Site name: Crouch and Roach Estuaries **County:** Essex

District: Maldon, Rochford, Chelmsford

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981, and additional land notified under Section 28B of the Wildlife and Countryside Act 1981, as inserted by Schedule 9 to the Countryside and Rights of Way Act 2000.

Local Planning Authority: Essex County Council, Maldon District Council, Rochford District Council, Chelmsford City Council

National Grid reference:	TQ 860 962		**Area:**	1847.87 ha
Ordnance Survey Sheet	**1:50,000:**	167, 169, 178	**1:10,000:**	TQ 79 SE, NE; TQ 88 NE; TQ 89 SE, NE, SW, NW; TQ 98 NW; TQ 99 SE, NE, SW, NW

Date notified: 1984 (part), 1990 (part), 1996
Date additional land notified: **2 November 2017**

Other Information

The Crouch and Roach Estuaries SSSI is contiguous with both the Dengie SSSI and the Foulness SSSI. These sites run from the mouth of the River Crouch, the Dengie SSSI to the north, and the Foulness SSSI running southwards including the south bank of the River Roach downstream. Part of the site overlaps the geological SSSI known as The Cliff, Burnham on Crouch.

A proportion of the site forms the Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area, classified under the EU Directive on the Conservation of Wild Birds (Directive 2009/147/EC), and is a wetland of international importance designated under the Ramsar Convention. The tidal reaches of the Crouch and Roach estuaries are part of the Essex Estuaries Special Area of Conservation designated under the EU Habitats Directive (92/43/EEC).

Description and Reasons for Notification

The rivers Crouch and Roach are situated in South Essex. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brickearth and loams with patches of sand and gravel. The intertidal zone along the rivers Crouch and Roach is ‘squeezed’ between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud in contrast with other estuaries in the county. This however is used by significant numbers of birds, and together with the saltmarsh and grazing marsh which comprise the Crouch and Roach Estuaries SSSI regularly support internationally important numbers of one species, and nationally important numbers of three species of wader and wildfowl. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants.

Most of the tidal reaches of the Crouch and Roach were originally fringed with saltmarsh but since the middle ages they have been progressively embanked to provide safe grazing and, more recently, arable land. Only relatively small areas of saltmarsh have never been embanked, including Woodham Fen, White House Farm, and the upper sections of Paglesham pool. Two of these sites are notable in that the natural transition from saltmarsh to grassland is uninterrupted by a sea wall, an increasingly rare feature on the Essex coast. Other salt marshes have formed where the sea defences have been breached, including Bridgemarsh Island, Brandy Hole and North Fambridge Marsh. These are three important and extensive stretches of salt marsh which have developed during the course of this century.

The salt marshes contain a range of characteristic plant species: the lower marshes, covered by most tides, are dominated by Glasswort *Salicornia* Spp, Annual Sea-blite *Suaeda maritima* and Sea Aster *Aster tripolium*, whilst on the higher land, Common Saltmarsh-grass *Puccinellia maritima*, Sea-Purslane *Atriplex portulacoides*, Common Sea-lavender *Limonium vulgare* and Thrift *Armeria maritima* become progressively more frequent. Several uncommon plants can also be found, including Lax-flowered Sea-lavender *Limonium humile* One-flowered Glasswort *Salicornia pusilla* and, locally on the drift line, Shrubby Sea-blite *Suaeda vera*. At the uppermost tidal levels and on the sea walls, Sea Couch *Elymus pycnanthus* is dominant. This rough grassland supports dense populations of the nationally scarce Roesel's Bush-cricket *Metrioptera roeselii*, whose persistent 'reeling' song is a constant feature of mid to late summer.

The sea walls, and their associated berms form important integral parts of the coastal habitat. There are a number of typically coastal species to be found such as Narrow-leaved Bird's-foot-trefoil *Lotus tenuis* and Grass Vetchling *Lathyrus nissolia* as well as a range of nationally scarce species such as Sea Barley *Hordeum marinum*, Sea Clover *Trifolium squamosum*, Curved Hard-grass *Parapholis incurva*, Slender Hare's-ear *Bupleurum tenuissimum* and two scarce saltmarsh grasses Borrer's Saltmarsh-grass *Puccinellia fasciculata* and Stiff Saltmarsh-grass *P.rupestris*. Furthermore the species complement of this grassland habitat is a reflection of that within the old unimproved grazing marsh. The grassland of the sea wall will therefore act as a natural seed source in the event that arable land is converted back to grazing marsh.

