guernsey (Roach, in Trans Soc. Guernesiaise, Vol. XVII) and The Rocks and Scenery of Guernsey (de Pomerai & Robinson, 1994).

The following is the formal assessments and recommendations for the sites:

4.1 Candie Cemetery & adjacent areas (Cimetière des Frères and Candie Gardens extending to Priaulx Library gardens)

Formal assessment

Score 26 - see appendix 1

This includes the SNCI currently designated in the Urban Area Plan ("UAP"), which consists of two cemeteries dating from 1830s/1840s, a formal garden dating from the 19th Century, and old, high granite walls with interesting flora occurring when not over-managed or treated with herbicides. The grassland in Candie Cemetery is at least as old as the cemetery and may well be much older, perhaps having been enclosed from previously existing grazing land. This would explain its impressive range of grasses and grassland forbs.

Candie Cemetery is a major hotspot of diversity in the urban area, but Candie Gardens and the Priaulx Library garden also have important fungal diversity, probably as they are relatively old dating at least in part from around the early part of the 19th Century, although their formal layout is from the Victorian era. The areas operate as a network of feeding and roosting/nesting sites for insects and birds.

Recommendation

It is recommended that the current SNCI is designated as an SSS and that this is extended to include the Priaulx Library garden and surrounding walls.

4.2 Cliffs

Formal assessment

Score 33 - see appendix 1

This encompasses the whole stretch of the cliffs from Pleinmont to Havelet Bay and the associated valleys leading inland and is currently designated an SNCI in the RAP. These cliffs are an important part of Guernsey's landscape as well as being a continuous stretch of 'non-urbanised' land, which provides many species with a natural corridor, and safe nesting, roosting and feeding sites. The major drawback is that they are currently largely abandoned grazing land and so scrub and continuous bracken occupy land that was once diverse coastal grassland and heath. It is hoped that these areas may be restored over parts of the cliffs in

order to bring a greater diversity of wildlife back. The SSS designation could be of great benefit in encouraging support, both financial and physical.

Recommendation

This area in its entirety is recommended as an SSS. It is proposed that some small areas are added at the eastern end to encompass the rest of the woodland at Fort George under States of Guernsey ownership, the main sites of Early Purple Orchid and the semi-improved grassland of a field at La Bouvée belonging to the States.

In the centre of the cliff zone, it is recommended that a second tier of designation be enacted to protect these areas. This would adjoin the SSS and encompass Les Varioufs and Les Villets for their historic landscape. These areas have old settlements and the fields still retain boundaries present on the Duke of Richmond (Gardner) map of 1787. Old hedgebanks support a range of wildlife, providing corridors and safe breeding sites and often support good quality grassland habitat in a landscape where this may be otherwise missing. Additionally, Les Villets has some semi-improved fields and a small area of swamp and is currently an SNCI.

We have included extra areas of coastal grassland where these exist next to the current boundary.

In the west at Pleinmont, likewise it is recommended that the SSS is extended to include fields parts of the historic strip field pattern, particularly to encompass those areas under less intensive management. It is recommended that an extension, using a second tier of designation, be enacted to encompass the rest of the historic strip field system. The presence of low banks act as corridors for species where the intervening land is farmed; these banks have and continue to be ploughed out in places, so damaging the character of the landscape.

4.3 Hommet Headland & Vazon coast (compound site)

Formal assessment

Score 28 - see appendix 1

Hommet Headland is a west coast headland and includes adjacent land with the small bay of Albecq to the east and Vazon to the southwest. There is a rich area of calcareous sand dune next to Albecq Bay on the neck of the peninsula. To the west of the road towards Vazon Bay is an area with brackish dune slacks with a diverse fauna and flora. The point has more acidic coastal grassland, scrub, both soft and hard cliffs and shingle banks. This is currently designated a SNCI in the RAP.

Vazon has some very rare plants along the coastal strip of sand dune and important remnants of dune slack. The open dune habitat at Les Dunes has been developing since 2004 and now represents a significant contribution to this limited habitat locally.

Recommendation

This area scores more highly than several other candidate sites on the short-list and should be designated as a SSS for its importance for a wide range of wildlife. It is recommended that the SSS include the Vazon coastline, which has some important remnant dune grassland, dune

slack and the largest open dune area in Guernsey. We recommend joining up along the coast , which would act as a corridor, albeit a narrow one.

4.4 Intertidal area around Guernsey (including offshore Islets & excluding the commercial harbours & Longue Hougue reclamation area)

Formal assessment

Score 31 - see appendix 1

Guernsey has one of the biggest tidal ranges in the world along with coasts facing in nearly every direction, creating an extensive area at low tide, with a wide range of habitats supporting an impressive diversity of organisms. Despite its importance for biodiversity, there is no current designation for the foreshore, a situation that has arisen at least partly because it is crown land. This has no current designation.

Recommendation

It is recommended the whole of the intertidal area is designated an SSS, including up to the high spring tide level and where feasible, adjoining other designated areas. The commercial areas of the harbours, including Beaucette Marina and Longue Hougue reclamation area are omitted. The inclusion of the offshore islets is also recommended as they provide relatively undisturbed areas of coastline with important bee and bird nesting and are vulnerable to unregulated recreational activity.

4.5 La Claire Mare, La Rousse Mare, the rest of the Colin Best Nature Reserve, Lihou Headland and L'Erée Shingle bank

Formal assessment

Score 27 - see appendix 1

This forms part of the only Ramsar site currently designated in the island. Thus its significance is already well documented, covering a wide range of habitats, including important wet meadows at La Claire Mare, Guernsey's largest shingle bank at L'Erée and the largest area of saltmarsh locally at La Rousse Mare.

Recommendation

It is recommended that the whole of the site is designated and that the headland and fields that are within the area of wetland called the Claire Mare are also be designated as part of the SSS where possible, as these operate as buffer zones and corridors.

4.6 L'Ancrese Common

Formal assessment

Score 33 - see appendix 1

This includes two current SNCIs designated in the RAP:

L'Ancrese Common is a large area of unenclosed land in the north of Guernsey, which consists mainly of dune grassland and scrub. Towards Fort Doyle the soil is less influenced by wind-blown sand and is more acid. There are several marshy areas and some ponds (originally dug for watering cattle).

Recommendation

The entire SNCI is recommended for SSS designation, with the eastern boundary marking the end of the Commune de L'Ancrese's ownership and its northwestern boundary where two small fields of marshy grassland are situated. It is also preferable to include the quarry to the northwest, but as this is contiguous with an adjacent garden, the garden has been included as a corridor. Areas around the coast and the car park have been included as corridors between the two SSSs and also with the Vale Church churchyard.

Secondary designation is recommended for the area between Fort Le Marchant and Fort Doyle south of the outlined areas. Another adjoining secondary designation encompassing the area from Le Marais to Le Grand Pré, including Les Mielles and fields to the north up to L'Ancrese is recommended as these have historic field patterns as shown in the Gardner map. This area includes several former 'orchid meadows', existing until recently. It is difficult to ascertain how many still exist currently or their present condition because they are privately owned and are hidden behind housing or other fields. Les Mielles, Le Marais and Le Grand Pre are all SNCIs and this enables some connectivity between them as well as a certain level of protection for what was part of Le Clos du Valle. There are also examples of Le Clos du Valle stone boundaries not found elsewhere in Guernsey.

4.7 Les Vicheries and Rue Rocheuse (extending to La Saline and Rocquaine sand dunes) (compound site)

Formal assessment

Score 27 - see appendix 1

This area includes three current SNCIs designated in the RAP:

The orchid fields of Les Vicheries, mostly belonging to La Société Guernesiaise, which can be spectacular when the orchids and other wet meadow plants are in flower and are popular with visitors in May and June.

The swamp, saltmarsh, semi-improved marshy grassland and coastal grassland of La Saline et Sécage.

The orchid fields of La Rue Rocheuse, which are as diverse as those at Les Vicheries, but are less well known. They have been suffering from over-grazing by rabbits in recent years, which has led to them being somewhat less colourful. They hold the main population of Common Adder's-tongue locally.

Recommendation

The three current SNCIs are proposed as a single SSS, with four extensions to create a less fragmented area, creating corridors where possible to facilitate this:

In Les Vicheries & La Saline, it is recommended that the SSS include all fields under La Société's management as a core area. Some other fields bordering Les Vicheries and adjoining both Les Vicheries and La Saline SNCIs are important to this area, being marshy grassland, semi-improved marshy grassland, swamp and unimproved grassland (the only known area of this habitat at present, other than Candie Cemetery). It is therefore proposed that these should be included.

Between Les Vicheries and La Rue Rocheuse there are both semi-improved and improved grassland fields as well as some abandoned areas. These operate as a corridor as, whilst most are less diverse, nevertheless, animals can use them to move between the better fields.

At La Rocheuse, the field to the north of the existing SNCI is recommended for inclusion, as this is semi-improved marshy grassland.

The sand dunes at Rocquaine should be considered for inclusion as these have important remnant populations of open dune flora and fauna.

These changes outlined above would create a larger and more effective 'safe' area for wildlife.

4.8 Lihou Island

Formal assessment

Score 29 - see appendix 1

Lihou has large areas of coastal grassland and soft cliffs, along with shingle areas, the latter being roped off during the bird-breeding season to give some protection from disturbance. Generally, the island has experienced a significantly increased level of recreation use in recent years.

Recommendation

It is recommended that the whole of this island is designated as an SSS extending to the high spring tide level (thereby meeting the proposed intertidal zone SSS) to ensure that breeding, feeding and roosting birds have sufficient protection.

4.9 Port Soif to Pont du Valle (including Vale Pond and extending to Cobo) (compound site)

Formal assessment

Score 30 - see appendix 1

This is the coastal strip of a significant portion of the West Coast encompassing both headlands and bays and includes four current SNCIs designated in the RAP:

The area between Grandes Rocques and Portinfer has some of the finest mobile sand dunes in the island at Port Soif and Grandes Rocques Bays while at Portinfer Bay some of the best pebble ridges remain. There is extensive species-rich dune and coastal grassland including the best site in Guernsey for Bee and Pyramidal Orchids and the only site for many other plants and insects.

Inland from the Port Soif coast are two important areas: one is the western part of a hougue covered with sand dune grassland, a last inland remnant of the Grand Mielles shown on the Duke of Richmond (Gardner) map of 1787. There is also a quarry with large shallow water areas with an interesting flora. North of this are two abandoned fields, which have in the past been dug for sand. The other part is two shallow water quarries, which have some rare plants and are mostly surrounded by scrub.

The area around Pulias encompasses a west coast headland and a brackish pool to the east. The latter was a bay blocked from the sea by a shingle bank in the 1800s so forming a brackish pond, important for waders, with an area of salt marsh at its edges. Shingle banks bound it to the south and there are areas of mobile dune, dune and coastal grassland and a single field still in use. This area is much used by walkers and is crossed by the west coast footpath.

The coastal strip from the Vale Church to Port Grat contains important open sand dunes along the Pont du Valle and at Les Picquerels, and several areas of rich stabilized dune grassland as around Rousse Tower and behind Port Grat. There are also pebble ridges and rocky coastline. It adjoins the Vale Pond and reaches nearly to L'Ancrese Common.

Recommendation

It is recommended that these SNCIs be joined as far as is possible to create a single SSS, thus reducing fragmentation. This would ensure that there are corridors for wildlife to move along the coastline and would provide some buffer land as this is a very narrow zone of protection. The sporting ground at Port Soif is included as buffer land.

