

COUNTY: SOMERSET

SITE NAME: BRIDGWATER BAY

DISTRICT: WEST SOMERSET

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 (as amended)

Local Planning Authority: Sedgemoor District Council, West Somerset District Council, Somerset County Council

National Grid Reference: ST 290480

Area: 3574.1 (ha) 8831.6 (ac)

Ordnance Survey Sheet 1:50,000: 181 182 1:10,000: ST 14 NE, 24 SW, NW, SE, NE, 25 SW, SE, NE, 34 NW, 35 SW

Date Notified (Under 1949 Act): –

Date of Last Revision: –

Date Notified (Under 1981 Act): 1989

Date of Last Revision: –

#### Other Information:

The site includes Bridgewater Bay National Nature Reserve declared under Section 23 of the National Parks and Access to the Countryside Act 1949 and designated a wetland of international importance under the Ramsar Convention. A Nature Conservation Review Grade 1\* site. The site is contiguous with the Brean Down, Berrow Dunes and Blue Anchor to Lilstock Coast SSSIs.

#### Description and Reasons for Notification:

Bridgewater Bay comprises a succession of habitats ranging through extensive intertidal mudflats, saltmarsh, shingle beach and grazing marsh intersected by a complex network of freshwater and brackish ditches. It supports internationally and nationally important numbers of over-wintering and passage migrant waders and waterfowl. The ditches and ponds contain a diverse invertebrate fauna including six nationally rare species and eighteen nationally scarce species. The site is an integral part of the Severn Estuary system and is ecologically linked to the Somerset Levels which provide alternative winter feeding grounds for waders and wildfowl.

The Bay occupies the sweeping arc of coastline between the wave-cut platform of Jurassic Blue Lias at the northern tip of the Quantock Hills and the cliffs of Carboniferous Dolomites and Limestone at Brean Down which project into the Severn Estuary and provide some degree of protection from the erosive tidal currents. This has allowed the deposition of an extensive area of intertidal mud which nonetheless remains highly mobile. Strong prevailing westerly winds have thrown up sand dunes and a shingle ridge at Barrow and Steart, respectively. On the landward side of these features is the marine/estuarine alluvium of Pleistocene and geologically recent times. The River Parrett meanders across this plain, its final loop encircling Pawlett Hams before entering the Bay and flowing out between Stert and Berrow Flats. The Hams are a hydrologically discrete area with water provided by the Cannington Brook which originates in the Quantock Hills.

The site contains the most extensive area of saltmarsh within Somerset and one of the largest Common Cord-grass *Spartina anglica* swards in the Severn Estuary. This is located on a spit at the mouth of the River Parrett, occupies a wide coastal band from Wall Common to Stert Island and fringes the mouth of the Brue. Common Cord-grass dominates much of the seaward edge of the marsh, having vigorously invaded and consolidated the fronting mudflats. Higher up, Common Saltmarsh-grass *Puccinellia maritima* increases in abundance with Sea Aster *Aster tripolium*. Where ungrazed, Common Reed *Phragmites australis* frequently forms a zone above this. Grazing of the upper marsh tends to encourage Red Fescue *Festuca rubra* and Creeping Bent *Argostis*

*stolonifera*. Sea Couch *Elymus pycnanthus* and Sea Club-rush *Scirpus maritimus* occur at the landward edge of the marsh. Other members of this community include Sea Wormwood *Artemisia maritima*, Saltmarsh Rush *Juncus gerardi*, Common Sea-lavender *Limonium vulgare*, Common Scurvy-grass *Cochlearia officinalis*, Spear-leaved Orache *Atriplex prostrata* and Sea Purslane *Halimione portulacoides*. High level sheep-grazed marshes carry populations of the nationally scarce Bulbous Foxtail *Alopecurus bulbosus*, Slender Hare's-ear *Bupleurum tenuissimum* and Sea Barley *Hordeum marinum* while Stert Island is known to support the nationally rare Compact Brome *Bromus madritensis* and nationally scarce Ray's Knotgrass *Polygonum oxyspermum*.

