



# Ramsar Information Sheet

Published on 15 January 2025

Update version, previously published on : 1 January 1999

## United Kingdom of Great Britain and Northern Ireland Crouch & Roach Estuaries



Designation date	24 March 1995
Site number	721
Coordinates	51°37'28"N 00°44'04"E
Area	1 847,87 ha



## Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

## 1 - Summary

### Summary

The Crouch and Roach Estuaries are located on the coast of south Essex in eastern England. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brick earth and loams with patches of sand and gravel. The intertidal zone along the Rivers Crouch and Roach is 'squeezed' between the sea walls along both banks and the river channel. Unlike more extensive estuaries elsewhere in Essex, this leaves a relatively narrow strip of tidal mud which, nonetheless, is used by a significant number of birds.

The site is of importance for wintering waterbirds, especially Dark-bellied brent goose *Branta bernicla bernicla*, which occurs in internationally important numbers; it is also regularly used by over 25,000 individual waterbirds during the winter. Additional interest is provided by a range of aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants. It is also an integral component of a suite of important nature reserves located along the Mid-Essex coast.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

##### Responsible compiler

Institution/agency	Natural England
Postal address	Natural England Suite D Unex House Bourges Boulevard Peterborough PE1 1NG

##### National Ramsar Administrative Authority

Institution/agency	Department for Environment, Food and Rural Affairs
Postal address	2 Marsham Street London SW1P 4DF United Kingdom

#### 2.1.2 - Period of collection of data and information used to compile the RIS

From year	1998
To year	2018

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Crouch & Roach Estuaries
---	--------------------------

#### 2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary	Yes <input checked="" type="radio"/> No <input type="radio"/>
(Update) The boundary has been delineated more accurately	<input type="checkbox"/>
(Update) The boundary has been extended	<input checked="" type="checkbox"/>
(Update) The boundary has been restricted	<input type="checkbox"/>
(Update) B. Changes to Site area	the area has increased
(Update) The Site area has been calculated more accurately	<input type="checkbox"/>
(Update) The Site has been delineated more accurately	<input type="checkbox"/>
(Update) The Site area has increased because of a boundary extension	<input checked="" type="checkbox"/>
(Update) The Site area has decreased because of a boundary restriction	<input type="checkbox"/>
(Update) For secretariat only: This update is an extension	<input type="checkbox"/>

#### 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	No
--	----

## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

b) Digital map/image  
<3 file(s) uploaded>

Former maps	0
-------------	---

##### Boundaries description

The site boundaries are shown on the site map. They are located along the estuaries of the River Crouch and River Roach and coincide with the boundaries of the Crouch and Roach Estuaries Site of Special Scientific Interest (SSSI) and the Crouch and Roach Estuaries Special Protection Area (SPA).

### 2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

### 2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes ☐ No ☒
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ☐ No ☒

### 2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

### 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Marine Ecoregions of the World (MEOW)	North Sea
EU biogeographic regionalization	Atlantic Region

### 3 - Why is the Site important?

#### 3.1 - Ramsar Criteria and their justification

<no data available>

##### ☒ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The site supports an appreciable assemblage of nationally rare, vulnerable, or endangered species or subspecies of plant or animal. These include:

- 13 nationally scarce plant species: Slender hare's ear *Bupleurum tenuissimum*, Divided sedge *Carex divisa*, Sea barley *Hordeum marinum*, Golden-samphire *Limbarda crithmoides*, Lax-flowered sea-lavender *Limonium humile*, Curved hard grass *Parapholis incurva*, Borrer's saltmarsh grass *Puccinellia fasciculata*, Stiff saltmarsh grass *Puccinellia rupestris*, Spiral tasselweed *Ruppia cirrhosa*, One flowered glasswort *Salicornia pusilla*, Small cord-grass *Spartina maritima*, Shrubby sea-blite *Suaeda vera* and Sea clover *Trifolium squamosum*; and
- several nationally rare and/or vulnerable invertebrate species, e.g., Scarce emerald damselfly *Lestes dryas*, the shorefly *Parydroptera discomyzina*, the soldierfly *Stratiomys singularior*, the large horsefly *Hybomitra expollicata*, the beetles *Graptodytes bilineatus* and *Malachius vulneratus*, the moth species *Malacosoma castrensis* and *Eucosma rubescana* (= *Eucosma catoptrana*).

##### ☒ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers

27021

Start year

1990

End year

1995

Source of data:

Cranswick, P.A., Walters, R.J., Evans, J. and Pollitt, M.S. (1995) The Wetland Bird Survey 1993-94: Wildfowl and Wader Counts. BTO/WWT/RSPB/JNCC, Slimbridge.