Several extensions are proposed:

Inland site of Port Soif to the eastern side of the hougue, which has remnants of the same sand dune grassland flora, under threat due to lack of management, one of the most important quarries in the island, being shallow water- this is increased to include scrub and semi improved grassland to the east and north especially as buffer land and some amenity grassland and gardens to join i.e. acting as corridors;

Inland site of Port Soif to the south where further important shallow water quarries exist;

Northern boundaries to include Vale Pond and adjoining grassland, as this is immediately adjacent to the current boundary of the sand dune area and is an SNCI at present; and

The coastal strip of northern half of Cobo Bay south to the pumping station, as there are important remnants of open dune and dune grassland along this strip.

4.10 South Vazon & La Grande Mare wet meadows (compound site)

Formal assessment

Score 26 - see appendix 1

This area includes two current SNCIs:

The 'south Vazon' wet meadows with orchids. These are in the lowland area behind the sand dunes along Vazon Bay. The whole area is sensitively managed and forms a subtly different habitat from the other 'orchid' meadows further south, as they are on a sandy substrate.

The southern parts of La Grande Mare where there are still wet meadows. They include the fields accessed from Le Gélé road, which are currently managed by La Société.

The wet meadows in La Grande Mare have been given a greater fragility score than for similar wet meadows elsewhere, due to major land-raising that has taken place as part of the golf course development. This has changed the hydrology of these fields.

Recommendation

It is recommended that the current SNCI of the South Vazon wet meadows is retained and that any permanent grassland between the two SNCIs is included to create a habitat corridor.

It is proposed that the fields of La Grande Mare SNCI are retained and extended to include semi-improved grassland and woodland and linked using available improved grassland and amenity grassland to create as robust an area as possible. Parts of the existing SNCI have been shown as buffer land as it is considered that land-raising has created permanent change in these areas.

4.11 St Sampson's Marais & Ivy Castle (compound site)

Formal assessment

Score 28 - see appendix 1

This includes two current SNCIs designated in the UAP:

Ivy Castle surrounds and some nearby fields, which were historically an important 'marais' area: hence Ivy Castle's historic name of Chateau des Marais. It was one of the richer areas botanically in the past, but some of the best fields were damaged by

dumping and land-raising in the 1960s/1970s. Thus, only some of these became part of the SNCI.

St Sampson's Marais, which is more remote and less damaged, but suffering from the presence of the invasive non-native Parrot's Feathers, *Myriophyllum aquaticum*, in some fields. The largest fields form an extensive area of undisturbed land and form the rest of the current SNCI.

The site is part of a relatively large area of low-lying grassland in the east of the island, most of which has been farmed for many years. This has mainly been grazing, as much of the land is too wet for cultivation or haymaking. The land is often referred to as the 'green lung' of the urban areas of St Peter Port and St Sampson's and is an important reservoir of some of our scarcer wetland species.

Recommendation

It is proposed that the current SNCIs are included along with adjoining fields to form a continuous designated SSS area, providing corridors between the more important areas of habitat as recommended in the Urban SNCI report (see David & Ozanne, 2006).

It is also recommended that a sufficient number of surrounding fields are included provide sufficient buffer land, especially given the proximity to the major urban areas of Guernsey (see map).

5. Practical Guidance & Suggestions for Protection from Damaging Activities

5.1 The Current Threats to SSSs

In order to suggest practical guidance for site protection, the threats to local biodiversity need to be determined. The following is a summary of the threats to SSSs and other areas of biological importance locally.

Although sites differ in terms of their 'robustness', numerous factors such as disturbance, on-going management, over-exploitation, neglect, pollution, and the impact of climate change and invasive species affect all habitats to a varying degree.

The main risks can be categorized into those affecting coastal and/or terrestrial habitats:

5.1.1 *Intertidal, beaches, cliffs*

Over-exploitation – the harvesting of various species e.g. bait species, ormers, razor-fish, cockles, needs to be sustainable.

Physical damage – some operations such as ormer gathering causes long-lasting damage to the entire intertidal ecosystem, particularly where areas of stones are left turned over.

Chemical pollution – there are a wide range of detrimental effects, depending on the nature of the incident e.g. oil spills, PIB incidents.

Coastal development – larger-scale projects are rare locally. However, the development of the North Beach Marina area in the 1980's and Longue Hougue in the 1990's led to the permanent loss of significant areas of intertidal habitats. Smaller-scale developments such as improvements to coastal defence or drainage and communications infrastructure are likely to affect at least the immediate vicinity to some degree.

Climate change causing:

- Loss of cold-water species leading to changes in marine food webs and loss of species at the southern edge of their range e.g. puffins.
- Colonization of new species on an advancing northern limit of their range.
- Sea level rise will affect coastal habitats to a varying degree.

Recreational disturbance (e.g. coasteering, paragliding, rock climbing kayaking etc.) - there has been a sharp increase in the use of some of the island's more remote areas for various recreation activities. During the breeding season, prolonged or regular disturbance can greatly increase the risk of desertion of nests, trampling of nests, predation, egg chilling and injury and/or death of chicks in the affected area, most of which will not be apparent. The future of local seabird species, some of which have

regional, national or international importance, is now uncertain; particularly as other issues such as pollution incidents (e.g. oiling) and climate change add further pressure.

Disturbance by dog walking - bird populations in particular are vulnerable to such disturbance, which can lead to long-term declines and the loss of local populations of certain species (Banks and Bryant). There is a strong link between increased dog walking on beaches and the loss of over-wintering waders.

Physical damage caused by recreation use - motorbike scrambling and sand racing on beaches can cause damage to the substrate as well as associated wildlife. Such damage may be short-lived or may take many months to recover.

Invasive non-native species – the introduction or arrival of alien species can often lead to considerable detrimental impacts on the marine environment.

5.1.2 Terrestrial

Development including building, hard surfacing.

Land-raising/tipping – leads to destruction of habitats and permanent changes to topography.

Installation of new drainage schemes - loss of wetland and marginal habitats.

Intensive agriculture practices - wide range of effects, predominantly causing a loss of native species and diverse habitats.

Loss of traditional management/abandonment:

- Lack of grazing – loss of threatened, diverse habitats and associated wildlife,
- Lack of traditional arable practices – leads to loss of associated arable flowers & seeds,
- Lack of scrub management – replacement of diverse assemblages with species-poor habitats such as bracken.

Recreational uses (e.g. golf) where they:

- Involve using fertilisers, pesticides and/or herbicides,
- Take over parts of valuable habitats and reduce their diversity.

Over-management or manicuring, e.g. mowing grassland as lawns or extension of cartilage and excessive use of fertilisers and biocides, leading to loss of native biodiversity.

Tree-planting on unimproved/semi-improved grassland or other diverse or threatened habitats.

Other inappropriate maintenance practices such as removing all vegetation from species-rich walls or spraying of earthbanks with herbicides.

Climate change – similar to above. Also, sea level rise will, in the long-term squeeze out restricted coastal habitats.

Recreational disturbance, including dog walking (as above in terrestrial areas) with a strong link between dog walking on rough grassland/heathland areas and the loss of breeding birds including charismatic species such as cuckoo and skylark.

Although the above lists of threats faced by SSS candidate sites, along with other important nature conservation areas, such as SNCIs and the Ramsar site, is extensive, it is not comprehensive or static. New threats to local biodiversity are emerging constantly. Potential risks in the future may be associated with the latest recreation activity to arrive in the island, a change in maintenance practices or may be the result of the cumulative effect of a land use which is currently benign, such as the demand for allotments.

5.2 Proposals for the Preservation, Enhancement and Management of SSSs

Generally the special interest of an SSS, and biodiversity throughout the through the island, could be preserved and enhanced by undertaking the following actions that fall within the scope of the Land Planning and Development (Guernsey) Law, 2005 and its Ordinances:

1. Financial incentives for landowner and/or managers of land to preserve and enhance the special interest of the SSS (S40 of the Land Planning and Development (Guernsey) Law, 2005).
2. Take enforcement action where a breach of planning control occurs
3. Control and minimise development. For example: the extension of domestic cartilage as well as the management of agricultural fields adjacent to domestic properties in order to prevent “suburban creep”
4. Requirements for culverting or channelling of streams, douits or roadside drains to requirement planning permission, irrespective of the party undertaking the work.
5. Controls for mechanical beach cleaning i.e. seaweed removal, other that under specific conditions
6. Controls on sports pitches and other lighting to minimise the disruption to birds and mammals.

Other matters that could be considered, but are beyond the scope of the Land Planning and Development (Guernsey) Law, 2005 and its Ordinances, include:

- General protection of hedge banks and stone boundaries to all types of properties.
- Exclusion of dog walking in specific areas that are important for birds, such as the south end of Vazon bay (Richmond end)
- Protection for all bat roosts
- Protection and provision for eels in streams/douits.
- Monitoring of activities such as ormering, bait digging and shore-gathering to ensure these are sustainable and do not compromise the habitat;
- Prevention if disturbance to bird breeding sites and roosting sites

It is recommended that each designated SSS site will be subject to an individual management plan which would provide background information on the area including data on habitats and

associated species, existing management details, examination of present or potential threats and advice on how the site could be maintained or enhanced in terms of its nature conservation importance. Management plans should also identify the following.

- Specific works that will impact on the special interest of the SSS and thus would be considered to be development in S4 of the Land Planning and Development (General Provisions) Ordinance, 2007. For example: ploughing, use of fertilisers, herbicides or pesticides.
- Any individual trees, groups of trees, vegetation, watercourse, stream, reservoir, pond or borehole that contributes to the special interest of the SSS.
- Specific procedures for managing the land, such as:
 - Re-introduction of species that have been lost where feasible
 - Encouragement for restoration of habitats lost through neglect, such as ponds
 - Reintroduction of traditional scrub management, possibly including controlled burning
 - Introduction of coppicing to enable new wooded areas to become more diverse
 - Improvements to pond-side management to restore amphibian & insect populations
 - Facilitate open dune development in suitable areas
 - Encouragement to restore open streams & douits
- Specific procedures for enhancement the land, such as:
 - Cutting of grasslands at appropriate times of year & removal of cut material
 - Grazing grasslands at appropriate times of year, especially where these were traditionally pasture land
 - Grazing heathland or cutting where grazing is impossible
 - Bracken control - bruising/cutting
 - Cyclical scrub cutting or controlled burning
 - Coppicing
 - Use of temporary roping off/ fencing of areas where disturbance is a problem
 - Management of pathways to minimise disturbance
- Procedures for monitoring the decline or improvement of its special interest.

Management plans provide a framework within which work is planned, carried out and controlled. They ensure the SSS and the adjacent land (where appropriate) are management in a way that sustains its long-term special interest. To be effective they should be written in consultation with all person/parties that have an interest in the land (for example, the owner, users, maintenance company). Furthermore, each management plan also needs to be consistent with the emerging Guernsey Biodiversity Strategy.

Realistically, writing a management plan for each designated SSS are likely to take some time. Therefore the priority for each management plan should be assessed. The priority should take account of the threats to the special interest as well as opportunities for enhancement, which might arise, for example, due to new development.

6 Conclusion

Following assessment of the island's most important SNCIs, the merits of the short-list of candidate sites have been proven. The remaining SNCIs were also assessed and only one area – Hommet Headland – was found to meet the criteria for SSS designation.

This appraisal has redefined the short-listed areas and has divided several of them up into new sites and complexes (compound sites), according to the JNCC guidelines. This approach facilitates site designation and would help to ensure that SSSs are viable nature conservation areas for the long term.

The sites recommended for SSS designation represent the broad range of habitats present in the island and ensure that the most important remaining examples of rare or species-rich habitats are protected adequately. The sites cover most of Guernsey's iconic plants and wildlife, such as seabirds, waders, bluebell woods, orchid meadows etc., which would be safeguarded following designation. Where appropriate, suitable buffer land and corridors have also been recommended, either as an extension of the SSS or as other designated land, in order to ensure that the integrity of the habitats and populations of associated wildlife remains viable.

This report has found that a total of 11 sites (or compound sites) qualify as SSSs. It is recommended that SSS designation be assigned to all of them.

