

File ref:

County: Isle of Wight

Site Name: Brading Marshes to St Helen's Ledges SSSI

Local Planning Authority: Isle of Wight County Council, Medina Borough Council, South Wight Borough Council

National Grid Reference: SZ 635883 **Area:** 488.46 (ha) ?(ac)

Ordnance Survey Sheet 1:50,000: 196 **1:10,000:** SZ 68, SZ 69

Date Notified (Under 1949 Act): **Date of Last Revision:** 1959

St Helen's Duver 1951

Brading Marshes 1971

St Helen's Ledges 1977

Date Notified (Under 1981 Act): **Date of Last Revision:** 17.3.95

St Helen's Duver 1984)

Brading Marshes 1984)

St Helen's Ledges 1988)

Confirmed: 7.12.95

Other Information:

The site includes three former SSSIs known as St Helen's Duver SSSI, Brading Marshes SSSI and St. Helen's Ledges SSSI. Part of the site is identified within the Geological Conservation Review.

Reasons for Notification:

The site includes a range of coastal habitats around the Bembridge estuary. Historically the estuary has undergone a series of land-claims and in 1874-79 an area of tidal silt was claimed to form Brading Marshes. Brading Marshes comprises an extensive area of neutral and acid grassland, saline and freshwater lagoons and pools, botanically rich ditches, reedbeds, and areas of ancient woodland peripheral to the former harbour. Bembridge Harbour today has a wide variety of estuarine habitats. These include intertidal mudflats and sandflats of ornithological importance, and sand dunes and shingle pits of geomorphological and biological importance which guard the harbour mouth. Beyond the spits are extensive intertidal sandflats with rocky outcrops, shingle, limestone reefs and ledges forming St Helen's Ledges, and the sheltered shallow waters of Priory Bay. This combination of hard and soft coast features supports a rich flora and marine invertebrate fauna including a number of species at their most easterly locality in the English Channel. A series of lagoons associated with the estuary have a high species diversity and support several rare specialist lagoonal species. The invertebrate fauna of the whole site is rich and includes at least 9 nationally rare and 23 nationally scarce species.* A number of nationally rare and scarce plants are also present within the site. The intertidal mudflats, sandflats, eelgrass *Zostera* beds, and shingle, together with Brading Marshes, support large numbers of overwintering wildfowl and waders which form an important component of the internationally important bird populations of The Solent. Brading Marshes is also important for its assemblage of breeding birds. The rocks which form St Helen's Ledges are of geological interest in yielding fossil insects dating from 34 million years ago (late Eocene and early Oligocene).

Brading Marshes is drained by the canalised River Yar and systems of internal ditches. Much of the area is subject to shallow winter flooding. The distribution of neutral and acid grassland appears to be governed by the former distribution of mudflats and sandflats respectively. These grazing marshes represent the only significant area of this habitat on the Isle of Wight. The grasslands include large populations of some species often assumed to indicate very long established habitats, such as the southern marsh-orchid *Dactylorhiza praetermissa*, heath-

grass *Danthonia decumbens* and marsh pennywort *Hydrocotyle vulgaris*, together with plants characteristic of brackish pasture such as the nationally scarce divided sedge *Carex divisa*. Brading Marshes as a whole exhibits great diversity of wetland habitats, which support a wide range of aquatic and semi-aquatic plants. The ditches and ponds are of particular interest including the nationally scarce brackish water-crowfoot *Ranunculus baudotii* and three species here at their only Isle of Wight locations: mare's-tail *Hippuris vulgaris*, lesser water-plantain *Baldellia ranunculoides* and fat duckweed *Lemna gibba*. The marsh complex is of importance for its populations of overwintering waterfowl, and supports a number of species of breeding wildfowl and wading birds. The reedbeds and associated scrub habitats support an exceptionally rich breeding community of warblers and other passerine birds. The marshes include two heronries.

Part of Bembridge airfield adjacent to the marshes is a particularly species-rich neutral grassland supporting a number of species which indicate a lack of agricultural improvement. These include a large population of green-winged orchids *Orchis morio*, together with oxeye daisy *Leucanthemum vulgare* and corky-fruited water-dropwort *Oenanthe pimpinelloides*. The woodlands peripheral to the marshes vary in their structure and species composition. Knowles Copse and Centurions Copse are a coppice-with-standards structure dominated by mature oak *Quercus robur* and ash *Fraxinus excelsior* over a hazel *Corylus avellana* coppice layer. Other woodlands have a mixed canopy, whilst along the edges of fens are wet woodland areas dominated by alder *Alnus glutinosa* and willow *Salix* species. The open woodland adjacent to Knowles Copse supports a range of ancient parkland lichens. The woodlands support a rich ground flora including a number of species characteristic of ancient semi-natural woodland such as butcher's-broom *Ruscus aculeatus* and dog's mercury *Mercurialis perennis*.

Behind the sea wall is a series of saline to brackish lagoons which support an internationally important assemblage of organisms. These include the nationally rare foxtail stonewort *Lamprothamnium papulosum* which is listed on Schedule 8 of the Wildlife and Countryside Act, 1981, the nationally rare beetle *Paracymus aeneus* (Red Data Book 1), here at its only location in Britain, and the nationally rare starlet sea anemone *Nematostella vectensis* (Red Data Book 3) both protected under Schedule 5 of the Wildlife and Countryside Act, 1981. These lagoonal species have critical habitat tolerances and are thus highly vulnerable to changes in salinity, hydrology and sediment disturbance. The lagoons are also important as an autumn and winter wildfowl refuge.

