File ref: 14 OBA

County: **Essex** **Site Name: Colne Estuary**

District: **Colchester/Tendring**

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

Local Planning Authority: Colchester Borough Council/Tendring District Council

National Grid Reference: TM 075155 **Area:** 2915.2 (ha) 7203.4 (ac)

Ordnance Survey Sheet 1: 50 000: 168 **1: 10 000:** TM 01 NW, TM 01 NE, TM 01 SE, TM 01 SW, TM 02 SE, TM 02 SW, TM 11 NW, TM 11 SW

Date Notified (Under 1949 Act): 1955 (part) 1971 (part) 1973 (part) **Date of Last Revision:** 1975

Date Notified (Under 1981 Act): 1989 **Date of Last Revision:** -

Other Information:

The SSSI is within an area proposed as a Wetland of International Importance under the Ramsar Convention and a Special Protection Area under the EEC Council Directive on the Conservation of Wild Birds. Three areas: Brightlingsea Marshes, East Mersea and Colne Point form part of the Colne Estuary National Nature Reserve. Colne Point, Fingringhoe Wick and Howlands Marsh are owned and managed as nature reserves by the Essex Naturalists' Trust. The Colne Estuary is listed as a site of national importance in the Nature Conservation Review (Ratcliffe, 1977).

Description and Reasons for Notification:

The Colne Estuary is comparatively short and branching, with five tidal arms which flow into the main river channel. The estuary is of international importance for wintering Brent Geese and Black-tailed Godwit and of national importance for breeding Little Terns and five other species of wintering waders and wildfowl. The variety of habitats which include mudflat, saltmarsh, grazing marsh, sand and shingle spits, disused gravel pits and reed beds, support outstanding assemblages of invertebrates and plants. Two areas of foreshore at East Mersea are of geological importance. Colne Point and St. Osyth Marsh are of geomorphological interest.

The Colne Estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mud flat communities typical of south eastern estuaries. The fauna is dominated by *Hydrobia* *cont.....*

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ulvae with *Macoma balthica*, *Scrobicularia plana*, *Hediste diversicolor* and *Nephtys hombergii*. Towards the mouth of the estuary the substratum becomes more sandy; *Zostera noltii* and *Zostera marina* have been recorded at Sandy Point. Due to a history of mariculture a range of introduced species occur, including *Crepidula fornicata*, *Urosalpinx cinerea*, *Crassostrea gigas* and *Mercenaria mercenaria*.

Saltmarsh has colonised a large proportion of the estuary at Geedon Saltings, Colne Point and the Strood. The majority of this is high level marsh dominated by Saltmarsh-grass *Puccinellia maritima*, Sea Purslane *Halimione portulacoides* and Annual Sea-blite *Suaeda maritima* while the creek edges and disused oyster pits have been colonised by Glasswort *Salicornia spp*. Sea Aster *Aster tripolium*, and Cord grass *Spartina spp*. There are extensive saltpans on Geedon Saltings and Colne Point where there is a shorter sward of Saltmarsh-grass, Thrift *Armeria maritima* and Common Sea-Lavender *Limonium vulgare*. Nationally uncommon species such as Golden samphire *Inula crithmoide* and Shrubby Seablite *Suaeda vera* occur frequently in the upper marsh and at the foot of the sea-walls. Shrubby Seablite is particularly extensive at Colne Point where there is transitional from saltmarsh to sand-dune and shingle. This transition habitat is also important for the nationally uncommon Rock Sea-lavender *Limonium binervosum* and is one of the few East Anglian sites for Sea Heath *Frankenia laevis*.

The saltmarsh and intertidal mud, with Mersea Flats forming the largest continuous area, provide extensive feeding areas for internationally important numbers of Brent Geest and Black-tailed Godwit. Nationally important numbers of Redshank, Dunlin, Sanderling, Ringed and Grey Plovers are also present together with significant numbers of Shelduck and Goldeneye. The grazing marsh at East Mersea and the Geedon Saltings are important feeding areas for Brent Geese, and the latter also contains the main high tide roost for waders.

Shell, sand and shingle spits occur throughout the estuary, providing nesting habitats for Little Terns and Ringed Plover; at Colne Point the breeding colony of Little Terns contains nationally important numbers. The shingle ridges at Colne Point have been colonised by abundant Sea Campion *Silene maritima*, Yellow Horned-poppy *Glaucium flavum* and many mosses and lichens. Sand-dunes which top the shingle ridge form one of the few dune systems in Essex, with characteristic species such as Marram grass *Ammophila arenaria*, Sand Couch *Elymus farctus*, Sea Holly *Eryngium maritimum* and Sea Sandwort *Honkenya peploides*.