Throughout this appraisal, there has been an awareness that landscapes, along with their natural and man-made habitats and features that make Guernsey distinctive, help create cultural identity and draw people, local and visitors alike. They give a sense of peace, of permanence, and of place. It is vital to preserve these areas, not just because they have important features, but also because they safeguard unique identity, but to ensure they will exist for future generations. When people have a sense of place, then they will have a greater concern to save animals and plants, menhirs and dolmens, forts and magazines, raised beaches and shingle banks.

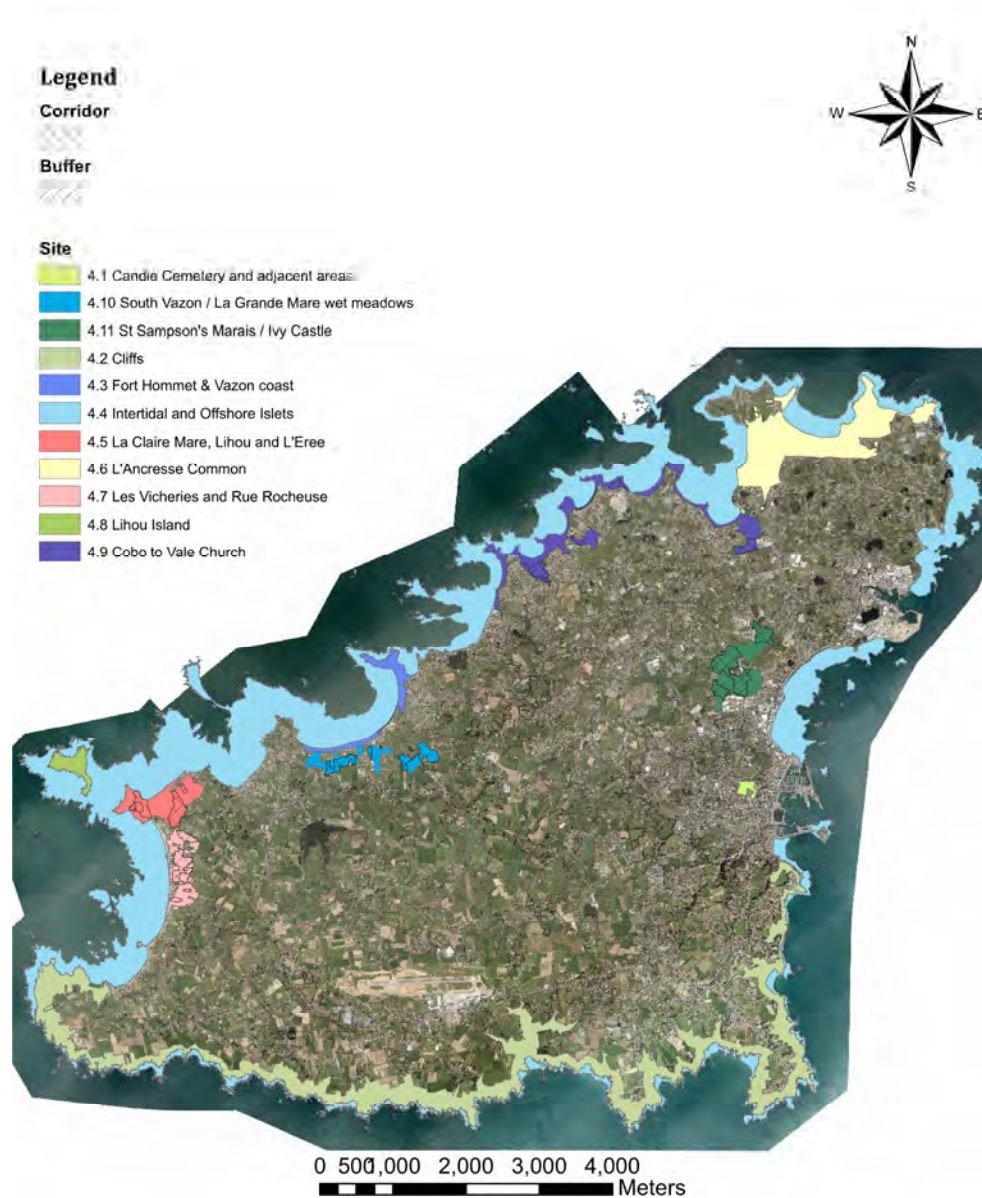
Appendix 1- SSSs: Scoring

Table 2. Scores for the 11 Recommended SSSs

	Typicalness	Fragility	Size	Diversity	Naturalness	Rarity	Ecological coherence	Potential value	Recorded history (of management)	TOTAL
Candie Cemetery & adjacent areas	3	3	1	3	2	3	2	2	1	20
Cliffs	2	3	3	3	2	3	3	3	2	24
Hommet Headland & Vazon coast	2	3	2	3	2	3	2	3	1	21
Intertidal area around Guernsey	3	2	3	3	3	2	3	2	2	23
L'Ancrese Common	2	3	3	3	2	3	2	3	3	24
La Claire Mare, La Rousse Mare etc.	2	2	2	3	2	3	2	2	1	19
Les Vicheries and La Rue Rocheuse etc.	3	2	2	3	3	3	2	2	2	22
Lihou Island	2	3	2	2	2	3	2	3	2	21
Port Soif to Pont du Valle etc.	2	3	2	3	2	3	2	3	1	21
St Sampson's Marais & Ivy Castle	2	2	2	3	2	3	3	3	1	21
South Vazon & La Grande Mare wet meadows	2	3	1	3	3	3	2	3	1	21

Appendix 2 - SSSs: Notes

Map of Proposed SSSs



1 Candie Cemetery & adjacent areas (Cimetière des Frères, Candie Gardens & Priaulx Library gardens)



Representative of habitats

Unimproved grassland
Semi-improved grassland

Standing water

There are also areas of planted broadleaved woodland, amenity grassland and parkland.

All these habitats are long established and have a good range of fungi to be seen in the autumn, such as this Scarlet Waxcap:



Biological/nature conservation value

Insects

No rare or threatened species, but a good variety of insects, including all 5 species of bumble bee found in Guernsey, 9 species of solitary bee, and 8 species of ant.

Plants

Over 150 species have been recorded here.
Rare & threatened species include:

Long-headed Poppy *Papaver dubium*
Pignut *Conopodium majus*
Meadow Vetchling *Lathyrus pratensis*

Autumn Hawkbit *Scorzoneroidea autumnalis*
Mouse-ear-hawkweed *Pilosella officinarum*
Autumn Ladies-tresses *Spiranthes autumnalis*

Rue-leaved Saxifrage *Saxifraga tridactylites*
Yellow Oat-grass *Trisetum flavescens*

Heath-grass *Danthonia decumbens*

Over 50 species of lichen are recorded, as well as over 80 fungi, at least one of which is found nowhere else in the island (*Russula virescens*). This is one of the foremost sites in the island for fungi. Several species of Waxcap fungi (*Hygrocybe* spp.) are present; these are indicators of undisturbed grassland. The full list of fungi recorded is:

Agaricus placomyces
Agaricus silvicola Wood Mushroom
Amanita gemmata Jewelled Amanita
Amanita muscaria Fly Agaric
Amanita pantherina Panther Cap
Amanita phalloides Death Cap
Armillaria mellea Honey Fungus
Boletus aereus?
Boletus chrysenteron Red cracked Boletus
Boletus edulis Cep
Boletus luridus Lurid Bolete
Calocera viscosa Yellow Stagshorn
Cantharellus cibarius Chanterelle
Chondrostereum purpureum Silverleaf Fungus
Clavaria fumosa Smoky Spindles
Clavulinopsis corniculata Meadow Coral
Clitocybe infundibuliformis
Clitopilus prunulus The Miller
Coprinellus micaceus Glistening Inkcap
Cortinarius aff. anomalus Variable Webcap
Cortinarius ochroleucus
Entoloma clypeatum Shield Pinkgill
Gyroporus castaneus Chestnut Bolete
Hebeloma crustuliniforme Poison Pie
Helvella crispa White Saddle
Hydnellum conrescens Zoned Tooth
Hydnellum spongiosipes
Hygrocybe chlorophana Golden Waxcap
Hygrocybe coccinea Scarlet Waxcap
Hygrocybe conica Blackening Waxcap
Hygrocybe irrigata Slimy Waxcap
Hygrocybe pratensis Meadow Waxcap
Hygrocybe psittacina Parrot Waxcap
Hygrocybe spadicea Date Waxcap
Hygrocybe virginea Snowy Waxcap
Hypholoma fasciculare Sulphur Tuft
Inocybe asterospora Star Fibrecap
Inocybe auricoma
Laccaria laccata Deceiver
Lacrymaria lacrymabunda Weeping Widow
Lactarius aurantiacus

Lactarius camphoratus
Lactarius hepaticus Liver Milkcap
Lactarius vellereus Fleecy Milkcap
Lepista nuda Wood Blewit
Lycoperdon excipuliforme Pestle Puffball
Lycoperdon perlatum Common Puffball
Lycoperdon utriforme Mosaic Puffball
Marasmius oreades Fairy Ring Champignon
Melanoleuca brevipes
Meripilus giganteus Giant Polypore
Mucilago crustacea
Mycena epipterygia Yellowleg Bonnet
Oudemansiella mucida Porcelain fungus
Paxillus involutus Brown Rollrim
Peziza badia Bay Cup
Pholiota squarrosa Shaggy Scalycap
Pseudoinonotus dryadeus Oak Bracket
Rickenella fibula Orange Moss cap
Russula atropurpurea Purple Brittlegill
Russula chloroides
Russula decipiens
Russula delica Milk White Brittlegill
Russula fragilis Fragile Brittlegill
Russula galochroa
Russula grisea
Russula nigricans Blackening Brittlegill
Russula nobilis
Russula odorata
Russula psuedoimpolita
Russula solaris
Russula vesca The Flirt
Russula virescens Greencracked Brittlegill
Scleroderma bovista Potato Earthball
Scleroderma verrucosum Scaly Earthball
Stereum hirsutum Hairy Curtain Crust
Suillus collinitus
Taphrina betulina Birch Besom
Taphrina deformans
Tapinella atrotomentosa
Trametes versicolor Turkeytail
Tricholoma terreum Grey Knight

Tricholomopsis rutilans Plums and Custard

Birds

Rare & threatened species or species with significant populations:

Breeding

Common species in steep decline such as:

Song Thrush

Greenfinch

Major migrants

Thrush species e.g.

Redwing

Song Thrush

Fieldfare

Blackbird

Wintering

Thrush species

Amphibians, Reptiles and Mammals

Frogs are recorded, but the areas are under recorded. Bats almost certainly feed over these areas.

Archaeological/historical interest

Information on gravestones, Cimetière des Frères is also within the historic town area

Geological interest

Gravestones – various rocks used, also rocks used to build nearby walls, some of which will be St Peter Port Gabbro



2 Cliffs



Representative of habitats:

Hard cliff
Soft cliff
Coastal grassland
Coastal heathland
Shingle
Standing freshwater
Running water

Swamp (although areas too small to be included in the habitat survey)
Dense scrub
Semi-natural deciduous woodland
Semi-improved grassland
Bare ground
Arable (with a diversity of 'weeds')

Additionally, a habitat type not represented in the habitat survey is found along the cliffs: flushes

There are also areas of planted woodland, both deciduous and coniferous, as well as continuous bracken.