Optional text box to provide further information

The site is regularly used by 27,021 individual waterbirds over winter (5-year peak mean 1990/91 – 1994/95).

##### ☒ Criterion 6 : >1% waterbird population

Optional text box to provide further information

The site regularly supports 2.2% of the global population of non-breeding (wintering) Dark-bellied brent goose *Branta bernicla bernicla* (5,509 individuals, 5-year peak mean 1989/90 - 1993/94).

#### 3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<b>Plantae</b>								
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Bupleurum tenuissimum</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Carex divisa</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Hordeum marinum</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Limbarda crithmoides</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Limonium humile</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Parapholis incurva</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Puccinellia fasciculata</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Puccinellia rupestris</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Ruppia cirrhosa</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Salicornia pusilla</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / LILIOPSIDA	<i>Sporobolus maritimus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Suaeda vera</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Trifolium squamosum</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Nationally rare, vulnerable or endangered plant species	The site supports an appreciable population of this nationally rare, vulnerable or endangered plant species

### 3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Others																	
ARTHROPODA / INSECTA	<i>Eucosma rubescana</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable moth species
ARTHROPODA / INSECTA	<i>Graptodytes bilineatus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable beetle species
ARTHROPODA / INSECTA	<i>Hybomitra expollicata</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable horsefly species
ARTHROPODA / INSECTA	<i>Lestes dryas</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable damselfly species
ARTHROPODA / INSECTA	<i>Malachius vulneratus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable beetle species
ARTHROPODA / INSECTA	<i>Malacosoma castrensis</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable moth species
ARTHROPODA / INSECTA	<i>Parydroptera discomyzina</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable shorefly species
ARTHROPODA / INSECTA	<i>Stratiomys singularior</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Nationally rare and/or vulnerable species	Resident nationally rare and/or vulnerable soldierfly species
Birds																	
CHORDATA / AVES	<i>Branta bernicla bernicla</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5509	1989/90-1993/94	2.2		<input type="checkbox"/>	<input type="checkbox"/>		Occurs regularly in the non-breeding season (winter) in internationally important numbers (2.2% of the global population)

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>



## 4 - What is the Site like? (Ecological character description)

### 4.1 - Ecological character

The Crouch and Roach estuaries are located on the coast of south Essex in eastern England. The Ramsar Site covers the tidal extent of the two rivers and grassland created when seawalls were built to reclaim intertidal marshes historically. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brick earth and loams. The intertidal zone is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud unlike other estuaries in the county, which, nonetheless, is used by significant numbers of waterbirds. One species is present in internationally important numbers, and other species occur in nationally important numbers. The site is flanked to the north and south by other Ramsar Sites, which collectively play an important role in supporting internationally and nationally important birds along the Essex Coast and as part of the East Atlantic Flyway. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants.

Most of the tidal reaches were originally fringed with saltmarsh that has been progressively embanked to provide safe grazing and, more recently, arable land. Only relatively small areas of saltmarsh have never been embanked, some of which still provide an uninterrupted natural transition from saltmarsh to grassland, an increasingly rare feature on the Essex Coast. Other extensive stretches of saltmarsh have developed during the 20th century where sea defences have been breached.

The saltmarshes 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 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 *Elytrigia atherica* is dominant. This rough grassland supports dense populations of the nationally scarce Roesel's bush-cricket *Metrioptera roeselii*.

The sea walls and their associated berms form important integral parts of the coastal habitat. Several typically coastal species occur, such as Narrow-leaved birds-foot-trefoil *Lotus tenuis* and Grass vetchling *Lathyrus nissolia*. There is also 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 *Puccinellia fasciculata* and *Puccinellia rupestris*. The species complement of this grassland habitat reflects that within the old, improved grazing marsh.

There are also some areas of grazing marsh landward of the sea wall. This is a characteristic, but increasingly uncommon habitat. Other less common plants typical of grazing marsh are Spiny rest-harrow *Ononis spinosa* and Hairy buttercup *Ranunculus sardous*. The brackish dykes and pools within the grazing marsh, together with the borrow dykes adjacent to the sea wall, are fringed with dense stands of the Sea club-rush *Bolboschoenus maritimus* or, more locally, Common reed *Phragmites australis* and Lesser reed-mace *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.

