



## **Crouch and Roach Estuaries SSSI Essex**

***Notification under section 28B of the  
Wildlife and Countryside Act 1981***

Issued by Natural England's Essex Local Delivery Team on **2 November 2017**

## Contact points and further information

This notification document is issued by Natural England's Essex Local Delivery Team. Our address for correspondence is:

Natural England  
Essex Local Delivery Team  
Area Team 8 - Bedfordshire, Cambridgeshire, Essex, Hertfordshire and Northamptonshire  
Mail Hub  
County Hall  
Spetchley Road  
Worcester  
WR5 2NP

Telephone number: 07775 510193

E-mail: [Crouch.and.Roach.Estuaries@naturalengland.org.uk](mailto:Crouch.and.Roach.Estuaries@naturalengland.org.uk)

Your contact point for enquiries relating to this notification is **Charles Williams**.

A second document (*Crouch and Roach Estuaries SSSI - supporting information*) is available on request from the address above. This contains information and extracts from relevant documents that have been used in the decision to notify this SSSI.

The date of extension of the Crouch and Roach Estuaries SSSI is 2 November 2017

## Contents

1. Summary .....	4
2. The legal background .....	4
3. Making representations .....	4
4. Reasons for notification .....	5
5. Reasons for the notification of additional land under section 28B .....	6
6. Site boundaries and relationships with other SSSIs .....	6
7. Management of the SSSI.....	7
8. Supporting information.....	7
9. Legal documents .....	8
<i>Annex 1 Citation.....</i>	<i>9</i>
<i>Annex 2 Views about Management.....</i>	<i>15</i>
<i>Annex 3 List of operations requiring Natural England's consent.....</i>	<i>21</i>
<i>Annex 4 Map(s) showing the land notified.....</i>	<i>25</i>

## 1. Summary

- 1.1 Crouch and Roach Estuaries was last notified as a Site of Special Scientific Interest (SSSI) on 11 April 1996. This document explains why the SSSI has been extended to include two areas of additional land at Allfleet's Marsh on the northern shore of Wallasea Island and at Brandy Hole in the upper Crouch. In both locations, intertidal and saltmarsh habitats have developed following managed realignments of sea defences. These habitats are now used by the nationally important wildlife of the Crouch and Roach Estuaries.
- 1.2 Crouch and Roach Estuaries, including the additional land, is a nationally important site by reason of its lowland ditch systems, saltmarshes, overwintering waterbirds, and assemblages of invertebrates and vascular plants.
- 1.3 The annexes to this document comprise the legal papers that detail the interest and the management required to maintain that interest. You have a right to make representations or objections to the notification of the two additional areas of land. Part 3 of this document explains how to make representations or objections.
- 1.4 Natural England's consent is required by owners and occupiers before any of the operations listed in *Annex 3* can be carried out. We will work closely with owners and managers, as well as other bodies, to ensure that existing operations and new works that are not considered likely to damage the special features of the SSSI can be carried out.

## 2. The legal background

- 2.1 Crouch and Roach Estuaries SSSI (as notified on 11 April 1996) is extended by the notification of additional land under section 28B of the Wildlife and Countryside Act 1981 (as amended). The notification of the additional land takes effect from the date of this notice.
- 2.2 Part 9 of this document contains the following legal documents as required by section 28B of the Wildlife and Countryside Act 1981:
  - a citation detailing the reasons for notification (*Annex 1*)
  - a statement of Natural England's views on the management of the SSSI (*Annex 2*)
  - a list of operations requiring Natural England's consent (*Annex 3*)
  - maps identifying the land subject to this notification under section 28B (*Annex 4*).
- 2.3 The 11 April 1996 notification, as modified by this notification under section 28B, continues to have effect. The key effects of that notification can be summarised as follows:
  - owners and occupiers must give Natural England notice before carrying out, causing or permitting to be carried out any of the activities in the list of operations at *Annex 3*;
  - owners of land included in the SSSI have a legal obligation to notify Natural England within 28 days if the ownership or occupancy of the land changes;
  - it is an offence for any person intentionally or recklessly to destroy or damage the special features of the SSSI or to disturb any of the fauna; and
  - other public bodies must consult Natural England before carrying out or authorising any works that may damage the SSSI.
- 2.4 If you require any further information or advice on how this notification affects you, please do not hesitate to contact Natural England at the address shown at the beginning of this notification document.