Biological/nature conservation value

Insects

Rare & threatened species present include:

Blue-winged grasshopper *Oedipoda coerluscens*
Carpocoris purpureipennis (a non-British shield bug)
Forrester Moth *Adscita statices*
Five-spot Burnet *Zygaena trifolii*

Sciapus platypterus (a non-British Dolichopodid fly)
Sciapus contristans (a Dolichopodid fly)
Syntormon bicolorillum (a Dolichopodid fly)

Green Hairstreak *Callophrys rubi*
Purple Hairstreak *Neozephyrus quercus*
Grayling *Hipparchia semele*
Glanville Fritillary *Melitaea cinxia*
Southern Grass Emerald *Chlorissa cloraria*

Pherbellia cinerella (a fly)
Cetonia morio (a non-British beetle)
Bembidion nigropiceum (a Carabid beetle)

5 species of non-British ant:

Formica pratensis

Plagiolepis vindobonensis

Solenopsis monticola

Messor capitata

Aphaenogaster subterranea

Plants

Rare & threatened species include:

Royal Fern *Osmunda regalis*

Least Adder's-tongue *Ophioglossum lusitanicum*

Golden-scaled Male-fern *Dryopteris affinis*

borreri

Southern Polypody *Polypodium cambricum*

Hard Fern *Blechnum spicant*

Bush Vetch *Vicia sepium*

Shore Dock *Rumex rupestris*

Water-pepper *Persicaria hydropiper*

Black Bryony *Tamus communis*

Lousewort *Pedicularis sylvatica*

Bog Pimpernel *Anagallis tenella*

Bladder Campion *Silene vulgaris*

Dwarf Pansy *Viola kitaibeliana*

Sea-kale *Crambe maritima*

Perforate St John's-wort *Hypericum perforatum*

Toadflax-leaved St John's-wort *Hypericum*

linariifolium

Wild Celery *Apium graveolens*

Pignut *Conopodium majus*

Cornish Moneywort *Sibthorpea europea*

Marsh Woundwort *Stachys palustris*

Bugle *Ajuga reptans*

Umbellate Hawkweed *Hieracium umbellatum*

Autumn Hawkbit *Scorzoneroides autumnalis*

Prostrate Asparagus *Asparagus prostratus*

Early-purple Orchid *Orchis mascula*

Glaucous Sedge *Carex flacca*

Long-bracted Sedge *Carex extensa*

Dotted Sedge *Carex punctata*

Distant Sedge *Carex distans*

Greater Tussock-sedge *Carex paniculata*

Dwarf Rush *Juncus capitatus*

Sea Rush *Juncus maritimus*

Sea Club-rush *Bulboschoenus maritimus*

Heath-grass *Danthonia decumbens*

Golden Hair Lichen *Teloschistes flavicans*

Golden Eye Lichen *Teloschistes chrysophthalmus*

Extinct species:

Marsh St John's-wort *Hypericum elodes*

Brooklime *Veronica beccabunga* (although present in the Silbe Nature Reserve, so not currently extinct in the island)

Lesser Skullcap *Scutellaria minor*

Green-winged Orchid *Anacamptis morio*

Birds

Rare & threatened species or species with significant populations:

Breeding

Fulmar

Shag (declining locally)

Kestrel

Oystercatcher

Lesser Black-backed Gull (CI has >1% of the sub-species' world population)

Herring Gull (declining locally)

Long-eared Owl (restricted locally)

Meadow Pipit (locally threatened)

Dartford Warbler (locally threatened)

Whitethroat

Blackcap

Chiffchaff

Stonechat (locally threatened)

Raven (restricted locally)

Jackdaw (restricted locally)

Linnet (in decline)

Extinct breeders

Yellowhammer

Skylark

Major migrants

Skylark
Meadow Pipit
Warbler species

Wheatear
Thrush species

Pleinmont, is important as a stopping off area for migrating birds. Over 150 species of birds have been recorded from the area (Pleinmont) and at times very large numbers of birds pass through (Veron, 1997).

Amphibians, Reptiles and Mammals

Bats (Le Creux Mahie, probably also fortifications & other caves)(roosts/suspected hibernation roosts)
Slow Worm (Pleinmont, suspected elsewhere)
Green Lizard (Fort George/Clarence Battery; have been recorded as far south as Fermain Bay)

Archaeological/historical interest

Major sites include:

Fort Pezerries, Pleinmont battery, Pleinmont watch-house, Mont Herault watch-house, Les Tielles watch-house & battery, Corbière 'castle', Point de La Moye prehistoric earthwork promontory fort, Les Sommeilleuses watch-house & magazine, St Clair's battery & the magazine at Petit Bôt, pre-martello tower at Petit Bôt, Saints bay Battery, pre-martello tower at Saint's, Jerbourg iron age ramparts, pre-martello tower at Fermain, Clarence battery, the remains of Fort George and lots of German fortifications.

Old-field boundaries & stock/sheep walls down the cliffs, remains of 'daffodil' fields, strip fields at Pleinmont.

Geological interest

Examples include:

Pleinmont Metasediment, Jerbourg Metasediment, Icart Gneiss, Pea-stacks Gneiss, 8m raised beach, 18m raised beach, 8m wave-cut platform, periglacial head deposits forming soft cliffs and most notably loessic head containing calcareous concretions and shells, many dolerite & other dikes.





3 Hommet Headland & Vazon coast



Representative of habitats

Dune grassland
Coastal grassland
Open dune
Saltmarsh
Dune slack

Shingle
Soft cliff
Hard cliff
Dense scrub

Coastal heathland (approx. 0.45ha) was eradicated on this site due to a fire in 1990, but could be re-established with appropriate management.

There is also continuous bracken and a few planted conifers.

Biological/nature conservation value

Insects

Rare & threatened species present include:

Tetrix undulata (a ground hopper)
Five-spot Burnet *Zygaena trifolii*
Nemotelus uliginosus (a soldier fly)
Poecilobothrus principalis (a Dolichopodid fly characteristic of brackish habitats)
Sciapus longulus (a Dolichopodid fly)
Syntormon filiger (a Dolichopodid fly)

Sphaerophoria rueppellii (a hoverfly)
Pherbellia cinerella (a fly)
Melieria cana (a fly with spotted wings)
Bembidion elongatum (a non-British beetle)
Curtonotus convexiuscula (a Carabid beetle)
Synuchus vivalis (a ground beetle)

Plants

Rare & threatened species present include:

Sand Quillwort *Isotes histrix*

Least Adder's-tongue *Ophioglossum lusitanicum*

Small Adder's-tongue *Ophioglossum azoricum*
Sand Catchfly *Silene conica*
Sea Rocket *Cakile maritima*
Sea-kale *Crambe maritima*
Ray's Knotgrass *Polygonum oxyspermum* (only current site in island)
Sea Milkwort *Glaux maritima*
Fringed Rupturewort *Herniaria ciliolata*
Narrow-leaved Bird's-foot Trefoil *Lotus glaber*
Strawberry Clover *Trifolium fragiferum*
Dwarf Pansy *Viola kitaibeliana*
Fairy Flax *Linum catharticum*
Yellow Centaury *Cicendia filiformis*
Lesser Centaury *Centaureum pulchellum*

Hound's-tongue *Cynoglossum officinale*
Sea Bindweed *Calystegia soldanella*
Autumn Hawkbit *Scorzoneroide autumnalis*
Early-purple Orchid *Orchis mascula*
Pyramidal Orchid *Anacamptis pyramidalis*
Autumn Ladies-tresses *Spiranthes autumnalis*
Bee Orchid *Ophrys apifera*
Sea Club-rush *Bulboschoenus maritimus*
Distant Sedge *Carex distans*
Glaucous Sedge *Carex flacca*
Common Sedge *Carex nigra*
Long-bracted Sedge *Carex extensa*
Hard-grass *Parapholis strigosa*
Heath-grass *Danthonia decumbens*

Extinct species:

Sea Spurge *Euphorbia paralias*

Birds:

Rare & threatened species or species with significant populations:

Breeding

Rock Pipit (restricted locally)
Meadow Pipit (locally threatened)
Stonechat (locally threatened)

Starling (in decline)
Linnet (in decline)

Extinct Breeders

Skylark

Major migrants

Warblers
Pipits

Waders

Feeding

Wintering finches

Meadow Pipit

Roosting

Wader species

Amphibians, Reptiles and Mammals

Under recorded. Bats almost certainly feed over this area

Archaeological/historical interest

Prehistoric find spots, mediaeval settlement, post-mediaeval and German fortifications

Geological interest

Cobo Adamellite (granite), Icart Gneiss



4 Intertidal area around Guernsey (including offshore Islets & excluding the commercial harbours & Longue Hougue reclamation area)



Representative of habitats

Intertidal shingle

Intertidal sand

Intertidal rock & boulders

For more detailed mapping see the Belle Grève Bay biodiversity survey (Guernsey, Channel Islands) (Elise Gaborit-Schlosser), which details the biotypes found at Belle Grève Bay and Petit Bot Bay. This is the only detailed habitat mapping that has been carried out locally.

The diversity of conditions results not only from the varying exposure to wind, sun, currents, and air, but also from the type of substrate, whether rock, sand, stones or a mixture.

Biological/nature conservation value

Insects

Rare & threatened species include:

Scaly Cricket (*Pseudomogoplistes vicentae*) (which is found on shingle ridges at the top of some beaches).

Other invertebrates

No threatened species are known, but these areas are understudied. However, the known diversity is still impressive. Notable species of economic importance include Ormers, Lady Spider and young Edible ('Chancre') Crabs, and young Plaice. The top shell, *Gibbula pennanti*, is at the north end of its range here, as is the Ormer.

Plants

The following seaweeds have been recorded since 1990 and give some idea of the diversity to be found:

Porphyra leucosticta

Porphyra purpurea

Porphyra umbilicalis
Nemalion helminthoides
Asparagopsis armata
Falkenbergia rufolanosa
Bonnemaisonia hamifera
Gelidium latifolium
Gelidium pusillum
Pterocladia capillacea
Palmaria palmata
Rhodothamniella floridula
Ahnfeltia plicata
Hildenbrandia rubra
Corallina officinalis
Jania rubens
Lithophyllum incrustans
Mesophyllum lichenoides
Phymatolithon lenormandii
Phymatolithon purpureum
Pneophyllum fragile
Catenella caespitosa
Calliblepharis ciliata
Calliblepharis jubata
Cystoclonium purpureum
Rhodophyllis divaricata
Dilsea carnosa
Dumontia incrassata
Furcellaria lumbricalis
Chondracanthus acicularis
Chondrus crispus
Gigartina pistillata
Iridaea tuberculosa
Mastocarpus stellatus
Petrocelis cruenta
Phyllophora crispa
Polyides rotundus
Sphaerococcus coronopifolius
Gracilaria gracilis
Plocamium cartilagineum
Gastroclonium ovatum
Lomentaria articulata
Lomentaria clavellosa
Rhodymenia pseudopalmata
Bornetia secundiflora
Ceramium ciliatum
Ceramium deslongchampsii
Ceramium pallidum
Ceramium echionotum
Ceramium gaditanum
Ceramium rubrum agg.
Ceramium shuttleworthianum
Griffithsia corallinoides
Halurus equisetifolius

Halurus flosculosus
Plumaria plumosa
Heterosiphonia plumosa
Apoglossum ruscifolium
Cryptopleura ramosa
Delesseria sanguinea
Hypoglossum hypoglossoides
Membranoptera alata
Nitophyllum punctatum
Phycodrys rubens
Polyneura bonnemaisonii
Boergeseniella fruticulosa
Chondria dasyphylla
Halopithys incurvus
Laurencia obtusa
Osmundea hybrida
Osmundea pinnatifida
Polysiphonia fucoides
Polysiphonia lanosa
Ectocarpus siliculosus
Herponema valianthei
Hincksia hincksiae
Hinksia secunda
Spongonema tomentosum
Elachista flaccida
Elachista fucicola
Elachista scutulata
Pseudolithoderma extensum
Myrionema strangulans
Litosiphon laminariae
Myriotrichia clavaeformis
Asperococcus fistulosus
Colpomenia peregrina
Petalonia fascia
Scytosiphon lomentaria
Ralfsia verrucosa
Stragularia clavata
Chordaria flagelliformis
Mesogloia vermiculata
Sauvageaugloia chordariaeformis
Leathesia difformis
Cladostephus spongiosus
Halopteris filicina
Stypocaulon scoparium
Dictyopteris membranacea
Dictyota dichotoma
Dictyota spiralis
Padina pavonica
Taonia atomaria
Carpomitra costata
Arthrocladia villosa
Desmarestia aculeata