The development of shingle ridges and construction of sea defences has prevented tidal inundation and encouraged a transition from saltmarsh to grazing marsh on Pawlett Hams, Wick Moor, Catsford and Wall Common. The majority of Pawlett Hams is semi-improved, permanent neutral grassland with Perennial Rye-grass *Lolium perenne* and Crested Dog's-tail *Cynosurus cristatus* abundant. Some fields have been converted to arable.

Pawlett Hams, Steart and Wick Moor are divided by networks of ditches which act as a drainage system in winter and as stock barriers and drinking water supplies in the summer. A wide variety of aquatic and bankside plant species occur in the ditches. Free-floating species include the nationally restricted Rootless Duckweed *Wolffia arrhiza*, together with uncommon species such as Frogbit *Hydrocharis morsus-ranae* and Water Fern *Azolla filiculoides*. Amongst the submerged waterweeds, Rigid Hornwort *Ceratophyllum demersum* and Spiked Water-milfoil *Myriophyllum spicatum* are common. Emergent species include Flowering Rush *Butomus umbellatus*, Common Reed and Water-plantain *Alisma plantago-aquatica*, while Brookweed *Samolus valerandi* and the local Parsley Water-dropwort *Oenanthe lachenalii* are found on the banksides. The slightly brackish nature of the water is indicated by the presence of plants such as the nationally restricted Brackish Water-crowfoot *Ranunculus baudotii*, Sea Clubrush *Scirpus maritimus*. Fennel Pondweed *Potamogeton pectinatus*, Lesser Pondweed *P. berchtoldii* and Grey Clubrush *Schoenoplectus tabernaemontani* form part of the community here. Many of the fields contain ponds which have well developed communities of plants and invertebrates very similar to those of the surrounding ditches.

The invertebrate interest is associated with the brackish and freshwater rhynes systems and ponds of Pawlett Hams and Wick Moor and the saltmarsh communities within the site. Five Red Data Book species have been recorded from Pawlett Hams: the Great Silver Water Beetle *Hydrophilus piceus*, the water beetle *Hydrovatus clypealis*, the hover fly *Lejops vittata* and the soldier flies *Odontomyia ornata* and *Stratiomys singularior*. A water mite new to Britain, *Diplodontus scapularis*, has recently been recorded here. Nationally scarce species include the aquatic snail *Cyraulus laevis*, the Hairy Dragonfly *Brachytron pratense* and a ladybird *Coccidula scutellata*. The Rhine system of Wick Moor supports a Red Data Book water beetle *Haliplus mucronatus*. Other nationally scarce species include the water beetles *Rhantus suturalis*, *Enochrus bicolor*, and *Berosus affinis*, the ladybird *Coccidula scutellata* and a soldier fly *Odontomyia viridula*. The insect fauna of the ungrazed saltmarshes include the nationally notable beetles *Bembidion normannum*, *Phaedon concinnus* and *Tachyporus atriceps*. Two nationally scarce Diptera have also been recorded; *Nemotelus notatus* and *Thinophilus flavipalpis*. Common saltmarsh specialists include the Dipteran species *Scatomyza litorea* and *Dolidropus griseipennis*, and the beetles *Pogonus chalceus* and *Reichenbachia helferi*.

Bridgwater Bay is a critical feeding ground for passage and over-wintering waders and wildfowl. In its own right it supports internationally important numbers of Whimbrel *Numenius phaeopus* and Black-tailed Godwit *Limosa limosa* on passage. Of the over-wintering species it attracts nationally important numbers of Dunlin *Calidris alpina* and Wigeon *Anas penelope*. Shelduck *Tadorna tadorna* use the Bay as a moulting ground and are also present in nationally important numbers. The Bay forms an integral part of the Severn Estuary system and is used by a substantial proportion of the overall waterfowl

population which is of international importance. The assemblage of wildfowl and waders contains individual populations present in internationally important numbers including Dunlin, Shelduck, Wigeon, Curlew *Numenius arquata*, Redshank *Tringa totanus* and Teal *Anas crecca*. Populations of national importance are those of Ringed Plover *Charadrius hiaticula* and Grey Plover *Pluvialis squatarola*. Significant numbers of Knot *Calidris canutus*, Turnstone *Arenaria interpres*, Common Snipe *Gallinago gallinago* and Mallard *Anas platyrhynchos* also occur.