## 3. Making representations

- 3.1 You have a legal right to make objections and representations about this notification. Any representations or objections should be made in writing by **2 March 2018** to Natural

England's Essex Local Delivery Team at the address shown on page 2. You may wish to seek legal or independent advice and your representative may wish to write to us on your behalf.

- 3.2 Natural England's Essex Local Delivery Team will consider your objections or representations and will try to resolve them. If there are no unresolved objections, approval to confirm the notification will be considered by an appropriate Natural England Director within nine months of this notification.
- 3.3 Any unresolved objections will be considered by the Board of Natural England within nine months of this notification. Following consideration of objections and representations, the Board of Natural England may confirm or withdraw all or part of this notification.
- 3.4 If you wish to emphasise any of your objections or representations to the Board in person, you should tell us when you write to us. You will then be advised of the date and location of the Board meeting.
- 3.5 Natural England's Essex Local Delivery Team will continue to try to resolve any objections after the deadline stated above for making objections or representations. The opportunity to make representations to the Board in person is limited to those cases where there are unresolved objections requiring the Board's consideration.
- 3.6 Natural England will accept correspondence relating to unresolved objections up to seven days prior to the Board meeting at which the confirmation is due to be considered. Correspondence received after this date will only be presented to the Board in very exceptional circumstances and you will be expected to provide justification as to why there has been a delay in providing the information. The decision whether this information will be submitted to the Board is entirely at Natural England's discretion. The reason that there is a seven day cut off is to allow Board members sufficient opportunity to consider all of the issues and read all the relevant paperwork before they meet to take their decision.
- 3.7 In the event that there are unresolved objections, confirmation of these notifications is likely to be considered at the Natural England Board meeting provisionally scheduled for June 2018.
- 3.8 Natural England has a policy of openness, which reflects our obligations under the Environmental Information Regulations 2004 and the Freedom of Information Act 2000. This legislation provides a legal right of access to information held by public bodies. This means that we will provide information on how we make our decisions on SSSIs to any person on request. This includes details of objections and representations received. We will assume, therefore, that your representation or objection can be made publicly available unless you indicate with clear and valid reasons which (if any) part(s) of these you wish to be excluded from this arrangement. However, you should be aware that the requirements of the legislation may mean that we cannot comply with your request that this information be withheld. We do, however, respect people's privacy and will take all reasonable steps to consult you before reaching a decision on disclosure of the information.
- 3.9 As an individual or organisation with an interest in Crouch and Roach Estuaries SSSI, your information will be stored and processed on a computer database that will be operated within the Data Protection Act 1998. This Act gives individuals the right to know what data we hold on them, how we use it and to which third parties it is disclosed. For the purposes of the Data Protection Act, the data controller is Natural England, Foss House, Kings Pool, 1-2 Peasholme Green, York, YO1 7PX.

#### **4. Reasons for notification**

- 4.1 The reasons for notification of the Crouch and Roach Estuaries SSSI are unaffected by this notice and the site continues to be of special interest for the following features:
  - Lowland ditch systems
  - Saltmarsh communities

- Aggregations of the following species of waterbird during the non-breeding season:
  - Dark-bellied brent goose *Branta bernicla bernicla*
  - Shelduck *Tadorna tadorna*
  - Shoveler *Anas clypeata*
  - Lapwing *Vanellus vanellus*
  - Golden plover *Pluvialis apricaria*
  - Dunlin *Calidris alpina*
  - Black-tailed godwit *Limosa limosa*
  - Redshank *Tringa totanus*
- Invertebrate assemblage
- Vascular plant assemblage

## **5. Reasons for the notification of additional land under section 28B**

- 5.1 The managed realignment sites (where the sea defences have been set back to allow tidal inundation and the development of intertidal and coastal vegetation communities) at Allfleet's Marsh (Wallasea Island) and Brandy Hole (upper Crouch) both support intertidal habitats and developing saltmarsh communities, as well as adjacent lowland ditch systems, which are similar to the habitats within the previously notified SSSI. They contribute to supporting elements of the full range of special interest features listed in section 4 (above) and described in more detail in the SSSI citation at Annex 1. Accordingly, the Crouch and Roach Estuaries SSSI is extended to include the two additional areas of land at Allfleet's Marsh and Brandy Hole.
- 5.2 In particular, both additional areas of land include habitats which contribute to supporting the important aggregations of non-breeding waterbirds for which the site is of special interest.