Desmarestia ligulata

Undaria pinnatifida

Chorda filum

Laminaria digitata

Laminaria hyperborea

Laminaria ochroleuca

Laminaria saccharina

Saccorhiza polyschides

Stilophora tenella

Bifurcaria bifurcata

Cystoseira baccata

Cystoseira foeniculaceus

Cystoseira nodicaulis

Cystoseira tamariscifolia

Halidrys siliquosa

Ascophyllum nodosum

Fucus serratus

Fucus spiralis

Fucus vesiculosus

Pelvetia canaliculata

Himanthalia elongata

Spongomorpha aeruginosa

Spongomorpha arcta

Blidingia marginata

Blidingia minima

Enteromorpha intestinalis

Enteromorpha prolifera

Enteromorpha linza

Ulva lactuca

Chaetomorpha linum

Chaetomorpha mediterranea

Cladophora hutchinsiae

Cladophora pellucida

Cladophora rupestris

Cladophora sericea

Bryopsis plumosa

Codium adhaerens

Codium tomentosum

Rivularia atra

Rivularia bullata

Birds

Rare & threatened species or species with significant populations:

Breeding

Shelduck (offshore islets)

Oystercatcher (offshore islets)

Common Terns (offshore islets)

Rock Pipits (restricted locally)

Major migrants:

Waders

Wagtails

Pipits

Wheatears

Wintering

Divers

Grebes

Ducks

Shag

Waders

Feeding:

Shag

Little Egret

Grey Heron

Waders

The principle feeding areas are centred on Richmond, Rocquaine, Belle Grève and Grande Havre.

Roosting/refuges/resting:

e.g. Hommet Paradis, Mielllette and Portinfer.

Waders

Birds move to these areas during high tide. The offshore islets of Hommet Paradis, Omptolle, La Capelle and the rocks off Fort le Crocq also provide safe and undisturbed roost sites (Veron, 1997). The intertidal zone and inshore waters, especially in the sheltered bays of Vazon, Pembroke, Grande Havre, Belle Grève and Perelle to Rocquaine, provide refuge and feeding for several marine species, especially divers, grebes and sea-duck (Veron, 1997).

Amphibians, Reptiles and Mammals

Grey seals mostly use offshore reefs, such as at Les Hanois.

Archaeological/historical interest

Peat beds in Vazon and Cobo Bay are of importance for the potential of finds of Neolithic or Iron Age. There are other bays where the sand may well conceal buried ancient landscapes.

Geological interest

A range of rock types exposed, also periglacial, interglacial and post glacial deposits – clay beds in places, peat beds at Catoroc, Vazon, Cobo, post-glacial forest remains in Vazon, raised rock cut platforms (where not included in the cliffs etc.) The St Peter Port Gabbro exposures at Spur Bay are important: showing layering of “Birdseye” Gabbro and pale, finer-grained Feldspar-rich Gabbro.



5 La Claire Mare, La Rousse Mare, the rest of the Colin Best Nature Reserve, Lihou Headland and L'Erée Shingle bank



Representative of habitats

Saltmarsh	Brackish pool
Marshy Grassland	Shingle
Semi-improved grassland	Swamp
Coastal grassland	Dense scrub
Standing water	

There are also areas of improved grassland with interesting plants: in practise well on the way to becoming semi-improved.

Biological/nature conservation value

Insects

Rare & threatened species include:

Grayling <i>Hipparchia semele</i>	<i>Dolichopus nubilus</i> (a brackish water fly)
<i>Tetrix undulata</i> (a ground hopper)	<i>Campiglossa plantaginis</i> (a fly that galls Sea Aster)
Five-spot Burnet <i>Zygaena trifolii</i>	<i>Tropidia scita</i> (a fen-land hoverfly)
Grayling <i>Hipparchia semele</i>	<i>Bembidion normannum</i> (a salt-marsh beetle)
<i>Cymus clavicolus</i> (a bug)	<i>Bembidion mannerheimi</i> (a Carabid beetle)
<i>Saldula pilosella</i> (a wetland bug)	<i>Curtonotus convexiuscula</i> (a Carabid beetle)
<i>Stictopleurus punctatonevrosus</i> (a bug)	<i>Pterostichus diligens</i> (a ground beetle)
<i>Nemotelus notatus</i> (a soldier fly)	<i>Anisosticus 19-punctata</i> (Water Ladybird)
<i>Hercostomus asimilis</i> (a Dolichopodid fly)	<i>Synuchus vivalis</i> (a ground beetle)
<i>Poecilobothrus principalis</i> (a Dolichopodid fly characteristic of brackish habitats)	<i>Copris lunaris</i> (a Scarab beetle extinct in the U.K.- needs permanent sandy grassland)
<i>Dolichopus diadema</i> (a salt marsh fly)	

Plants

Rare & threatened species include:

Sand Quillwort *Isotes histrix*
Common Adder's-tongue *Ophioglossum vulgatum*
Marsh Pennywort *Hydrocotyle vulgaris*
Prostrate Glasswort *Salicornia ramosissima*
Sea Spurrey *Spergularia marina*
Greek Sand Spurrey *Spergularia bocconeii*
Common Seablite *Suaeda maritima*
Yellow Vetch *Vicia lutea*
Strawberry Clover *Trifolium fragiferum*
Tall Ramping Fumitory *Fumaria bastardii*
Fringed Rupturewort *Herniaria ciliolata*

Dwarf Pansy *Viola kitaibeliana*
Yellow-horned Poppy *Glaucium flavum*
Bog Stitchwort *Stellaria alsine*
Common Marsh-bedstraw *Galium palustre*
Sea-kale *Crambe maritima*
Sea Aster *Aster tripolium*
Compact Rush *Juncus conglomeratus*
Sea Club-rush *Bulboschoenus maritimus*
Glaucous Sedge *Carex flacca*
Common Sedge *Carex nigra*
Hard-grass *Parapholis strigosa*

Extinct Species

Wild Celery *Apium graveolens*

Birds

Rare & threatened species or species with significant populations:

Breeding

Shelduck
Marsh Harrier
Kestrel

Barn Owl
Reed Warbler

Major migrants

Ducks
Waders
Wagtails
Pipits
Reed Warbler

Sedge Warbler
Aquatic Warbler
Other warblers
Wheatear

Roosting

Grey Heron
Little Egret
Marsh Harrier
Gulls

Curlew
Other waders
Swallows
Sand Martins

Wintering

Ducks
Marsh Harrier
Curlew

Other waders
Chiffchaff
Reed Bunting

Amphibians, Reptiles and Mammals

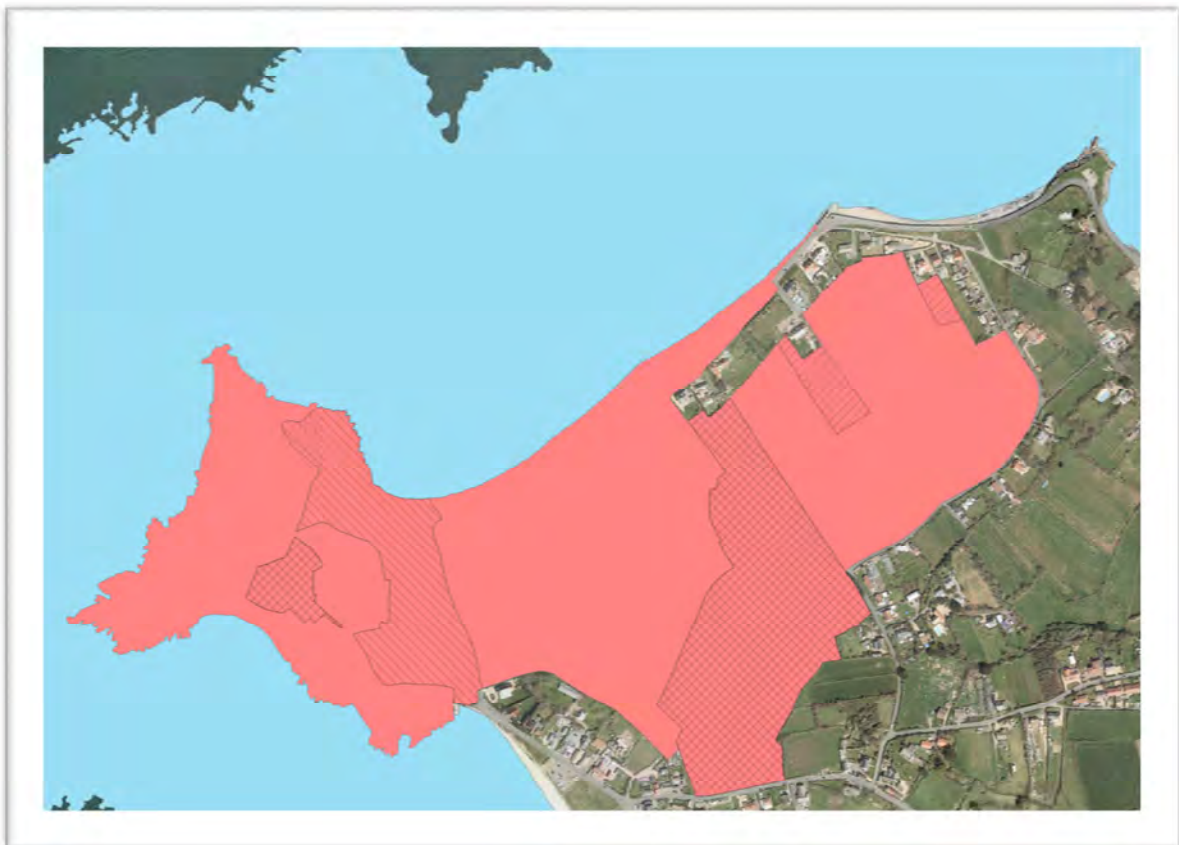
The area is under recorded. Frog. Bats almost certainly feed over this area.

Archaeological/historical interest

Le Creux ès Faies dolmen (passage grave), prehistoric settlement, post-mediaeval and German fortifications, prehistoric & mediaeval find spots.

Geological interest

L'Erée Adamellite (granite) exposures, alluvial deposits with possible plant remains. The Catiaroc peat exposures are not far away so there is a possibility of peat, although this is not shown on the Geological map.



6 L'Ancrese Common



Representative of important habitats

Shingle	Running water
Open dune	Standing freshwater
Dune grassland	Dune heath
Coastal grassland	Coastal heathland
Marshy grassland	Soft cliff
Dune slack	Rock
Bare ground	Dense scrub

Bracken is present and there is improved grassland on the fairways and greens of the golf course.

Biological/nature conservation value

Some very important areas within the Common for the plants listed below - marshy areas, damp short-grass areas, areas of high quality species-rich dune grassland, open dune, bare peaty ground that is wet in winter, heath, and ponds (though the last are suffering from the management practice of mowing right up to them).