The seawalls, foldings and areas of grazing marsh are unimproved neutral grassland, much of which is herb-rich, with the occasional scattered scrub. The grasses Sea Couch *Elymus pycnanthus*, Couch *Elymus repens*, Creeping Bent *Agrostis stolonifera*, Meadow Barley *Hordeum secalinum*, Red Fescue *Festuca rubra* and the nationally uncommon Sea Barley *H. marinum* are all frequent. Other plant species present include Grass Vetchling *Lathyrus nissolia*, Strawberry Clover *Trifolium fragiferum* and Spiny Restharrow *Ononis spinosa*, together with the nationally uncommon Sea Clover *Trifolium squamosum* and Slender Hare's-ear *Bupleurum tenuissimum*. Many anthills, produced by the meadow ant *Lasius flavus*, occur throughout the grazing marsh and provide additional habitat for plants such as Lady's Bedstraw *Galium verum*. The former saltmarsh creeks and ditches within the grazing marsh add to the structural and species diversity, and are dominated by Water Dock *Rumex hydrolapathum*, Grey Club-rush *Schoenoplectus tabernaemontani*, Lesser Pond-sedge *Carex acutiformis* and Divided

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Sedge *C. divisa*, as well as Common Reed *Phragmites australis* and Sea Club-rush *Scirpus maritimus* which also dominate the majority of borrow dykes. The combination of these habitats provides excellent cover, feeding and breeding conditions for many birds including Whinchats in the more scrubby areas, Bearded Tits in the reed-beds and Pochard in pools dominated by Sea Club-rush. Predatory birds including Barn Owls, Short-eared Owls and Hen Harriers frequently hunt along the seawalls in winter.

Much of the invertebrate interest is in the ungrazed marsh on Fingringhoe Ranges, indeed Langenhoe Marsh is the best Essex site for aquatic invertebrates outside the Thames Estuary. The Sea Club-rush filled ditches support nationally scarce and rare insects including the mosquito *Aedes flavescens*, the meniscus midge *Dixella attica*, numerous species of water beetle, rarest of which is *Graptodytes bilineatus*, and the nationally rare Scarce Emerald Damselfly *Lestes dryas*. This last species also occurs nearby in the disused gravel pits at Fingringhoe Wick Nature Reserve. Both sites support outstanding assemblages of dragonflies. Langenhoe is the only Essex site for the uncommon Hairy Dragonfly *Brachytron pratense*. Other species found on the couch-dominated grassland or in the ditches include the horsefly *Hybomitra ciureai*, the cranefly *Erioptera bivittata* whose larvae are found in brackish mud, and the aquatic weevil *Phytobius quadrinodosus*. The sand-dunes and shingle ridges at Colne Point are important for invertebrates, particularly spiders: one of these *Heliophanus auratus*, is known to occur in only the Essex estuaries. Other uncommon species present in the estuary include Roesel's Bush-cricket *Metrioptera roeselii* and several coastal moths including Ground Lackey *Malacosoma castrensis*, Mathew's Wainscot *Leucania pallens*, Silky Wainscot *Chilodes maritimus* and Dotted Fan Foot *Zanclognatha cribrumalis*.

St. Osyth marsh is an important site for saltmarsh morphology, and is one of a few marsh areas in Britain to have been dated, the maximum age being 4280^{+} 45 years BP, the date provided by the analysis of a peat seam preserved in grey-black clay at the site. The assemblage of features - creeks, pans and saltmarsh cliff are all present at St. Osyth, and reflect the maturity of the marsh system. The saltpans have been intensively researched by geomorphologists, and provide much information relating to the formation and development of this unique coastal landform. One of the main interests in the Colne Point structure is the process of breaching and secondary spit genesis brough about by landwards over-roll across the marsh surface. This process is well displayed at present in the upper levels of the system.

Geological exposures at East Mersea show important organic deposits beneath gravels which are attributed to the Thames-Medway system. These Pleistocene deposits of warm climate origin, but uncertain age, consist of silts, detrital muds and peats yielding freshwater and estuarine molluscs, ostracods, mammal and plant remains. They occupy one or more post-Anglian interglacial periods. Investigation of this locality is still in the early stages but it is clearly of considerable importance in Pleistocene studies.