## **6. Site boundaries and relationships with other SSSIs**

- 6.1 The two areas of additional land directly adjoin the previously notified SSSI. Allfleet's Marsh is on the northern shore of Wallasea Island which lies at the confluence of the rivers Crouch and Roach. Brandy Hole is on the south bank of the upper Crouch, to the north-east of Hullbridge. Both of the extension areas are managed realignment sites where intertidal and saltmarsh habitats have been created to compensate for losses and damage elsewhere. At Brandy Hole this was related to flood defence works affecting the Crouch and Roach Estuaries, whilst the habitats at Wallasea Island are to compensate for the impacts of developments at two sites in Kent and Suffolk.
- 6.2 At the Allfleet's Marsh realignment site, a new 3.7 km-long seawall (with a new berm and borrow dyke behind it) was constructed inland of the original seawall along the north side of Wallasea Island in summer 2006. The original wall was breached in six places to create new intertidal habitat on former arable land between the old and new walls.
- 6.3 Since 2006, the new borrow dyke and berm behind the eastern 1.7 km long section of the new seawall has been buried under excavated material imported onto Wallasea Island by Crossrail as part of the RSPB Wallasea Island Wild Coast Project. This material was added to raise the ground level in preparation for an even larger managed realignment on the east side of the island (Jubilee Marsh) which was breached in summer 2015. Further west, the borrow dyke behind the Allfleet's Marsh seawall is intact and will not be significantly affected by later phases of the RSPB project.
- 6.4 The landward boundary at Allfleet's Marsh therefore runs as follows:
  - In the western part of the extension, where there is a roughly 2 km long borrow dyke and berm behind the new seawall, the SSSI boundary follows the landward bank of the borrow dyke.

- In the eastern part of the extension, where there is no longer a borrow dyke and berm behind the new seawall, the SSSI boundary runs along the northern side of the wall at the level of the Highest Astronomical Tide (HAT).

- 6.5 The small realignment site at Brandy Hole was created during the winter of 2002/3 when an old seawall was breached in four places to create new intertidal habitat. Except on the southwest edge of the realignment site, where a counter wall was constructed to protect adjacent arable land, the upper limit of saline intrusion is not set by a seawall but by gently rising ground, and so is poorly defined.
- 6.6 Therefore, away from the counter wall, the SSSI boundary at Brandy Hole follows the ownership extent of the Blackwater Wildfowlers' Association, which is marked by a fence and the edge of adjacent arable land. This provides a well-defined boundary line, allows for expected landward migration of the saltmarsh edge due to sea level rise, and includes two pools and an area of brackish grassland which are of value to waterbirds and other wetland species.
- 6.7 The boundaries have been drawn to include all of the land supporting the features of special interest and those areas required to ensure the long-term sustainability of these features. Where possible the boundary follows definable features on the ground, such as fences, dykes and sea walls.
- 6.8 Further clarification of the precise location of the boundaries is provided on the maps that form the annex to this package and more details can be obtained from Natural England's Essex Local Delivery Team at the address shown on page 2 of this document.
- 6.9 Crouch and Roach Estuaries SSSI directly abuts Dengie SSSI (to the north) and Foulness SSSI (to the south), which are of special interest for a range of coastal geology, habitats and species, including for their aggregations of non-breeding waterbirds. Collectively, these three SSSIs along with the Colne Estuary SSSI and Blackwater Estuary SSSI lying further to the north, form a continuous network of estuarine and coastal habitats along the Mid Essex Coast (and extending through Benfleet and Southend Marshes SSSI into the Thames Estuary), which are of national and international importance.