### 4.2 - What wetland type(s) are in the site?

#### Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
G: Intertidal mud, sand or salt flats	Intertidal mudflats and sandflats	1	735	
H: Intertidal marshes	Saltmarsh	2	505	

#### Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools	Marshes and reedbeds (8 ha); standing open water (including ponds) (20 ha)	4	28	

#### Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
4: Seasonally flooded agricultural land	Unimproved grazing marsh	3	61
9: Canals and drainage channels or ditches	Borrow dykes	4	59

#### Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Neutral grassland (not including unimproved grazing marsh but including semi-improved and improved grassland).	459

### 4.3 - Biological components

#### 4.3.1 - Plant species

<no data available>

## 4.3.2 - Animal species

&lt;no data available&gt;

## 4.4 - Physical components

## 4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfb: Marine west coast (Mild with no dry season, warm summer)

## 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

Entire river basin ☐

Upper part of river basin ☐

Middle part of river basin ☐

Lower part of river basin ☐

More than one river basin ☐

Not in river basin ☐

Coastal ☒

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The site contains the tidal estuaries of both the River Crouch and the River Roach before they empty into the southern North Sea.

## 4.4.3 - Soil

Mineral ☒

(Update) Changes at RIS update ☒ No change ☐ Increase ☐ Decrease ☐ Unknown ☐

No available information ☐

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ☐ No ☒

## 4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	No change
Usually seasonal, ephemeral or intermittent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Marine water	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change

## 4.4.5 - Sediment regime

Sediment regime unknown ☐

Please provide further information on sediment (optional):

There is no significant erosion of sediments occurring in the site, although the saltmarsh habitat is seeing some erosion. The sea walls restrict the ability of saltmarsh to "migrate" inland.

#### 4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4 ) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐

Unknown ☐

#### 4.4.7 - Water salinity

Fresh (<0.5 g/l) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐

Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐

Euhaline/Eusaline (30-40 g/l) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐

Unknown ☐

#### 4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐

Unknown ☐

#### 4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself:  
i) broadly similar ☐ ii) significantly different ☒

Surrounding area has greater urbanisation or development ☒

Surrounding area has higher human population density ☒

Surrounding area has more intensive agricultural use ☒

Surrounding area has significantly different land cover or habitat types ☒

### 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

##### Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low
Wetland non-food products	Livestock fodder	Low

##### Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	Medium
Hazard reduction	Flood control, flood storage	Medium
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Medium

##### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Water sports and activities	High
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Low
Spiritual and inspirational	Aesthetic and sense of place values	Low
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	Low
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Low
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Long-term monitoring site	High

## Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Low
Nutrient cycling	Carbon storage/sequestration	Low

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ☐ No ☒ Unknown ☐

## 4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☐
- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐
- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland ☐

<no data available>

## 4.6 - Ecological processes

<no data available>

## 5 - How is the Site managed? (Conservation and management)

### 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

##### Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other public ownership	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

##### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Commercial (company)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Foundation/non-governmental organization/trust	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Natural England Protected Areas Team

Provide the name and/or title of the person or people with responsibility for the wetland:

Natural England Lead Adviser, Essex Delivery Team

Postal address:

Natural England Mail Hub, Natural England, Worcester County Hall, Spetchley Road, Worcester, WR5 2NP, UK

E-mail address:

protectedsites@naturalengland.org.uk

### 5.2 - Ecological character threats and responses (Management)

#### 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

##### Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Housing and urban areas		Medium impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	increase

##### Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Low impact	Medium impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown

#### 5.2.2 - Legal conservation status

##### Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area (SPA)	<a href="https://publications.naturalengland.org.uk/publication/5048504904843264">https://publications.naturalengland.org.uk/publication/5048504904843264</a>	whole
EU Natura 2000	Essex Estuaries Special Area of Conservation (SAC)	<a href="https://publications.naturalengland.org.uk/publication/4781199427895296">https://publications.naturalengland.org.uk/publication/4781199427895296</a>	partly

##### National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Nature Reserve (NNR)	Dengie NNR	<a href="https://www.gov.uk/government/publications/essex-national-nature-reserves/essex-national-nature-reserves#dengie">https://www.gov.uk/government/publications/essex-national-nature-reserves/essex-national-nature-reserves#dengie</a>	partly
Site of Special Scientific Interest (SSSI)	Crouch and Roach Estuaries SSSI	<a href="https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002160.pdf">https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002160.pdf</a>	whole

### 5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve ☐
- Ib Wilderness Area: protected area managed mainly for wilderness protection ☐
- II National Park: protected area managed mainly for ecosystem protection and recreation ☐
- III Natural Monument: protected area managed mainly for conservation of specific natural features ☐
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☒
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

### 5.2.4 - Key conservation measures

#### Legal protection

Measures	Status
Legal protection	Implemented

#### Habitat

Measures	Status
Soil management	Implemented
Catchment management initiatives/controls	Implemented
Improvement of water quality	Implemented

#### Species

Measures	Status
Control of invasive alien plants	Partially implemented

#### Human Activities

Measures	Status
Fisheries management/regulation	Implemented
Regulation/management of recreational activities	Partially implemented
Management of water abstraction/takes	Implemented
Regulation/management of wastes	Implemented
Communication, education, and participation and awareness activities	Implemented
Harvest controls/poaching enforcement	Implemented

#### Other:

Some of the measures are implemented outside the Ramsar Site as well as inside.