Crustacean

Rare & threatened species include:

Cypris bispinosa (an Ostracod)

Insect

Rare & threatened species include:

Five-spot Burnet *Zygaena trifolii*

Grayling *Hipparchia semele*

Villa modesta (a bee fly)

Helina protuberans (a sand-dune fly)

Hornet Robber-fly *Asilus crabroniformis*

Pherbellia cinerella (a fly)

Lasius psammophilus (a sand-dune ant)

Ophonus puncticeps (a Carabid beetle)
Copris lunaris (a Scarab beetle extinct in the
U.K.- needs permanent sandy grassland)

Harpalus serripes (a ground beetle)



Five-spot Burnet moth

Plants

Rare & threatened species present include:

Chara sp. (a Stonewort)
Land Quillwort *Isoetes hystrix*
Common Adder's-tongue *Ophioglossum vulgatum*
Pond Water-crowfoot *Ranunculus peltatus*
Thread-leaved Water-crowfoot *Ranunculus trichophyllus*
Great Water Dock *Rumex hydrolapthum*
Brackish Water-crowfoot *Ranunculus baudotii*
Yellow Horned-poppy *Glaucium flavum*
Western Gorse *Ulex gallii* (which may now be extinct)
Orange Bird's-foot *Ornithopus pinnatus*
Strawberry Clover *Trifolium fragiferum*
Sand Catchfly *Silene conica*
Sea Stock *Matthiola sinuata*
Sea Rocket *Cakile maritima*
Sea-kale *Crambe maritima*
Marsh Pennywort *Hydrocotyle vulgaris*
Fringed Rupturewort *Herniaria ciliolata*
Sea Holly *Eryngium maritimum*
Guernsey Centaury *Exaculum pusillum*
Yellow Centaury *Cicendia filiformis*
Great Water-dock *Rumex hydrolapathum*
Salad Burnet *Sanguisorba minor*

Lousewort *Pedicularis sylvatica*
Bog Pimpernel *Anagallis tenella*
Saltwort *Salsola kali*
Common Marsh-bedstraw *Galium palustre*
Rue-leaved Saxifrage *Saxifraga tridactylites*
Sea Bindweed *Calystegia soldanella*
Umbellate Hawkweed *Hieracium umbellatum*
Autumn Hawkbit *Scorzoneroides autumnalis*
Water-plantain *Alisma plantago-aquatica*
Prostrate Asparagus *Asparagus prostratus*
Pyramidal Orchid *Anacamptis pyramidalis*
Southern Marsh-orchid *Dactylorhiza praetermissa*
Autumn Ladies-tresses *Spiranthes autumnalis*
Lizard Orchid *Himantoglossum hircinum*
Dwarf Rush *Juncus capitatus*
Small-fruited Yellow-sedge *Carex oederi*
Carnation Sedge *Carex panicea*
Glaucous Sedge *Carex flacca*
Common Sedge *Carex nigra*
Dwarf Millet *Milium scabrum*
Purple Moor-grass *Molinia caerulea*
Hard-grass *Parapholis strigosa*
Heath-grass *Danthonia decumbens*

Extinct species:

Sea Spurge *Euphorbia paralias*
Marsh St John's-wort *Hypericum elodes*
Guernsey Centaury *Exaculum pusillum*

Lesser Centaury *Centaureum pulchellum*
Pennyroyal *Menta pulegium* ?
Common Cottongrass *Eriophorum angustifolium*



Water Crowfoots in flower at L'Ancrese

Birds

Rare & threatened species or species with significant populations:

Breeding

Kestrel
Barn Owl
Long-eared Owl (restricted locally)
Meadow Pipit

Dartford Warbler (locally threatened)
Stonechat (restricted locally)
Finch species

Extinct breeders

Skylark

Major migrants

Meadow Pipit
Yellow Wagtail
White Wagtail

Redstart
Wheatear
Whinchat

It is the first landfall after an over sea flight of at least 70 miles for birds from the south coast of England (Veron, 1997)

Roosting

Gull species

Feeding

Starling (declining locally)

Amphibians, Reptiles and Mammals

Slow Worm
Smooth Newt

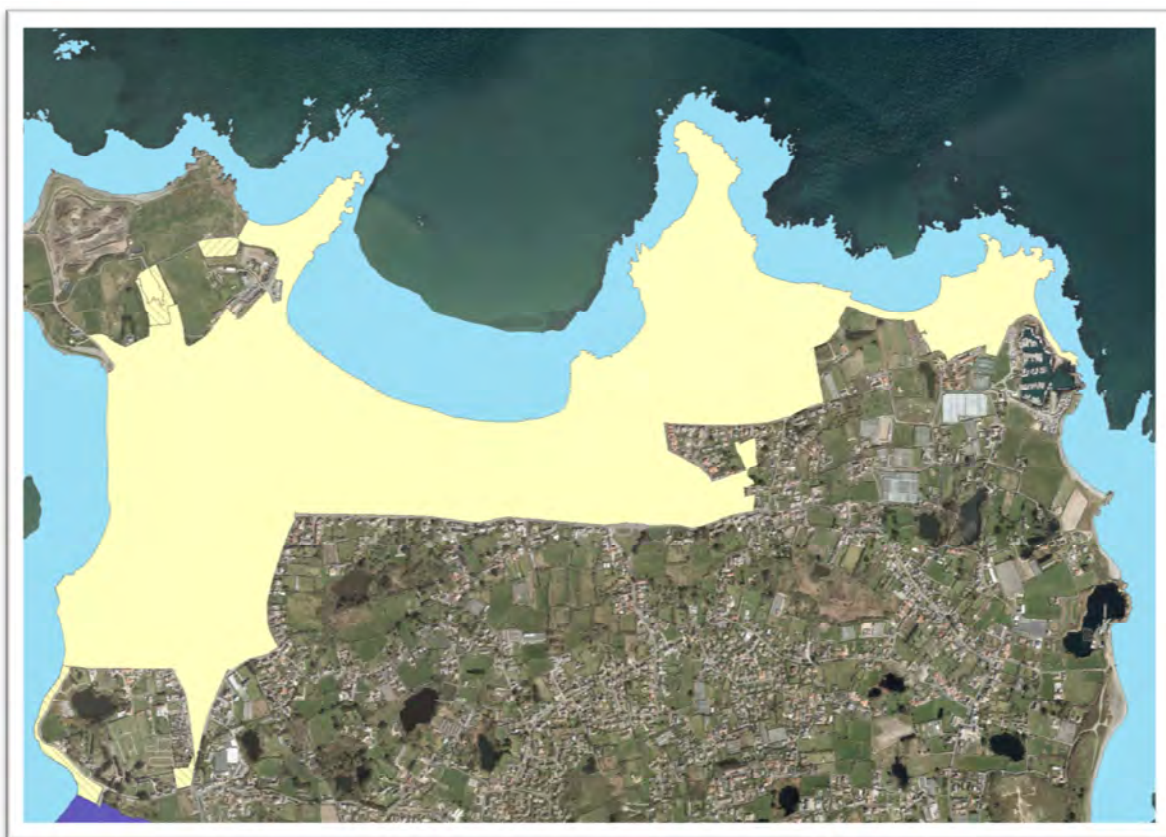
Frog
Bats almost certainly feed over this area

Archaeological/historical interest

Les Fouaillages grave & associated settlement evidence, La Varde dolmen (passage grave), La Platte Mare cist-in-circle, La Mare ès Mauves cist-in-circle, "Martello 7" cist-in-circle. Several pre-martello towers around L'Ancrese Bay and nearby Pembroke, Fort Doyle, Fort Le Marchant and Chouet, the star fort near Pembroke, Fort Pembroke, Beaucette Battery, various German fortifications.

Geological interest

Raised beach deposits; low cliff formations.



7 Les Vicheries and La Rue Rocheuse (extending to La Saline and Rocquaine sand dunes)



Representative of habitats

Unimproved marshy grassland
Semi-improved marshy grassland
Open dune
Dune grassland
Coastal grassland

Unimproved grassland
Swamp
Dense Scrub
Running water
Saltmarsh

There are good hedgebanks in this area. The four orchid species and hybrids are very numerous in the more diverse fields.

Biological/nature conservation value

Insects

Rare & threatened species include:

Short-winged Conehead *Conocephalus dorsalis*
Tetrix undulata (a ground hopper)
Five-spot Burnet *Zygaena trifolii*
Hercostomus gracilis a (wetland Dolichopodid fly, only site in island)

Poecilobothrus principalis (a Dolichopodid fly characteristic of brackish habitats)
Tropidia scita (a fen-land hoverfly)
Bembidion guttula (A Carabid beetle)
Bembidion elongatum (A non-British Carabid beetle)

Plants

Rare & threatened species include:

Common Adder's-tongue *Ophioglossum vulgatum*
Prostrate Glasswort *Salicornia ramosissima*

Grass-leaved Orache *Atriplex littoralis*
Common Seablite *Suaeda maritima*
Water-pepper *Persicaria hydropiper*

Sea Holly *Eryngium maritimum*
Sea Stock *Matthiola sinuata*
Sea-kale *Crambe maritima*
Sea Bindweed *Calystegia soldanella*
Marsh Pennywort *Hydrocotyle vulgaris*
Marsh Woundwort *Stachys palustris*
Common Marsh-bedstraw *Galium palustre*
Bog Stitchwort *Stellaria alsine*
Bugle *Ajuga reptans*
Water Forget-me-not *Myosotis secunda*
Marsh Mallow *Althaea officinalis*

Southern Marsh-orchid *Dactylorhiza praetermissa*
Compact Rush *Juncus conglomeratus*
Glaucous Sedge *Carex flacca*
Sea Club-rush *Bulboschoenus maritimus*
Common Sedge *Carex nigra*
Dotted Sedge *Carex punctata*
Distant Sedge *Carex distans*
Common Yellow Sedge *Carex viridula oedocarpa*
Hard-grass *Parapholis strigosa*
Heath-grass *Danthonia decumbens*



Southern Marsh-orchid with Ragged Robin

Birds

Rare & threatened species or species with significant populations:

Breeding

Reed Warbler (restricted locally)

Major migrants

Meadow Pipit
Swallow

Sedge Warbler

Feeding

Marsh Harrier
Kestrel

Barn Owl

Wintering

Snipe

Jack Snipe

Amphibians, Reptiles and Mammals

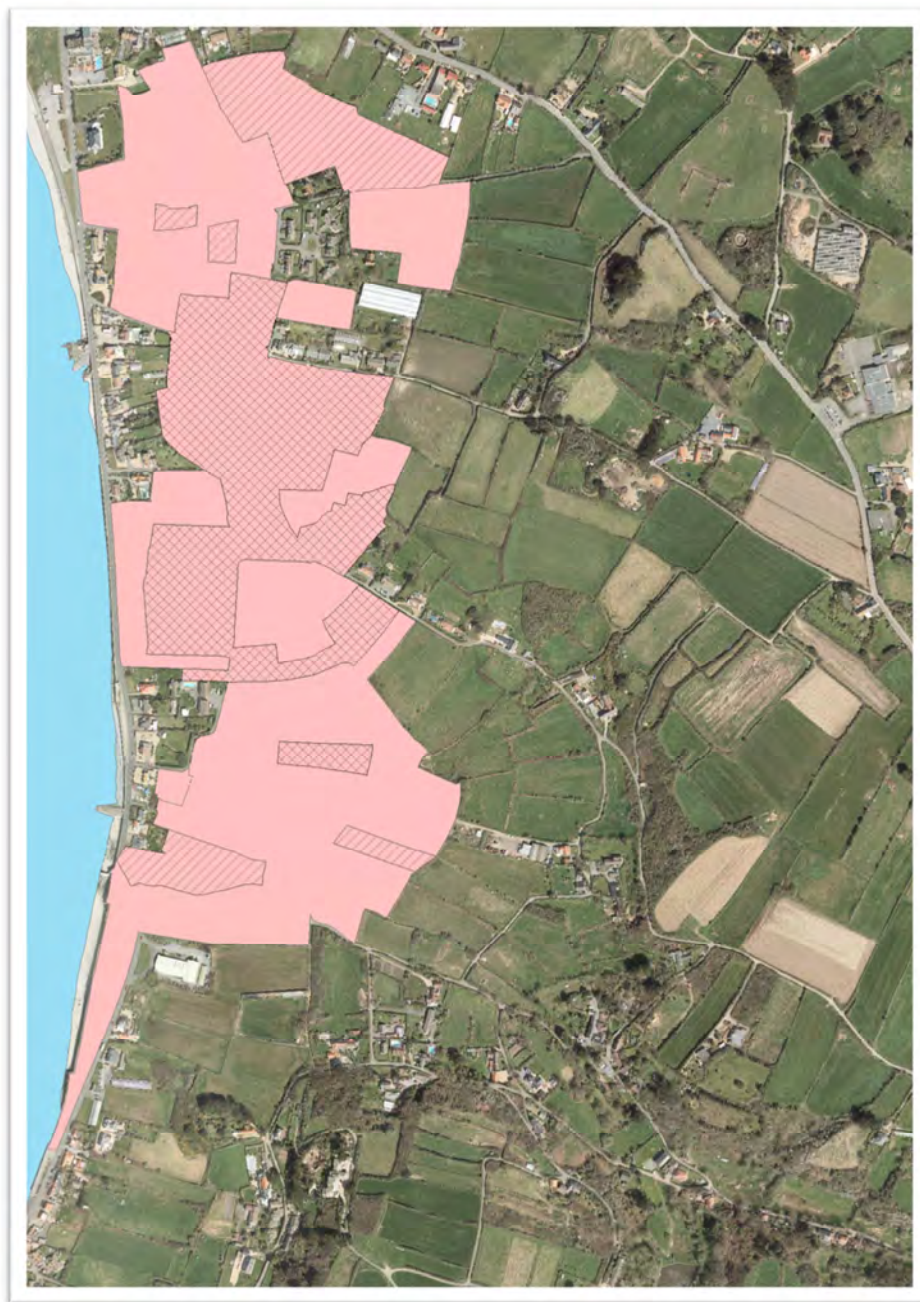
Under recorded. Slow worms. Bats almost certainly feed over this area