## **7. Management of the SSSI**

- 7.1 This document includes at *Annex 2* a statement of the management that Natural England considers is needed to conserve and enhance the features of special interest. Different management may be appropriate in different parts of the site and this statement is not intended to detail the exact requirements at specific locations. The statement is intended to explain how we can work with and support owners and managers in continuing to achieve positive management of the SSSI.
- 7.2 This document also includes a list of the operations requiring Natural England's consent at *Annex 3*. Some of the operations may already be taking place and where they do not cause any damage they will be given consent. We will work with landowners and managers to agree lists of such existing and planned activities, which can be approved.
- 7.3 Where an operation has been granted a consent, licence or permission from another public body a separate consent will not generally be required from Natural England. However, other public bodies are required to consult Natural England before such consents, licences or permissions are issued.
- 7.4 In particular, we recognise the important roles of the owners and managers of the land in managing this site. We will work with them to develop means to secure the sustainable management of Crouch and Roach Estuaries SSSI.

## **8. Supporting information**

- 8.1 The detailed information which has been used to assess the importance of this SSSI is available on request from the address on page 2 of this paper.

## **9. Legal documents**

- 9.1 Attached at *Annexes 1 - 4* are the legal documents, which are required by section 28B of the Wildlife and Countryside Act 1981.



## ***Annex 1***

### **Citation**

This is a legal document on which you have a right to make objections or representations, with respect to the notification of the additional land, as explained in part 3 of this document



**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 *Lymnocyptes 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.



## ***Annex 2***

### **Views about Management**

This is a legal document on which you have a right to make objections or representations, with respect to the notification of the additional land, as explained in part 3 of this document.







## Views About Management

Wildlife and Countryside Act 1981 Section 28(4) as inserted by  
Schedule 9 to the Countryside and Rights of Way Act 2000

### **A statement of Natural England's views about the management of Crouch & Roach Estuaries Site of Special Scientific Interest (SSSI).**

This statement represents Natural England's views about the management of the SSSI for nature conservation. This statement sets out, in principle, our views on how the site's special conservation interest can be conserved and enhanced. Natural England has a duty to notify the owners and occupiers of the SSSI of its views about the management of the land.

Not all of the management principles will be equally appropriate to all parts of the SSSI. Also, there may be other management activities, additional to our current views, which can be beneficial to the conservation and enhancement of the features of interest.

The management views set out below do not constitute consent for any operation. Natural England's written consent is still required before carrying out any operation likely to damage the features of special interest (see your SSSI notification papers for a list of these operations). Natural England welcomes consultation with owners, occupiers and users of the SSSI to ensure that the management of this site conserves and enhances the features of interest, and to ensure that all necessary prior consents are obtained.

#### **Management Principles**

##### Littoral sediments (mud and sand flats)

Intertidal mud and sand flats include a range of generally muddy or sandy low-gradient shores that are exposed to air during low tide and submerged during the higher tides. High energy shores, such as those on open coasts, are generally sandy in nature whilst more sheltered, low energy flats are muddier. They support a wide variety of marine invertebrates that represent an important food source for many fish and bird species.

Good water quality and sediment quality should be maintained, and the sediment budget within the estuarine or coastal system should not be restricted by anthropogenic influences.

The birds that use mud and sandflats for feeding and roosting are vulnerable to disturbance from human activities, for example, bait digging, dog walking and wildfowling. These activities can lead to reduced time spent feeding, or individuals being restricted to areas with a poor food supply. Disturbance should therefore be minimised, especially at times when bird populations may be stressed, such as during severe winter weather.

The location and extent of mud or sandflats is dependent on the extent to which the estuary or coast where they occur is constrained from responding to sea level rise and changing sediment regimes. Management needs to create space to enable landward roll-back to take place in response to sea-level rise, and should also allow the system to be dynamic and retain the flexibility to respond to associated changes such as the movement of physical features within the system, e.g. migrating subtidal sandbanks.

##### Coastal lagoons

Coastal lagoons are saline water bodies separated from the sea by a barrier (usually sand, shingle or rock sill). In Essex saline lagoons are mostly represented by linear borrow dykes. These are

artificially created water bodies which have a land drainage function. They are separated from the sea by a sea wall. Sea water enters via sluices in the sea wall or seeps through the wall. This separation from the sea makes them unique among coastal habitats and means that saline lagoons are either tideless, or the tide has only a restricted effect on the lagoon. They retain part of their water-body at low tide, and this water may be either saline or brackish. They often support unusual assemblages of marine, estuarine and aquatic plants and animals, including lagoonal specialist species.