St Helen's Duver and Bembridge Point are sand dune systems which are botanically rich. The dunes at the Duver are the only example of a fixed dune system on the Isle of Wight and are now a relict feature whose further development is precluded by a frontal promenade starving the dunes of further supplies of sand. The outer dunes have been largely colonised by the nationally scarce sea buckthorn *Hippophae rhamnoides*, although a few are dominated by the pioneer, marram grass *Ammophila arenaria*. The inner dunes have largely succeeded from the pioneer stage to a rich grassland herb community in which thrift *Armeria maritima* tussocks are common. Irregular clumps of gorse *Ulex europaeus* scrub have become established, probably where the sand has accumulated over earlier inter-tidal mud. Shallow slacks have been colonised by willow *Salix* species and support a relatively lush vegetation though they seldom hold water. Approximately 250 species of flowering plants have been recorded from the Duver, including several nationally scarce species such as maiden pink *Dianthus deltoides*, suffocated clover *Trifolium suffocatum*, fenugreek *T. ornithopodioides* and autumn squill *Scilla autumnalis*. The north of the Duver is bordered by steep, south-easterly facing, wooded slopes, known as St Helen's Common. This woodland is relatively young in age and composed mainly of ash and oak. The dune and shingle system around Bembridge Point also support a diverse flora including two nationally scarce grasses: dune fescue *Vulpia fasciculata* and great brome *Anisantha diandra*.

St Helen's Ledges, together with the Bembridge Ledges SSSI to the south, provide the best example of a rocky shore fauna and flora on the south coast, east of Pool Harbour in Dorset. In areas relatively free from wave action the limestone rocks show a vertical zonation in plant communities. In the splash zone, just above high water, the lichens *Verrucaria maura* and *Lichina pygmaea* are abundant. Below high water distinct communities of brown algae occur with various dominant seaweeds such as bladderwrack *Fucus vesiculosus*, serrated wrack *F. serratus* and egg wrack *Ascophyllum nodosum*. Elsewhere the upper shore is dominated by the green algae *Enteromorpha linza*. On the ledges themselves both *Codium tormentosum* and sea lettuce *Ulva lactuca* are common together with the red algae such as Irish moss *Chondrus crispus* and nationally rare species such as *Grateloupia filicina* var. *luxurians* and *Gracilaria bursa-pastoris*. A diverse invertebrate fauna is found in association with the varying algal communities, and the various substrates and exposures. The limestone crevices provide shelter and shade for many marine molluscs including three species of periwinkle *Littorina littoralis*, *L. littorea* and *L. saxatilis*; topshells *Gibbula* species; slipper limpets *Crepidula fornicata* and netted dog whelks *Nassarius reticulatus*. The limpet *Patella aspera* is found here at its eastern-most locality on the south coast of England. Associated with the rocky outcrops are a variety of decapod crustaceans including hermit crab *Eupagurus bernhardus*, spider crab *Macropodia tenuirostris*, and squat lobsters *Galathea* species. The soft intertidal sands support catworm *Nephtys* species and ragworms *Nereis virens* and *N. diversicola*. Acorn barnacles *Semibalanus balanoides* and the introduced barnacle *Elminius modestus* encrust many of the rocks whilst beadlet anemone *Actinia equina* and snakelocks anemone *Anemonia sulcata* occupy damper hollows and pools.

Within the sheltered waters of Priory Bay the sandy substrates support scattered populations of worms including lugworms *Arenicola marina*, the sand mason worm *Lanice conchilega*, *Nephtys hombergi* and *Cirriiformia tentaculata*. The large, mainly sub-littoral eelgrass beds in the bay represent what is believed to be the largest area of this habitat in the Isle of Wight. Two nationally scarce species are present: common eelgrass *Zostera marina* and dwarf eelgrass *Z. noltii*. The eelgrass is a source of food for dark-bellied Brent goose *Branta bernicla* and widgeon *Anas penelope* which resort to the bay in winter. The invertebrates and fish associated with the eelgrass beds provide a rich source of food for many wading birds including redshank *Tringa totanus*, oystercatcher *Haematopus ostralegus* and sanderling *Calidris alba*.

Brading Marshes to St Helen's Ledges SSSI forms an important component of The Solent estuarine system which has been identified as an internationally important site for overwintering wildfowl and waders. The range of coastal habitats including the marshes, lagoons, intertidal mudflats and sandflats within and around Bembridge Harbour, shingle and *Zostera* beds provide important feeding and roosting habitat for significant numbers of waterfowl including dark-bellied Brent goose, widgeon, teal *Anas cracca*, dunlin *Calidris alpina*, sanderling and redshank. Brading Marshes also support important numbers of breeding waterfowl including redshank, lapwing *Vanellus vanellus*, snipe *Gallinago gallinago*, pochard *Aythya ferina*, teal and little grebe *Tachybaptus ruficollis*.

The SSSI includes a geological exposure of national scientific importance from St Helen's Ledges to Horseshoe Point. This exposure is a limestone at the base of Bembridge Marls (late Eocene or early Oligocene age) and is a fossiliferous site for the 'Insect Limestone' of the Isle of Wight, yielding over 40 species. The St Helen's site is the most distant from the classical exposure near Cowes, and thus extends knowledge of the Eocene and Oligocene insect fauna of the Hampshire Basin. The site has a high research potential.

* Nationally rare species are equivalent to those listed in the British Red Data Book which includes those considered endangered, vulnerable or rare. Nationally notable/scarce species are estimated to occur in 16–100 km grid squares in Britain.