Archaeological/historical interest

Old field boundaries as in the Duke of Richmond map

Geological interest

L'Erée Adamellite (granite), alluvial deposits with possible plant remains.



8 Lihou Island



Representative of habitats

Shingle
Brackish pool
Saltmarsh
Coastal grassland

Dense scrub
Bare ground
Hard cliff
Soft cliff

There is also continuous bracken.

Biological/nature conservation value

Insects

Rare & threatened species include:

Five-spot Burnet *Zygaena trifolii*
Grayling *Hipparchia semele*
Villa modesta (a bee fly)

Bembidion normannum (a Carabid beetle)
Bembidion properans (a Carabid beetle)

Plants

Rare & threatened species include:

Sand Quillwort *Isoetes hystrix*
Small Adder's-tongue *Ophioglossum azoricum*
Small Red Goosefoot *Chenopodium chenopodioides*
Saltwort *Salicornia ramosissima*
Yellow-horned Poppy *Glaucium flavum*
Dwarf Pansy *Viola kitaibeliana*
Sea Storksbill *Erodium maritimum*

Sea-kale *Crambe maritima*
Sea Milkwort *Glaux maritima*
Common Marsh-bedstraw *Galium palustre*
Umbellate Hawkweed *Hieracium umbellatum*
Autumn Hawkbit *Scorzoneroides autumnalis*
Autumn Ladies Tresses *Spiranthes autumnalis*
Sea Club-rush *Bulboschoenus maritimus*

Extinct Species

Lesser Centaury *Centaureum pulchellum*

Birds

Rare & threatened species or species with significant populations:

Breeding

Shag	Great Black-backed Gull (largest colonies in Bailiwick)
Cormorant (restricted locally)	Meadow Pipit (locally threatened)
Shelduck	Stonechat (restricted locally)
Oystercatcher	Linnet (declining locally)

Extinct/occasional breeding

Ringed Plover	Common Tern
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Roosting

Gull species	Wader species
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A major high tide roost site for waders and gulls with Oystercatcher & Herring Gull. Used by Little Egrets (see P. Veron, 1997).

Major migrants

Important refuge for migrating passerines	
Meadow Pipit	Wheatear

Amphibians, Reptiles and Mammals

Under recorded.

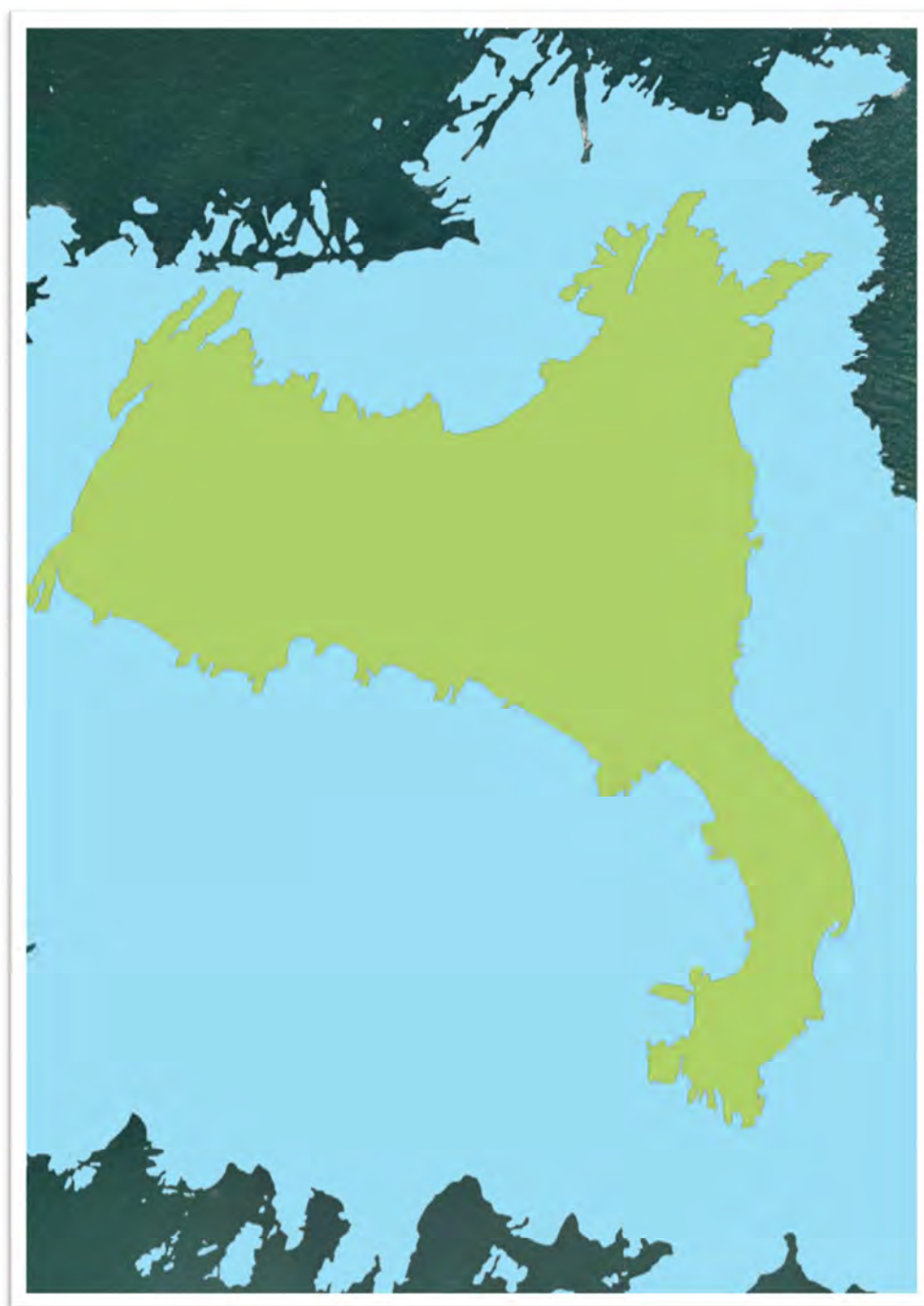
Grey Seals bred recently with a pup observed on the north side of the Island.

Archaeological/historical interest

The mediaeval Priory is the most significant site; also remains of a watch house and prehistoric sites.

Geological interest

Coastal exposures of raised beach deposits. Rocks are mainly Icart Gneiss with dolerite dykes.



9 Port Soif to Pont du Valle (including Vale Pond and extending to Cobo)



Representative of habitats

Dune grassland	Brackish pool
Coastal grassland	Saltmarsh
Semi-improved grassland	Bare ground
Open dune	Swamp
Shingle	Soft cliff
Running water (brackish)	Hard cliff
Standing water	Dense scrub

There are also areas of arable.

Biological/nature conservation value

There are patches of high quality dune grassland in places along the coast and areas of open dune with the typical species assemblages, tiny areas of remnant saltmarsh communities and brackish water areas.

Crustaceans

Rare & threatened species include: *Palaemonetes varians* (a brackish water prawn)

Insects

Rare & threatened species include:

Scaly Cricket <i>Pseudmogoplistes vicentae</i>	<i>Cyrtosia</i> sp. nov (a bee fly)
Mole Cricket <i>Gryllotalpa gryllotalpa</i>	<i>Villa modesta</i> (a bee fly)
Short-winged Conehead <i>Conocephalus dorsalis</i>	<i>Acrosathe annulata</i> (a sand-dune fly)
<i>Ochetostethus nanus</i> (a non-British bug)	<i>Thereva bipunctata</i> (a sand dune fly)
<i>Graptopeltus lynceus</i> (a bug)	<i>Tethina grisea</i> (a sandy beach fly)
Five-spot Burnet <i>Zygaena trifolii</i>	<i>Dolichopus nubilus</i> (a brackish water fly)

Dolichopus sabinus (a brackish water fly)
Dolichopus strigipes (an estuarine fly)
Sphaerophoria rueppellii (a hoverfly)
Hornet Robber fly *Asilus crabroniformis*
Salticella fasciata (a snail-killing fly)
Parectecephala longicornis (a non-British fly)
Campiglossa plantaginis (a fly that galls Sea Aster)
Pherbellia cinerella (a fly)

Gonatopus lunatus (a Dryinid)
Lasius psammophilus (a sand-dune ant)
Ophonus puncticeps (a Carabid beetle)
Pogonus chalceus (a Carabid beetle)
Enochrus bicolor (a water beetle)
Harpalus serripes (a ground beetle)
Copris lunaris (a Scarab beetle extinct in the U.K.- needs permanent sandy grassland)

Plants

Rare & threatened species include:

Chara hispida (a Stonewort)
Yellow-horned Poppy *Glaucium flavum*
Small-flowered Buttercup *Ranunculus parviflorus*
Rue-leaved Saxifrage *Saxifraga tridactylites*
Spring Vetch *Vicia lathyroides*
Fairy Flax *Linum catharticum*
Salad Burnet *Sanguisorba minor*
Sea Spurrey *Spergularia marina*
Long-stalked Crane's-bill *Geranium columbinum*
Sea Stock *Matthiola sinuata*
Sea Rocket *Cakile maritima*
Sea-kale *Crambe maritima*
Common Seablite *Suaeda maritima*
Glasswort *Salicornia ramosissima*
Saltwort *Salsola kali*
Sea Holly *Eryngium maritimum*
Wild Celery *Apium graveolens*
Dittander *Lepidium latifolium*
Small Hare's -ear *Bupleurum baldense*
Fringed Rupturewort *Herniaria ciliolata*
Bog Pimpernel *Anagallis tenella*
Sea Milkwort *Glaux maritima*
Marsh Bedstraw *Galium palustre*
Sea Bindweed *Calystegia soldanella*