Any management needs to be carefully tailored to the needs of each individual lagoon and should be based on an understanding of the natural features of importance and the external factors affecting the lagoon. Indeed, where a lagoon is in a good and stable condition, active management is unlikely to be necessary. Maintaining salinity and water depths can be a key management priority. It may be necessary to actively manage freshwater and seawater input to favour certain species or communities. Whilst freshwater input is not essential to the conservation of lagoons, some connectivity with seawater is.

The water depth is also critical to many of the lagoonal specialist species with a depth between 0.5 and 1m being desirable. Some deeper water refuges are also beneficial. Siltation from surrounding land run-off may need to be addressed.

Water quality, and any direct and/or diffuse inputs from the surrounding land, can have a profound effect upon the productivity of lagoons and well-being of specialist species. Saline lagoons can show extreme reactions to a build-up of some types of nutrients and therefore it may be necessary to actively manage inputs, especially where in close proximity to farmland.

In some cases, it may be desirable to allow vegetation to encroach into the lagoon to increase the diversity of habitats present, particularly for some breeding and migratory bird species. However vegetation should not be allowed to encroach to such an extent that it significantly reduces the areas of open water and shallow water, thus reducing the variety of habitats available to specialist species within the lagoon itself.

### Coastal saltmarsh

Saltmarshes form the upper vegetated portions of intertidal mudflats in sheltered coastal locations, such as estuaries, lagoons and beach plains. There is typically a zonation of vegetation, from plants adapted to regular immersion by the tides (halophytes), through to more widespread plant species in the areas less frequently covered by the sea. The halophyte plant species are confined to this type of habitat, and areas of structurally diverse vegetation provide good invertebrate habitat. Saltmarshes are also important nursery sites for several fish species, and important refuge, feeding and breeding grounds for wading birds and wildfowl.

There are a number of factors that are contributing to saltmarsh change that management may need to take into consideration. These include coastal erosion as a result of coastal flood-defence works, rising sea-levels, variations in sediment deposition, and land claim for development.

### Neutral pasture

Neutral pasture requires active management if it is to retain its conservation interest. In order to maintain a species-rich sward, each year's growth of vegetation must be removed. Otherwise the sward becomes progressively dominated by tall and vigorous grasses which, together with an associated build-up of dead plant matter, suppress less vigorous species and reduce the botanical diversity of the site. On pasture land this management is achieved by grazing. The precise timing and intensity of grazing will vary both between and within sites, according to local conditions and requirements (such as, for example, type or availability of stock or the needs of individual plants or animals of conservation concern) but should aim to keep a relatively open sward without causing excessive poaching. Light trampling can be of benefit by breaking down leaf litter and providing areas for seed germination. Any surrounding, well-managed hedgerows may considerably add to the habitat in providing shelter for invertebrates. Occasional dressings of lime may be acceptable.

### Brent goose pasture

Where grassland is included in the site as a food source for wildfowl during winter, water levels should be maximised, and the pasture grazed/mown to produce a lush sward of the appropriate

height in early October. This may also require the application of nitrogen in September to ensure the quality of the sward for grazing wildfowl.

### Marshy grassland

Marshy grassland requires active management if it is to retain its conservation interest. Generally, each year's growth of vegetation must be removed. Otherwise the sward becomes dominated by tall, vigorous grasses and rushes which, together with an associated build-up of dead plant matter, suppress less vigorous species and lower the botanical richness of the sward. Traditionally, this management is achieved by grazing. Cattle are often the preferred stock, being relatively tolerant of wet conditions and able to control tall grasses and rank vegetation. Cattle also tend to produce a rather uneven, structurally diverse sward. However, ponies can be used if necessary. Grazing usually takes place at times between late spring and early autumn, but the precise timing and intensity will depend on local conditions and requirements, such as the need to avoid trampling ground-nesting birds. Heavy poaching should be avoided but light trampling can be beneficial in breaking down leaf litter and providing areas for seed germination. An element of managed scrub, both within and fringing a field can be of importance to birds and invertebrates, as can a surrounding hedge. Careful maintenance of existing ditches and drains is usually acceptable practice, but abandonment or deepening of ditches can be harmful.

### All habitats

The habitats within this site are highly sensitive to inorganic fertilisers\* and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to this site, and any recreational activities within, may also need to be controlled.