There are also some areas of grazing marsh landward of the sea wall. This is a characteristic, but increasingly uncommon, habitat in the county. These grazing marshes, apart from their botanical interest, are used by large numbers of Sky lark *Alauda arvensis* and Corn Bunting *Miliaria calandra* . The cattle or sheep grazed sward is dominated by Creeping Bent *Agrostis stolonifera*, Perennial Rye-grass *Lolium perenne*, Red Fescue *Festuca rubra* and Meadow Barley *Hordeum secalinum* . Other less common plants typical of this habitat are Spiny Rest-harrow *Ononis spinosa* and Hairy Buttercup *Ranunculus sardous* . Some of the grazing marsh has been intensively improved and has therefore lost most of its botanical interest. This improved grassland however provides excellent grazing for the internationally important numbers of Dark-bellied Brent Geese *Branta bernicla* which use the estuary.

The brackish dykes and pools within the grazing marsh, together with the borrow dykes adjacent to the sea walls are fringed with dense stands of Sea Club-rush *Bolboschoenus maritimus*, or more locally Common Reed *Phragmites australis* and Lesser Reedmace *Typha angustifolia* . Fennel Pondweed *Potamogeton pectinatus* and Beaked Tasselweed *Ruppia maritima* are the most common aquatic plant species. Soft Hornwort *Ceratophyllum submersum*, Brackish Water-crowfoot *Ranunculus baudotii* and Spiral Tasselweed *Ruppia Cirrhosa* also occur. These three species are all fairly uncommon nationally, the latter species being nationally scarce. These water bodies also have a rich invertebrate fauna, including several rare and local species of water beetle and Soldier Fly. Most noticeable are the dragonflies and damselflies, which include the Ruddy Darter *Sympetrum sanguineum*, a typically south eastern species, and the Red Data Book species Scarce Emerald Damselfly *Lestes dryas*.

The complex of salt marsh, grazing marsh and intertidal habitats is of major importance especially as feeding and roosting sites for large numbers of waders and wildfowl. Wintering Dark-bellied Brent Geese regularly occur in internationally important numbers, whilst wintering Black-tailed Godwit *Limosa limosa*, Common Shelduck *Tadorna tadorna* and Northern Shoveler *Anas clypeata* regularly occur in nationally important numbers. In addition the intertidal mud along the Crouch and Roach is used by nationally important numbers of Redshank *Tringa totanus* and Dunlin *Calidris alpina* for feeding and as a roosting site for up to 10,000 Northern Lapwing *Vanellus vanellus* and 6,000 European Golden Plover *Pluvialis apricaria* . Several more species of wader and wildfowl reach nationally important levels during harsh winters, using upstream areas of the Crouch and Roach which provide relatively sheltered conditions. Redshank, Oystercatcher *Haematopus ostralegus* and Lapwing breed in small numbers, especially on the grazing marshes and within the borrow dykes, and at migration time the muddy saltmarsh creeks and tidal flats are frequented by

Common Greenshank *Tringa nebularia*, Common Sandpiper *Actitis hypoleucos*, Spotted Redshank *Tringa erythropus*, Little Stint *Calidris minuta*, Curlew Sandpiper *Calidris ferruginea* and Ruff *Philomachus pugnax* . Many other birds use the site, including Grey Herons *Ardea cinerea* probably from the nearby Heronries at North Fambridge and Foulness, Green Sandpiper *Tringa ochropus*, Short-eared Owls *Asio flammeus*, Hen Harriers *Circus cyaneus* and Merlin *Falco columbarius* which have a roost at Hullbridge. The Essex Wildlife Trust reserve at Woodham Fen is often used by Jack Snipe *Lymnocryptes minimus*, Water Pipit *Anthus spinoletta* and Barn Owls *Tyto alba* and Bridgemarsh Island has a large colony of Black-headed gulls *Larus ridibundus*.

Included within the site are open areas of fresh to brackish water. There are mildly brackish lagoons at Saltcoats and Lower Raypits, and a fresh water reservoir adjacent to Stannetts Creek north of the Roach. All these water bodies are important for watering and preening for wildfowl that use the estuary.

The Essex coast is a renowned wintering site for Dark-bellied Brent Geese, supporting up to one fifth of the world population in more or less discrete groups centred on the major estuaries. One such group, with an average peak of 6,100 birds over 2% of the international population, is found around the Crouch and Roach Estuaries SSSI. They feed along both estuaries, on both grazing marsh and arable land. The areas of permanent, ley and rotational grassland included within the Crouch and Roach Estuaries SSSI are therefore essential for the conservation of this particular wintering population. The inter-tidal mud adjacent to these areas of grassland is also of great importance to the geese, as they use the inter-tidal area for roosting, congregating, bathing and feeding.

The various habitats found within the Crouch and Roach Estuaries SSSI all have significant invertebrate interest. In particular the brackish marsh and salt marsh are outstanding in a national context. These marshes are home to a highly specialised invertebrate fauna, several of which are listed in the Red Data Books; the Ground Lackey moth *Malacosoma castrensis*, the striped horsefly *Hybomitra expollicatus* and the beetle *Malachius vulneratus* are a few examples. In addition, within the brackish creeks, ditches and borrow dykes, the shore fly *Parydroptera discomyzina* and the soldierfly *Stratiomys singularior* have been recorded.