### 5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes ☐ No ☒

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ☐ No ☒

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

A farm, Marsh Farm, within the Ramsar Site is owned and maintained by Essex County Council. The farm is an educational facility which, through farm tours, provides information about wildlife and the countryside. The local wildlife trust has two reserves on site, Blue House Farm and Lower Raypits, at which they conduct conservation education.

#### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

Further information

There is a Site Improvement Plan for the Essex Estuaries which covers the Essex Estuaries Special Area of Conservation and several Special Protection Areas, including the Crouch and Roach Estuaries SPA. However, it does not directly address the Ramsar Site, some of the habitats and species in the Ramsar Site are features of the SAC or SPA.

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Barne, J.H., Robson, C.F., Kaznowska, S.S., Doody, J.P., Davidson, N.C. & Buck, A.L. (eds.) (1998) Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness. JNCC, Peterborough.

Buck, A.L. (ed.) (1993) An inventory of UK estuaries. Volume 5. Eastern England. JNCC, Peterborough.

Burd, F. (1989) The saltmarsh survey of Great Britain. An inventory of British saltmarshes. Research & Survey in Nature Conservation, No. 17. Nature Conservancy Council, Peterborough.

Cottle, R., Pethick, J. & Dalton, H. (2002) Essex Estuaries Coastal Habitat Management Plan: final report. English Nature, Peterborough.

Cranswick, P.A., Walters, R.J., Evans, J. & Pollitt, M.S. (1995) The Wetland Bird Survey 1993-94: Wildfowl and Wader Counts. BTO/WWT/RSPB/JNCC, Slimbridge.

Davidson, N.C., Laffoley, D. d'A., Doody, J.P., Way, L.S., Gordon, J., Key, R., Pienkowski, M.W., Mitchell, R. & Duff, K.L. (1991) Nature conservation and estuaries in Great Britain. Nature Conservancy Council, Peterborough.

Hill, T.O., Emblow, C.S. & Northen, K.O. (1996) Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries. JNCC, Peterborough.

JNCC (2008) Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar Information Sheet UK11058. Version 3.0.

Musgrove, A.J., Langston, R.H.W., Baker, H. & Ward, R.M. (eds.) (2003) Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99. International Wader Studies, No. 16. WSG/BTO/WWT/RSPB/JNCC, Thetford.

Musgrove, A.J., Pollitt, M.S., Hall, C., Hearn, R.D., Holloway, S.J., Marshall, P.E., Robinson, J.A. & Cranswick, P.A. (2001) The Wetland Bird Survey 1999–2000: wildfowl and wader counts. BTO, WWT, RSPB & JNCC, Slimbridge.

Natural England (2015) Site Improvement Plan: Essex Estuaries. Improvement Programme for England's Natura 2000 Sites (IPENS), Version 1.0, Date 01/04/2015.

Perring, F.H. & Farrell, L. (1983) British Red Data Books: 1. Vascular Plants 2nd Edition. Royal Society for Nature Conservation.

Pritchard, D.E., Housden, S.D., Mudge, G.P., Galbraith, C.A. & Pienkowski, M.W. (eds.) (1992) Important Bird Areas in the United Kingdom including the Channel Islands and the Isle of Man. RSPB, Sandy.

Ratcliffe, D.A. (ed.) (1977) A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain. Cambridge University Press, Cambridge.

Shirt, D.B. (ed.) (1987) British Red Data Books: 2. Insects. Nature Conservancy Council, Peterborough.

Stroud, D.A., Chambers, D., Cook, S., Buxton, N., Fraser, B., Clement, P., Lewis, P., McLean, I., Baker, H. & Whitehead, S. (eds.) (2001) The UK SPA network: its scope and content. JNCC, Peterborough.

Worley, A. & Simpson, M. (1998) Littoral and sublittoral biotope mapping and data capture exercise for the Essex Estuaries candidate Marine Special Area of Conservation. English Nature Research Reports, No. 305.

#### 6.1.2 - Additional reports and documents

##### i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

##### ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

##### iii. a description of the site in a national or regional wetland inventory

<no file available>

##### iv. relevant Article 3.2 reports

<no file available>

##### v. site management plan

<no file available>

##### vi. other published literature

<2 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



View of All Fleets Marsh ( Natural England, 06-11-2017 )



View up the River Crouch from Brandy Hole ( Natural England, 06-11-2017 )



View of Brandy Hole ( Natural England, 06-11-2017 )

#### 6.1.4 - Designation letter and related data

##### Designation letter

<1 file(s) uploaded>

Date of Designation 1995-03-24