\* Pasture managed for wildfowl may be an exception with regard to inorganic fertiliser.

Date issued: 6 June 2005

Date additional land notified: 2 November 2017



## ***Annex 3***

### **List of operations requiring Natural England's consent**

This is a legal document on which you have a right to make objections or representations with respect to the notification of the additional land, as explained in part 3 of this document.



## Operations requiring Natural England's consent

Wildlife and Countryside Act 1981 Section 28 (4)(b) substituted by Schedule 9 to the Countryside and Rights of Way Act 2000

The operations listed below may damage the features of interest of Crouch and Roach Estuaries SSSI. Before any of these operations are undertaken you must consult Natural England, and may require our consent.

It is usually possible to carry out some of these operations in certain ways, or at specific times of year, or on certain parts of the SSSI, without damaging the features of interest. If you wish to carry out any of these activities please contact your Natural England Area Team who will give you advice and where appropriate issue a consent. Please help us by using the 'notice form' (provided at notification and available on request) to ask us for consent to carry out these operations.

In certain circumstances it will not be possible to consent these operations, because they would damage the features of interest. Where possible the Area Team will suggest alternative ways in which you may proceed, which would enable a consent to be issued. To proceed without Natural England's consent may constitute an offence. If consent is refused, or conditions attached to it, which are not acceptable to you, you will be provided with details of how you may appeal to the Secretary of State.

<b>Standard reference number</b>	<b>Type of operation</b>
----------------------------------	--------------------------

- |      |  |
|------|--|
| 1.   | Cultivation, including ploughing, rotovating, harrowing, and re-seeding.   |
| 2.   | Grazing and changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing).   |
| 3.   | Stock feeding and changes in stock feeding practice.   |
| 4.   | Mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage).  |
| 5.   | Application of manure, fertilisers and lime.   |
| 6.   | Application of pesticides, including herbicides (weed killers).  |
| 7.   | Dumping, spreading or discharge of any materials.  |
| 8.   | Burning and changes in the pattern or frequency of burning.  |
| 9.   | The release into the site of any wild, feral or domestic animal*, plant or seed.   |
| 10.  | The killing or removal of any wild animal*, including pest control.  |
| 11.  | The destruction, displacement, removal or cutting of any plant or plant remains (including e.g. tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould turf etc.) |
| 12.  | Tree and/or woodland management+ and changes in tree and/or woodland management+.  |
| 13a. | Drainage (including moor-gripping and the use of mole, tile, tunnel or artificial drains).   |
| 13b. | Modification of the structure of watercourses (e.g. rivers, streams, springs, ditches, dykes, drains), including their banks and beds, as by re-alignment, re-grading and dredging.          |
| 13c. | Management of aquatic and bank vegetation for drainage purposes.   |

<b>Standard reference number</b>	<b>Type of operation</b>
14.	The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15.	Infilling of ditches, dykes, drains, ponds, marshes or pits.
16a.	Freshwater fishery production and/or management, and changes in freshwater fishery production and/or management (including sporting fishing and angling).
16b.	Coastal fishing or fisheries management and seafood or marine life collection and changes in coastal fishing practice or fisheries management and seafood or marine life collection (including the use of traps or fish cages).
17.	Reclamation of land from sea, estuary or marsh.
18.	Bait digging in intertidal areas.
19.	Erection of sea defences or coast protection works, including cliff or landslip drainage or stabilisation measures.
20.	Extraction of minerals, including peat, shingle, sand and gravel, topsoil, subsoil, shells and spoil.
21.	Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
22.	Storage of materials.
23.	Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
26.	Use of vehicles or craft likely to damage or disturb features of interest.
27.	Recreational or other activities likely to damage features of interest.
28.	Game and waterfowl management and hunting practices and changes in game and waterfowl management and hunting practice.

**Notes:**

\* 'animal' includes any mammal, reptile, amphibian, bird, fish or invertebrate.

+ including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition

**Date notified:** 11 April 1996

**Date additional land notified:** 2 November 2017

**National grid reference:** TQ860962



## ***Annex 4***

### **Maps showing the land notified**

These are legal documents on which you have a legal right to make objections or representations with respect to the notification of additional land, as explained in part 3 of this document.



Insert summary extension maps here

Insert detail extension maps here