Hound's-tongue *Cynoglossum officinale*
Marsh Woundwort *Stachys palustris*
Blue Fleabane *Erigeron acer*
Sea Aster *Aster tripolium*
Umbellate Hawkweed *Hieracium umbellatum*
Autumn Hawkbit *Scorzonoides autumnalis*
Mouse-ear-hawkweed *Pilosella officinarum*
Sea Arrow-grass *Triglochin maritima*
Marsh Arrow-grass *Triglochin palustris*
Spiked Water-milfoil *Myriophyllum spicatum*
Shining Pondweed *Potamogeton lucens*
Broad-leaved Pondweed *Potamogeton natans*
Bee Orchid *Ophrys apifera*
Pyramidal Orchid *Anacamptis pyramidalis*
Autumn Ladies-tresses *Spiranthes autumnalis*
Branched Bur-reed *Sparganium erectum*
Sharp Rush *Juncus acutus*
Sea Rush *Juncus maritimus*
Sea Club-rush *Bulboschoenus maritimus*
Grey Club Rush *Schoenoplectus tabermontani*
Glaucous Sedge *Carex flacca*
Common Sedge *Carex nigra*
Long-bracted Sedge *Carex extensa*
Crested Hair-grass *Koeleria macrantha*
Heath-grass *Danthonia decumbens*



Bee Orchid

Extinct species:

Purple Spurge *Euphorbia peplis*

Lesser Centaury *Centaureum pulchellum*

Birds:

Rare & threatened species or species with significant populations:

Breeding

Meadow Pipit (locally threatened)

Linnet (declining locally)

Stonechat (locally threatened)



Meadow Pipit

Extinct Breeders

Skylark

Major migrants

Wheatear

Pipits

Wagtails

Roosting

Wader species

Gull species

Feeding

Starling

Finch species

Amphibians, Reptiles and Mammals

Under recorded

Frog

Slow Worm

Smooth Newt

Bats almost certainly feed over these areas

Archaeological/historical interest

Prehistoric monuments at Pecqueries and Port Soif, cists at Rousse, pre-historic/flint find spots on most headlands, site of barrow at Picquerel Point, Bronze age settlement at Rousse, Mediaeval settlement at Grandes Rocques, Pre -martello tower at Rousse, battery at Picquerel Point, multi-period fortifications at Grande Rocques, and German fortifications at various other points along the coast.

Geological interest

Raised beach deposits are exposed intermittently. Cobo Adamellite (granite) is a distinctive feature at the south end of this area.



10 South Vazon & La Grande Mare wet meadows



Representative of habitats

Marshy grassland
Semi-improved marshy grassland
Swamp
Standing Water

Running water
Semi-natural woodland
Dense Scrub

There is also improved grassland.

Biological/nature conservation value

Crustacea

Rare & threatened species include:
Porcellio dilatata (a woodlouse)

Insects

Rare & threatened species include:

Short-winged Conehead *Conocephalus dorsalis*
Tetrix undulata (a ground hopper)
Cymus clavicularis (a bug)
Five-spot Burnet *Zygaena trifolii*
Hercostomus asimilis (a Dolichopodid fly)
Hercostomus nigriplantis (a Dolichopodid fly)
Hercostomus plagiatus (a Dolichopodid fly)
Rhaphium riparium (a Dolichopodid fly)
Campsicnemus loripes (a Dolichopodid fly)

Micromorphus albipes (a Dolichopodid fly)
Syntormon pumilus (a Dolichopodid fly)
Tropidia scita (a fen-land hoverfly)
Hydromya dorsalis (a snail-killing fly)
Pherbina coryleti (a snail-killing fly)
Bembidion elongatum (a non-British Carabid beetle)
Bembidion mannerheimi (a Carabid beetle)
Anisostictus 19-punctata (Water Ladybird)

Plants

Generally under-recorded. Rare & threatened species include:

Celery-leaved Crowfoot *Ranunculus sceleratus*
Common Marsh-bedstraw *Galium palustre*
Common Water-plantain *Alisma plantago-aquatica*
Southern Marsh-orchid *Dactylorhiza praetermissa*

Skullcap *Scutellaria galericulata*
Compact Rush *Juncus conglomeratus*
Common Yellow Sedge *Carex viridula oedocarpa*
Carnation Sedge *Carex panicea*
Glaucous Sedge *Carex flacca*
Common Sedge *Carex nigra*

Extinct species:

include the following (at La Grande Mare):

Marsh Cinquefoil *Comarum palustre*
Round-leaved Sundew *Drosera rotundifolia*
Round-leaved Wintergreen *Pyrola rotundifolia*
Bogbean *Menyanthes trifoliata*
Marsh Helleborine *Epipactis palustris*
Common Twayblade *Neottia ovata*

Summer Lady's-tresses *Spiranthes aestivalis*
Bog Pondweed *Potamogeton polygonifolius*
Fen Pondweed *Potamogeton coloratus*
Common Cottongrass *Eriophorum angustifolium*
Star Sedge *Carex echinata*
Flea Sedge *Carex pilulifera*

Birds

Rare & threatened species or species with significant populations:

Breeding

Marsh Harrier (restricted locally)
Reed Warbler (restricted locally)

Chiffchaff (restricted locally)

Extinct Breeders

Skylark

Major migrants

Reed Warbler
Sedge Warbler

Willow Warbler

Feeding

Swallow
House Martin

Woodcock

Wintering

Snipe (declining locally)

Amphibians, Reptiles and Mammals

Under recorded. Bats almost certainly feed over these areas

Archaeological/historical interest

Peat deposits

Geological interest

Peat deposits



11 St Sampson's Marais & Ivy Castle



Representative of habitats

Semi-improved marshy grassland
Swamp
Running water

Semi-natural broadleaved woodland
Dense Scrub

Also there is arable land and improved grassland.

Biological/nature conservation value

Insects

Rare & threatened species include:

Short-winged Conehead *Conocephalus dorsalis*
Tetrix undulata (a ground hopper)
Hornet Robber-fly *Asilus crabroniformis*
Pherbellia cinerella (a fly)
Campsicnemus loripes (a Dolichopodid fly)
Syntormon pumilus (a Dolichopodid fly)

Bembidion properans (a Carabid beetle)
Bembidion mannerheimi (a Carabid beetle)
Bembidion guttula (A Carabid beetle)
Bembidion properans (a Carabid beetle)
Pterostichus minor (a ground beetle)
Anisosticus 19-punctata (Water Ladybird)

Plants

Rare & threatened species include:

Ivy-leaved Crowfoot *Ranunculus hederaceus*
Celery-leaved Crowfoot *Ranunculus sceleratus*
Great Water-dock *Rumex hydrolapathum*
Pale Persicaria *Persicaria lapathifolia*
Water-pepper *Persicaria hydropiper*
Marsh Yellow-cress *Rorippa palustris*
Creeping Yellow-cress *Rorippa sylvestris*

Bog Stitchwort *Stellaria alsine*
Marsh Woundwort *Stachys palustris*
Skullcap *Scutellaria galericulata*
Strawberry Clover *Trifolium fragiferum*
Marsh Speedwell *Veronica scutellata* (the only island site),
Tufted Water Forget-me-not *Myositis laxa*

Common Marsh-bedstraw *Galium palustre*
 Purple-loosestrife *Lythrum salicaria*
 Common Water-plantain *Alisma plantago-aquatica*

Branched Bur-reed *Sparganium erectum*
 Greater Pond-sedge *Carex riparia*
 Hard Rush *Juncus inflexus*
 Ivy-leaved Duckweed *Lemna trisulca*



Purple Loosestrife

Birds

Rare & threatened species or species with significant populations:

Breeding

Marsh Harrier (restricted locally)

Reed Warbler (restricted locally)

Major migrants

Swallow

Sedge Warbler

Reed Warbler

Whinchat

Amphibians, Reptiles and Mammals

Under recorded

Frog

Bats almost certainly feed over this area

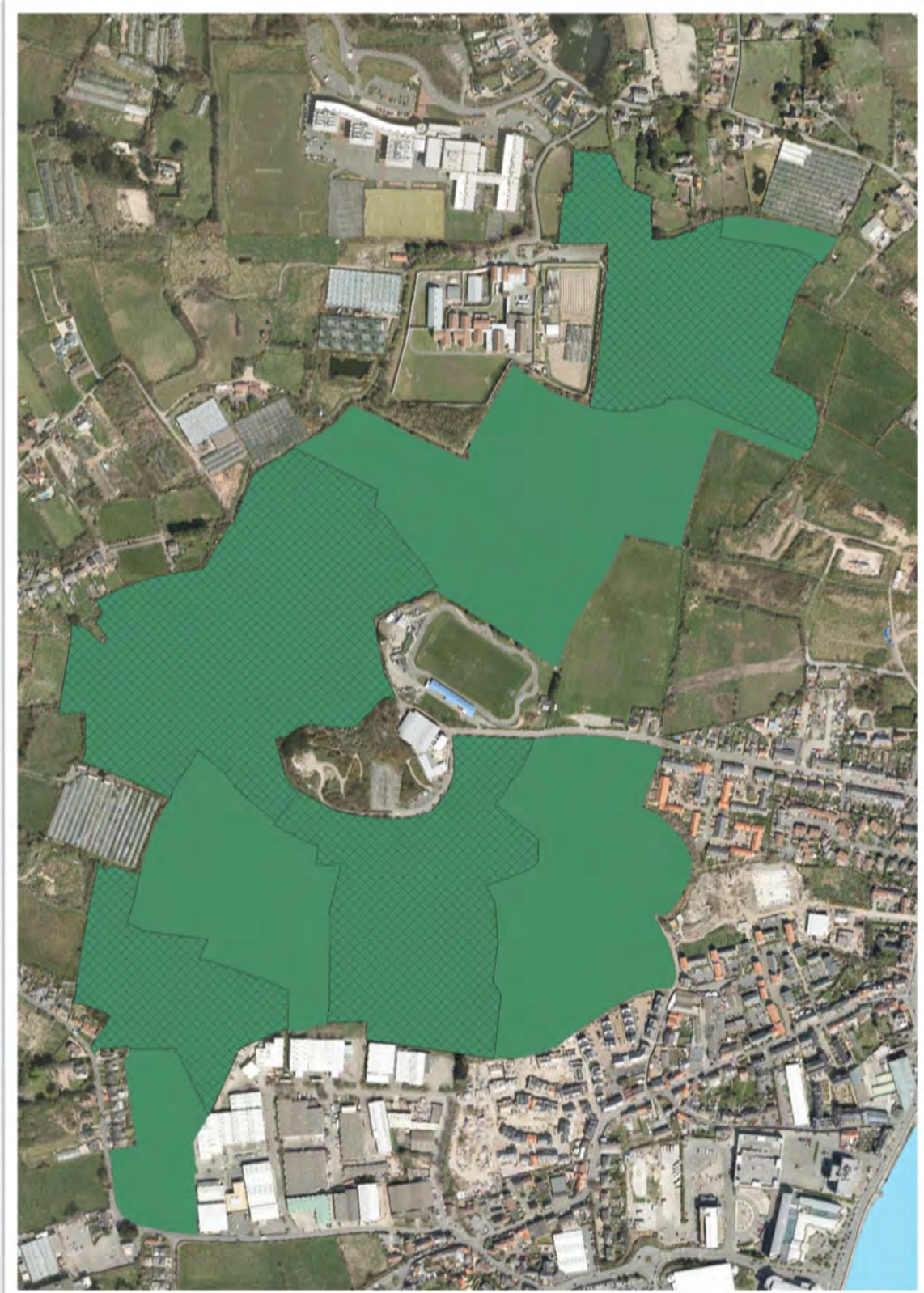
Slow Worm

Archaeological/historical interest

Chateau des Marais: ringwork of the castle built as a hasty defensive measure following the loss of France in 1204; walls both 18th Century in date. There are possible prehistoric standing stones (menhirs).

Geological interest

Possible peat beds



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Notes on the people quoted in the Text:

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John Pinel, Principal Ecologist, States of Jersey